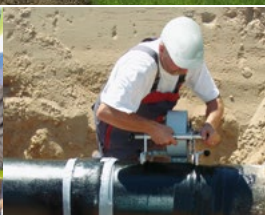


# CORROSION PREVENTION

We preserve values.



■ **PLASTELEN®**  
Petrolatum Tapes & Mastics



■ **BUTYLEN**  
Tapes and Tape Systems



■ **DEKOTEC®**  
Heat Shrinkable Sleeves



■ **LIQUITOL®**  
Liquid Coatings



■ **DEKOTEC®**  
Insulation and Sealing Tapes



■ **MarineProtect™**  
Jetty Pile Protection



[www.dekotec.de](http://www.dekotec.de)



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# STRONG BRANDS

for Enduring Protection



**PLASTELEN®**  
Petrolatum Tapes & Mastics

Proven corrosion prevention of complicated pipeline components in the under and above soil area as well as at flexible and maintenance intensive armatures.



**BUTYLEN**  
Tapes and Tape Systems

For more than 40 years, proven as permanent corrosion prevention at pipelines, welding seams and fittings for new structures and rehabilitation measures.



**DEKOTEC®**  
Heat Shrinkable Sleeves

High quality and robust sleeves for the protection of field joints and sleeve connections against corrosion and root penetration, as two and three-layer system for normal up to high operating temperatures.



**LIQUITOL®**  
Liquid Coatings

Spray and spread coatings for highest requirements for welding seams, soil to air interface areas and for trenchless pipe laying.



**DEKOTEC® & PALIMEX®**  
Insulation and Sealing Tape

Based on their sealing, vibration damping and insulation properties, **DEKOTEC®** and **PALIMEX®** Tapes have found a large variety of application options in metal-construction and industry.



**MarineProtect™**  
Jetty Pile Protection

Corrosion and weathering protection for metal, concrete piles or wood in the splash zone of moles and harbors. Simple application above the water as well as under water.

# PRODUCT FINDER

## Product Finder Corrosion Prevention Tapes and Sleeves\*\*

Product	Product design		System design			Stress class		ISO 21809-3	Operating temperature		Design temperature		Page
	Number of layers	Thickness (mm)	Number of layers		Thickness (mm)	DIN 30672 EN 12068	GRTgaz (RV02)		min. °C (°F)	max. °C (°F)	min. °C (°F)	max. °C (°F)	
			Inner tape	Outer tape									
<b>PLASTELEN® Petrolatum Tapes</b>													
PLASTELEN®-Cal	4	1.2	2		2.4				-40 (-40)	+110 (+230)	-50 (-58)	+120 (+248)	30-31
PLASTELEN®-Feu	3	1.0	2		2.0				-40 (-40)	+70 (+158)	-50 (-58)	+80 (+176)	32-33
PLASTELEN®-Flex	4	1.5	2		3.0				-40 (-40)	+30 (+86)	-50 (-58)	+50 (+122)	34-35
PLASTELEN®-Tape MT	3	1.7	2		3.4				-30 (-22)	+60 (+140)	-30 (-22)	+80 (+176)	36-37
PLASTELEN®-Plast	4	1.1	3		3.3	A 30		11A	-40 (-40)	+30 (+86)	-50 (-58)	+50 (+122)	38-39
PLASTELEN®-Tec	3	1.1	2		2.2				-40 (-40)	+35 (+95)	-40 (-40)	+50 (+122)	40-41
PLASTELEN®-Verte	3	1.1	2		2.2				-50 (-58)	+30 (+86)	-50 (-58)	+50 (+122)	42-43
MarineProtect™-Tape	4	1.5	2		3.0				-60 (-76)	+50 (+122)	-60 (-76)	+50 (+122)	142-143
<b>BUTYLEN PE-/Butyl Rubber Tapes (3-Layer) – selection –</b>													
BUTYLEN-E10	3	1.0	2		2.0				-40 (-40)	+50 (+122)	-50 (-58)	+70 (+158)	54-55
BUTYLEN-E15	3	1.5	2		3.0				-40 (-40)	+50 (+122)	-50 (-58)	+70 (+158)	54-55
BUTYLEN-N8	3	0.8	2		1.6				-40 (-40)	+50 (+122)	-50 (-58)	+70 (+158)	54-55
BUTYLEN-N10	3	1.0	2		2.0				-40 (-40)	+50 (+122)	-50 (-58)	+70 (+158)	54-55
BUTYLEN-N12	3	1.2	2		2.4				-40 (-40)	+50 (+122)	-50 (-58)	+70 (+158)	54-55
BUTYLEN-N15	3	1.5	2		3.0				-40 (-40)	+50 (+122)	-50 (-58)	+70 (+158)	80-81
<b>BUTYLEN PE-/Butyl Rubber (Single Tapes Systems)</b>													
BUTYLEN-AS39 P	3	0.8	4		3.2	C 50	HR	12-1	-40 (-40)	+50 (+122)	-50 (-58)	+85 (+185)	56-57
BUTYLEN-AS40 Plus	3	0.8	3		2.4	B 50			-40 (-40)	+50 (+122)	-50 (-58)	+85 (+185)	58-59
BUTYLEN-AS40 Plus	3	0.8	4		3.2	C 50	HR	12-1	-40 (-40)	+50 (+122)	-50 (-58)	+85 (+185)	58-59
BUTYLEN-AS50	3	1.1	2		2.2	B 50			-40 (-40)	+50 (+122)	-50 (-58)	+85 (+185)	60-61
BUTYLEN-S10	3	0.8	4		3.2	B 50			-40 (-40)	+50 (+122)	-50 (-58)	+70 (+158)	62-63
<b>BUTYLEN PE-/Butyl Rubber (Two-Tape Systems)</b>													
BUTYLEN-AS30/-R20 MP	3/2	0.5 / 0.5	2	2	2.0	B 50	R		-40 (-40)	+50 (+122)	-50 (-58)	+70 (+158)	64-65
BUTYLEN-AS39 P/-R20 HT	3/2	0.8 / 0.5	2	2	2.6	C 50	HR	12-1	-40 (-40)	+50 (+122)	-50 (-58)	+85 (+185)	66-67
BUTYLEN-AS40 Plus/-090	3/2	0.8 / 0.4	2	2	2.4	B 50	HR		-40 (-40)	+50 (+122)	-50 (-58)	+85 (+185)	68-69
BUTYLEN-AS40 Plus/-R20 HT	3/2	0.8 / 0.5	2	2	2.6	C 50	HR	12-1	-40 (-40)	+50 (+122)	-50 (-58)	+85 (+185)	70-71
BUTYLEN-AS40 Plus/-R25 HT	3/2	0.8 / 0.65	2	2	2.9	C 50	STHR	12-1	-40 (-40)	+50 (+122)	-50 (-58)	+85 (+185)	72-73
BUTYLEN-AS50/-R20 HT	3/2	1.1 / 0.5	2	2	3.2	C 50	THR	12-1	-40 (-40)	+50 (+122)	-50 (-58)	+85 (+185)	74-75
BUTYLEN-E10/-090	3/2	1.0 / 0.4	2	2	2.8	B 30	R		-40 (-40)	+30 (+86)	-50 (-58)	+50 (+122)	76-77
BUTYLEN-ET100/-R20 HT	3/2	1.0 / 0.5	2	2	3.0	B 70			-40 (-40)	+70 (+158)	-50 (-58)	+100 (+212)	78-79
BUTYLEN-N15/-PE3	3/2	1.5 / 0.4	2	1	3.4	B 30	HR		-40 (-40)	+30 (+86)	-50 (-58)	+70 (+158)	80-81
BUTYLEN-N15/-PE5	3/2	1.5 / 0.5	2	2	4.0	C 30	HR		-40 (-40)	+30 (+86)	-50 (-58)	+70 (+158)	82-83
BUTYLEN-N60/-S20	3/3	1.2 / 0.5	2	2	3.4	C 50	HR	12-1	-40 (-40)	+50 (+122)	-50 (-58)	+70 (+158)	84-85
BUTYLEN-S10/-090	3/2	0.8 / 0.4	2	2	2.4		HR		-40 (-40)	+50 (+122)	-50 (-58)	+70 (+158)	86-87
<b>BUTYLEN PE-/Butyl Rubber (Multi Tape Systems)</b>													
System 1 (BUTYLEN-E12/-090/-R20 HT)	3/2/2	1.2/0.4/0.5	2	2+2	4.2	C 30	THR		-40 (-40)	+30 (+86)	-50 (-58)	+70 (+158)	88-89
System 2 (BUTYLEN-N12/-090/-R20 HT)	3/2/2	1.2/0.4/0.5	2	2+2	4.2	C 50	THR		-40 (-40)	+50 (+122)	-50 (-58)	+70 (+158)	90-91
System 3 (BUTYLEN-032-65 AS/-090/-R20 HT)	3/2/2	0.65/0.4/0.5	2	2+2	3.1	C 50	THR		-40 (-40)	+50 (+122)	-50 (-58)	+70 (+158)	92-93
System 4 (BUTYLEN-032-65 AS/-090)	3/2	0.65/0.4	5	2	4.1	C 50	THR		-40 (-40)	+50 (+122)	-50 (-58)	+70 (+158)	94-95
System 5 (BUTYLEN-032-65 AS/-R20 HT)	3/2	0.65/0.5	2	2	2.3	B 50			-40 (-40)	+50 (+122)	-50 (-58)	+70 (+158)	94-95
System 6 (BUTYLEN-032-65 AS/-R20 HT)	3/2	0.65/0.5	2	3	2.8	C 50	THR		-40 (-40)	+50 (+122)	-50 (-58)	+70 (+158)	96-97
<b>DEKOTEC® Heat Shrinkable Sleeves</b>													
DEKOTEC®-HTS70	3	1.8-2.8*			1.8-2.8*	C 60	THR	14B-1	-40 (-40)	+70 (+158)	-40 (-40)	+80 (+176)	110-111
DEKOTEC®-HTS90	3	1.8-2.8*			1.8-2.8*	C 80	THR		-40 (-40)	+90 (+194)	-40 (-40)	+100 (+212)	112-113
DEKOTEC®-MTS30	2	1.8-2.6*			1.8-2.6*	C 30	HR		-35 (-31)	+30 (+86)	-35 (-31)	+40 (+104)	114-115
DEKOTEC®-MTS55	2	1.8-2.6*			1.8-2.6*	C 50	HR	14A-1	-35 (-31)	+60 (+140)	-35 (-31)	+70 (+158)	116-117
DEKOTEC®-MTS55 DI	2	1.8-2.5*			1.8-2.5*	C 50		14A-1	-35 (-31)	+60 (+140)	-35 (-31)	+70 (+158)	118-119

\* System thickness as delivered

## Product Finder Liquid Coatings\*\*

Product	System design		Specialties	Stress class		ISO 21809-3	Operating temperature		Design temperature		Page
	Number of layers	Thickness (mm)		EN 10290	GRTgaz (RV02)		min. °C (°F)	max. °C (°F)	min. °C (°F)	max. °C (°F)	
<b>LIQUITOL® Liquid Coatings</b>											
LIQUITOL®-FK2	1	> 1.5	ideal for factory and field-joint coating and soil to air interface areas	B, Typ 3	HR & THR	18B	-20 (-4)	+80 (+176)	-40 (-40)	+80 (+176)	122-123
LIQUITOL®-FK2 C	1	> 1.5	ideal for factory and field-joint coating and soil to air interface areas	B, Typ 3	HR & THR	18B	-20 (-4)	+80 (+176)	-40 (-40)	+80 (+176)	124-125
LIQUITOL®-HDD	1	> 2.5	ideal for horizontal directional drilling (HDD)	B, Typ 3		18B	-20 (-4)	+80 (+176)	-40 (-40)	+80 (+176)	126-127
LIQUITOL®-TLC	1	> 2.5	ideal for pipe driving/pipe ramming processes	B, Typ 3			-20 (-4)	+80 (+176)	-40 (-40)	+80 (+176)	128-129

\*\*The overview shows a selection of the comprehensive product program without the guarantee of product properties. The respective product properties can be found in the specific product information.



## Product Finder Corrosion Prevention Tapes and Sleeves\*\*

Produkt	Processing		Field of Application				Approvals (selection)	Page
	Cold	Warm	Field joint coating	Rehabilitation	Armatures & moldings	Repair		
<b>PLASTELEN® Petrolatum Tapes</b>								
PLASTELEN®-Cal	✓		✓		✓			30-31
PLASTELEN®-Feu	✓		✓		✓		Alstom (FR)	32-33
PLASTELEN®-Flex	✓		✓		✓			34-35
PLASTELEN®-Tape MT	✓		✓		✓	✓	GRTgaz (FR)	36-37
PLASTELEN®-Plast	✓		✓		✓		DVGW (GER)	38-39
PLASTELEN®-Tec	✓		✓		✓			40-41
PLASTELEN®-Verte	✓		✓				GRDF (FR), Alstom (FR)	42-43
MarineProtect™-Tape	✓		✓		✓		Seaport Taman (RU)	142-143
<b>BUTYLEN PE-/Butyl Rubber Tapes (3-Layer) – selection –</b>								
BUTYLEN-E10	✓		✓		✓	✓		54-55
BUTYLEN-E15	✓		✓		✓	✓		54-55
BUTYLEN-N8	✓		✓		✓	✓		54-55
BUTYLEN-N10	✓		✓		✓	✓		54-55
BUTYLEN-N12	✓		✓		✓	✓		54-55
BUTYLEN-N15	✓		✓		✓	✓		80-81
<b>BUTYLEN PE-/Butyl Rubber (Single Tapes Systems)</b>								
BUTYLEN-AS39 P	✓		✓	✓	✓	✓	DVGW (GER)	56-57
BUTYLEN-AS40 Plus	✓		✓	✓	✓	✓	DVGW (GER), SVGW (CH), INGL (IL)	58-59
BUTYLEN-AS40 Plus	✓		✓	✓	✓	✓	DVGW (GER), Gasteq QA (NL), SVGW (CH), OGE (GER), ÖVGW (AT), Wingas (GER)	58-59
BUTYLEN-AS50	✓		✓	✓	✓	✓	DVGW (GER), Synergrid (BE)	60-61
BUTYLEN-S10	✓		✓	✓	✓	✓	DVGW (GER), Synergrid (BE)	62-63
<b>BUTYLEN PE-/Butyl Rubber (Two-Tape Systems)</b>								
BUTYLEN-AS30/-R20 MP	✓		✓	✓	✓	✓	DVGW (GER), Intergaz (KZ)	64-65
BUTYLEN-AS39 P/-R20 HT	✓		✓	✓	✓	✓	DVGW (GER), IOCL (IN), Enagas (ES), Latvia Gaze (LV), Tüpras (TR), SCOP (IQ), Kogas (KR), SNAM (IT), Intergaz (KZ)	66-67
BUTYLEN-AS40 Plus/-090	✓		✓	✓	✓	✓	GRTgaz (FR), TIGF (FR), AIR LIQUIDE (FR), Technip (FR)	68-69
BUTYLEN-AS40 Plus/-R20 HT	✓		✓	✓	✓	✓	DVGW (GER)	70-71
BUTYLEN-AS40 Plus/-R25 HT	✓		✓	✓	✓	✓	GRTgaz (FR), TIGF (FR), Technip (FR), SUMED (EG)	72-73
BUTYLEN-AS50/-R20 HT	✓		✓	✓	✓	✓	DVGW (GER), Sasol (ZA)	74-75
BUTYLEN-E10/-090	✓		✓	✓	✓	✓	GRDF (FR)	76-77
BUTYLEN-ET100/-R20 HT	✓		✓	✓	✓	✓	Enagas (ES), Technip (FR), Kogas (KR), Taqa (QA), Qatargas (QA)	78-79
BUTYLEN-N15/-PE5	✓		✓	✓	✓	✓	DVGW (GER)	80-81
BUTYLEN-N15/-PE5	✓		✓	✓	✓	✓	DVGW (GER)	82-83
BUTYLEN-N60/-S20	✓		✓	✓	✓	✓	DVGW (GER), ÖVGW (AT), INGL (IL)	84-85
BUTYLEN-S10/-090	✓		✓	✓	✓	✓	GRTgaz (FR), TIGF (FR)	86-87
<b>BUTYLEN PE-/Butyl Rubber (Multi Tape Systems)</b>								
System 1 (BUTYLEN-E12/-090/-R20 HT)	✓		✓	✓	✓	✓		88-89
System 2 (BUTYLEN-N12/-090/-R20 HT)	✓		✓	✓	✓	✓	ÖVGW (AT)	90-91
System 3 (BUTYLEN-032/-65AS/-090/-R20 HT)	✓		✓	✓	✓	✓	ÖVGW (AT)	92-93
System 4 (BUTYLEN-032-65AS/-090)	✓		✓	✓	✓	✓	ÖVGW (AT)	94-95
System 5 (BUTYLEN-032-65AS/-R20 HT)	✓		✓	✓	✓	✓		94-95
System 6 (BUTYLEN-032-65AS/-R20 HT)	✓		✓	✓	✓	✓	ÖVGW (AT)	96-97
<b>DEKOTEC® Heat Shrinkable Sleeves</b>								
DEKOTEC®-HTS70		✓	✓				DVGW (GER), GOST R (RUS), GRTgaz (FR), Enagas (ES)	110-111
DEKOTEC®-HTS90		✓	✓				DVGW (GER), GOST R (RU), SCOP (IQ)	112-113
DEKOTEC®-MTS30		✓	✓				Enagas (ES)	114-115
DEKOTEC®-MTS55		✓	✓				DVGW (GER), Enagas (ES), Amber Grid (LT)	116-117
DEKOTEC®-MTS55 DI		✓	✓					118-119

## Product Finder Liquid Coatings\*\*

Product	Processing		Application examples				Approvals (selection)	Page
	Spraying	Spreading	Field joint coating	Rehabilitation	Armatures & fittings	Repair		
<b>LIQUITOL® Liquid Coatings</b>								
LIQUITOL®-FK2	✓		✓	✓	✓		Open Grid Europe (GER), Enagas (ES), TAL (GER), GRTgaz (FR)	122-123
LIQUITOL®-FK2 C		✓	✓	✓	✓	✓	Open Grid Europe (GER), Enagas (ES), GRTgaz (FR), TAL (GER)	124-125
LIQUITOL®-HDD		✓	✓				GRTgaz (FR), Enagas (ES), INGL (IL), TIGF (FR), GrDF (FR)	126-127
LIQUITOL®-TLC		✓	✓					128-129

\*\*The overview shows a selection of the comprehensive product program without the guarantee of product properties. The respective product properties can be found in the specific product information.



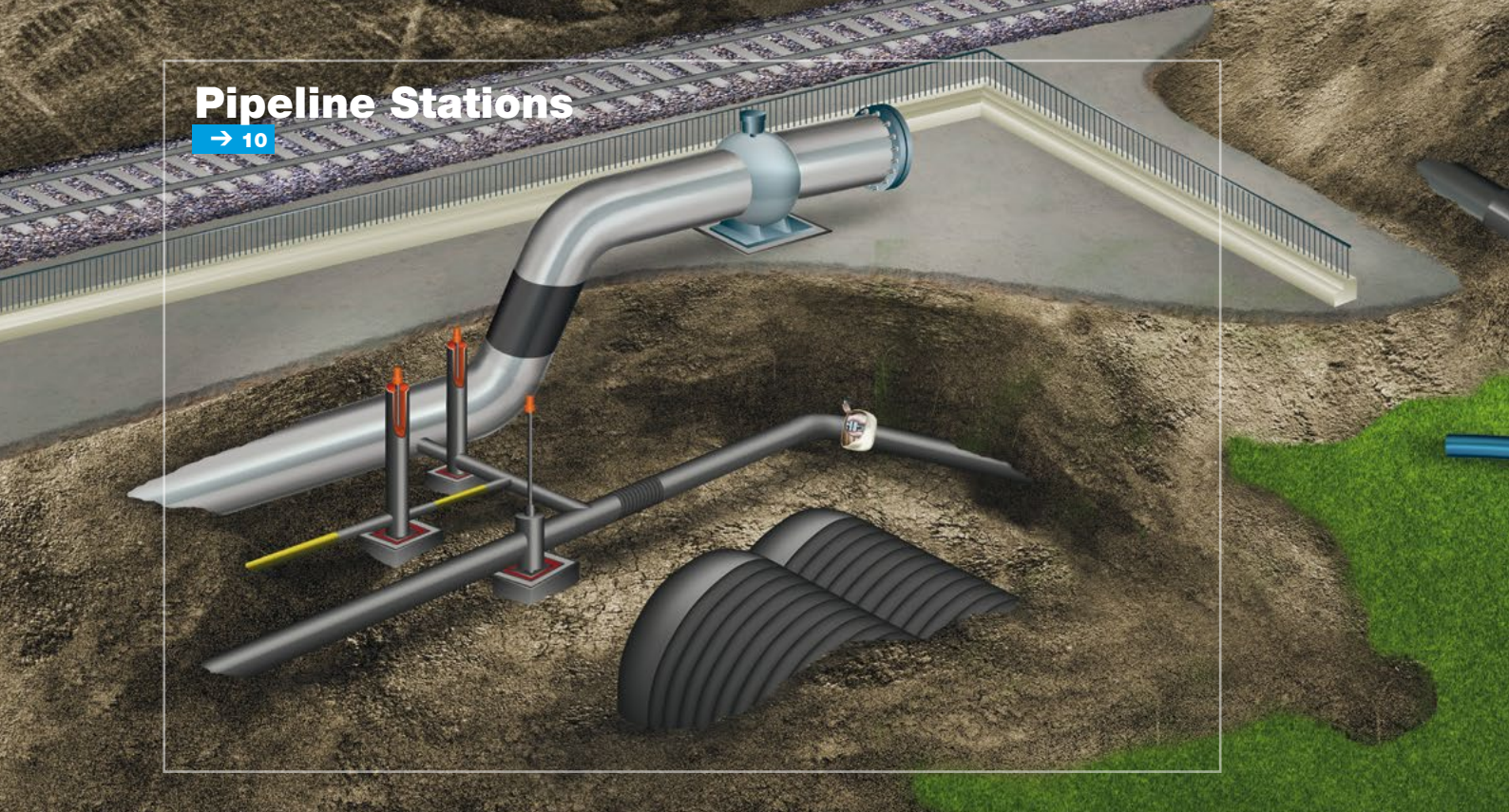
## Pipeline Protection

→ 8



## Pipeline Stations

→ 10





# FIELDS OF APPLICATION

LEVERKUSEN

## Offshore- and Jetty Pile Protection

→ 14

## Sealing & Insulation

→ 16

## Trenchless Pipe Laying

→ 12



## Total pipe coating

### Single Tape Systems:

BUTYLEN-AS39 P

→ 56

-AS40 Plus

-AS50

-S10

### Two-Tape Systems:

BUTYLEN-AS30/-R20 MP

→ 64

-AS39 P/-R20 HT

-AS40 Plus/-090

-AS40 Plus/-R20 HT

-AS40 Plus/-R25 HT

-AS50/-R20 HT

-ET100/-R20 HT

-N60/-S20

-S10/-090

### Multi Tape Systems:

BUTYLEN-System 1 to 6

→ 88

## Field-Joint Coating

### Single Tape Systems:

BUTYLEN-AS39 P

→ 56

-AS40 Plus

-AS50

-S10

### Two-Tape Systems:

BUTYLEN-AS30/-R20 MP

→ 64

-AS39 P/-R20 HT

-AS40 Plus/-090

-AS40 Plus/-R20 HT

-AS40 Plus/-R25 HT

-AS50/-R20 HT

-E10/-090

-ET100/-R20 HT

-N15/-PE5

-N60/-S20

-S10/-090

DEKOTEC®-MTS30

→ 110

-MTS55

-HTS70

-HTS90

LIQUITOL®-FK2

→ 122

-FK2 C

### Multi Tape Systems:

BUTYLEN-System 1 to 6

→ 88



# PIPELINE PROTECTION



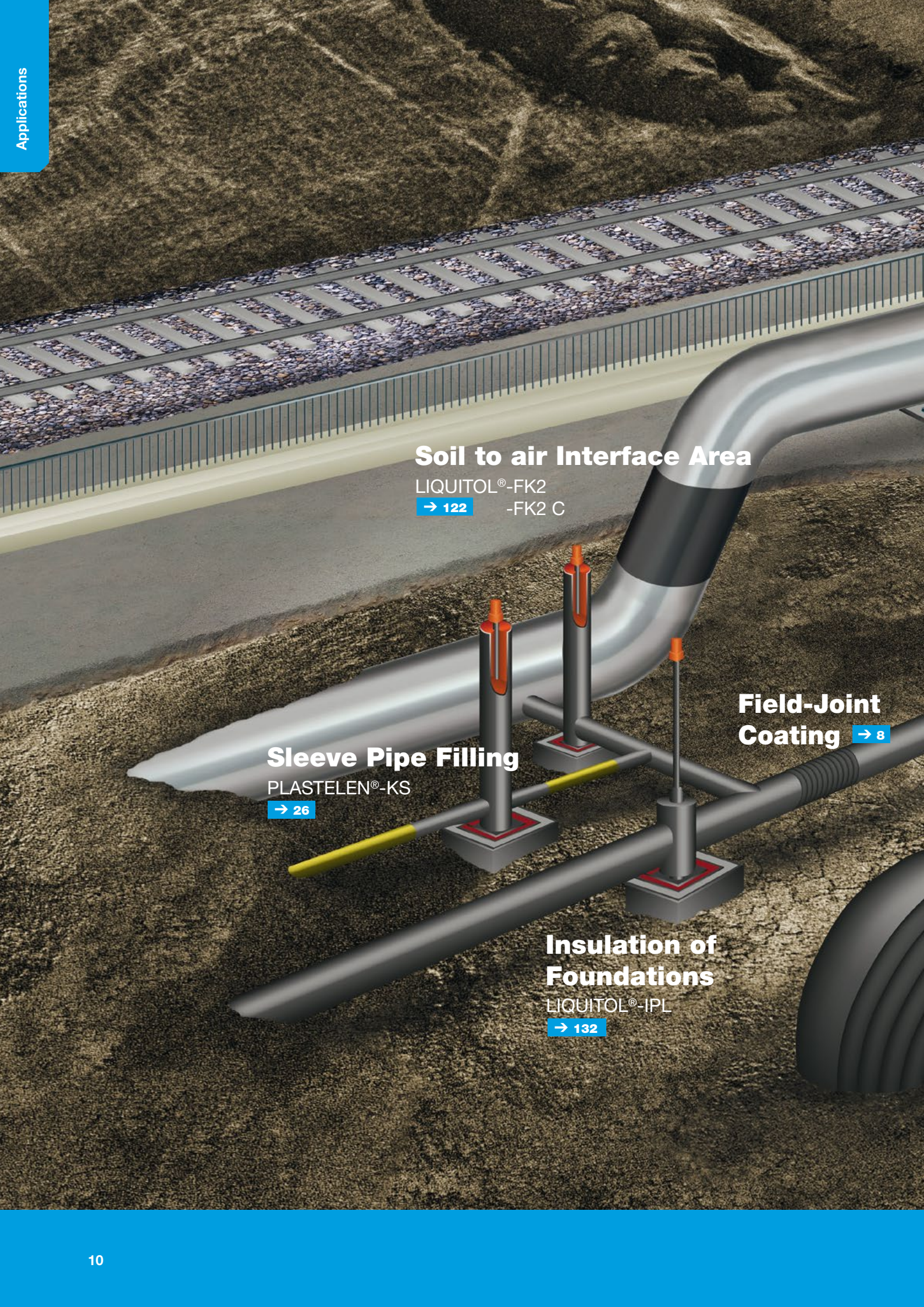
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LIQUITOL®-IPL  
→ 132



# PIPELINE STATION

## Flanges, Armatures and Fittings

PLASTELEN®-Cal

→ 27

-Feu  
-Flex  
-PF Mastic  
-Plast  
-Plast Mastic  
-Tec

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→ 122

-FK2 C

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→ 68

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-S10/-090

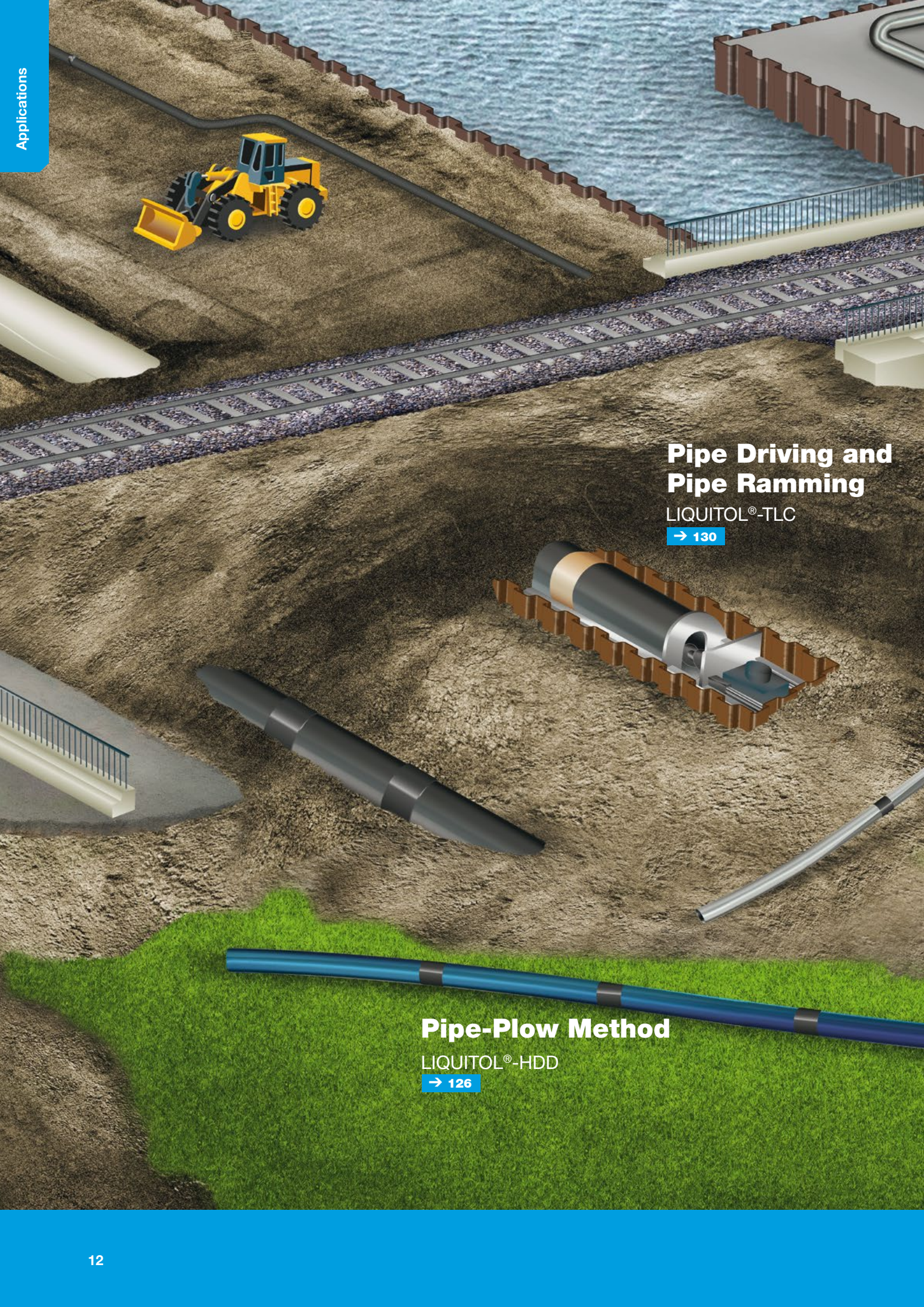
## Liquid Coatings

LIQUITOL®-FK2

→ 122

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LIQUITOL®-TLC

→ 130

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# TRENCHLESS PIPE LAYING



## Horizontal Directional Drilling

LIQUITOL®-HDD

→ 126



## Offshore Systems

PLASTELEN®-Feu

→ 32 -Jet, -Fill, -Cord

BUTYLEN-AS39 P/-R20 HT

→ 66

MarineProtect™-100

→ 158 -2000 FD

VivaxCoat®

→ 46

## Ship Building

DEKOTEC®-FK

→ 144 -K  
-RW120

LEVERKUSEN

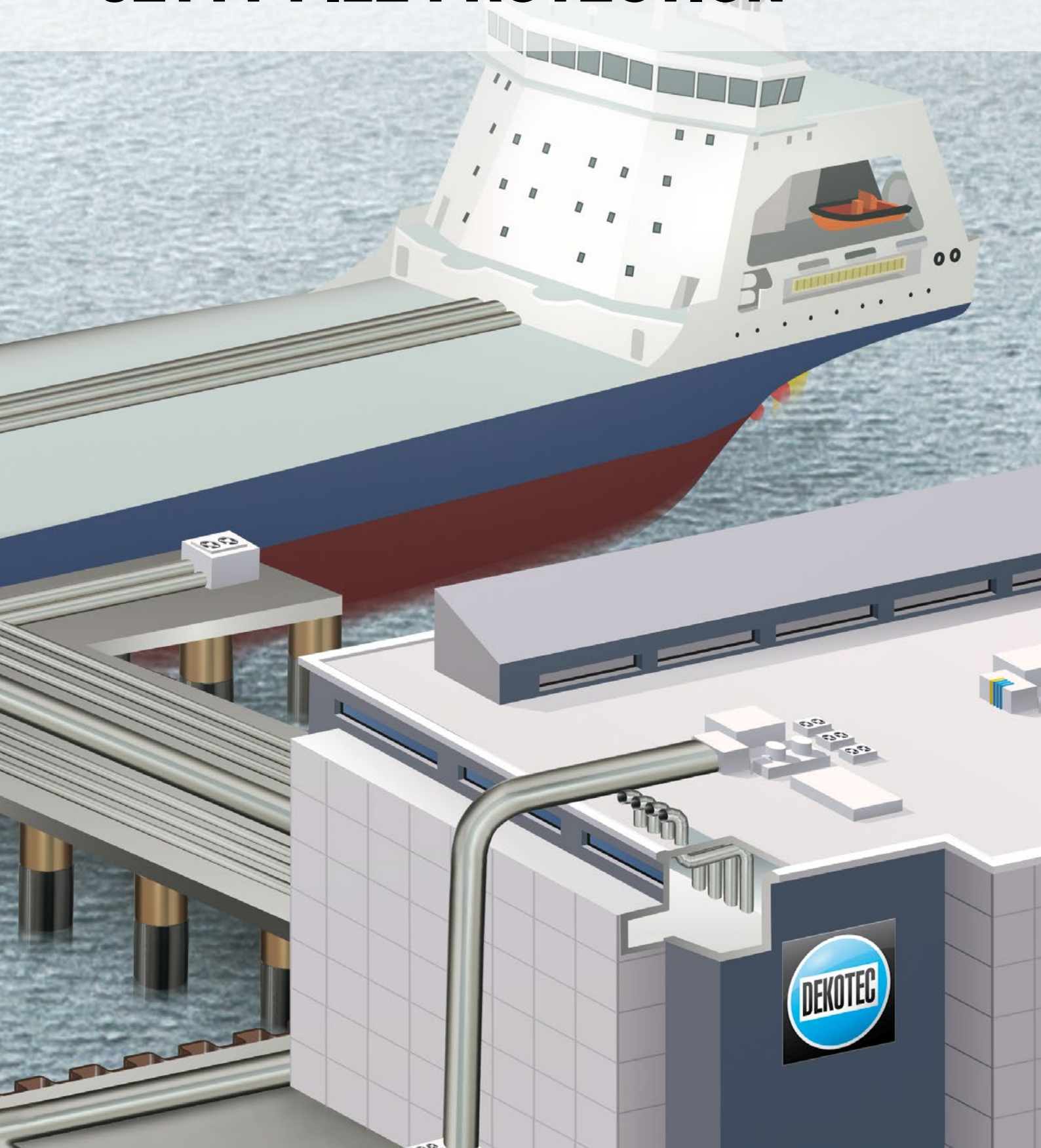
## Jetty Pile Protection

MarineProtect™-100

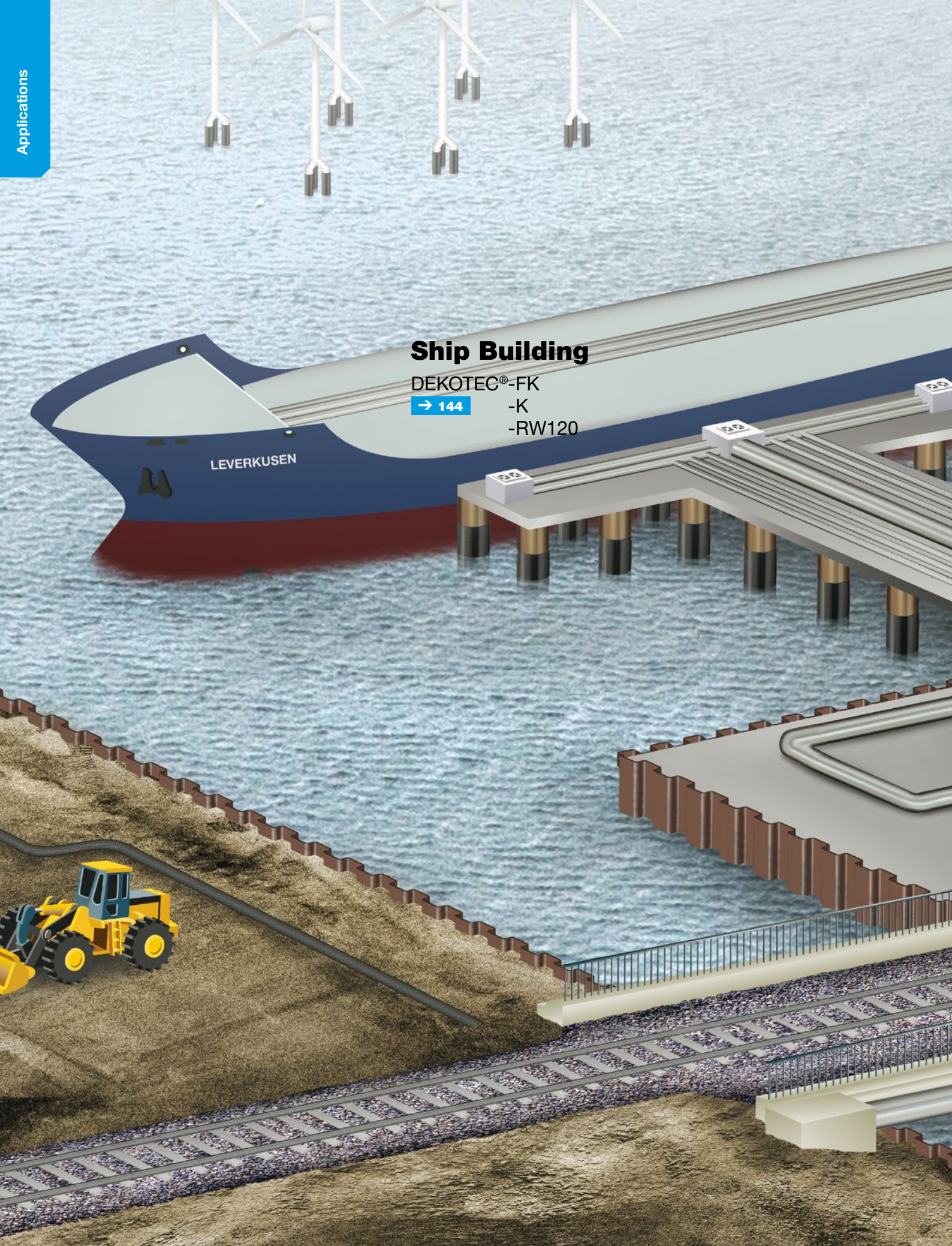
→ 158 -2000 FD



# OFFSHORE- AND JETTY PILE PROTECTION







## Ship Building

DEKOTEC®-FK

→ 144

-K

-RW120



# SEALING & INSULATION

## Metal-Structure, Facade Construction

DEKOTEC®-FK  
→ 144 -K

## Sealing Tapes

PALIMEX®-2000  
→ 147 -KTB500  
-170

## Wagon Construction

DEKOTEC®-RW120  
→ 144

## Pipe Bridges & above ground Pipelines

DEKOTEC®-AL, -PB  
→ 138





***We preserve  
values.***



# REPAIR SYSTEMS

for anti-corrosion coatings

- BUTYLEN-W, -WP, -W+ Mastic
- BUTYLEN-Tape Systems

→ 100

→ 49

**2.**  
BUTYLEN-  
Tape Systems

**1.**  
BUTYLEN-W, -WP, W+  
Mastic

**2.**  
DEKOTEC®-DRP

- DEKOTEC®-Meltstick
- DEKOTEC®-DRP

→ 106

**1.**  
DEKOTEC®-Meltstick

- LIQUITOL®-FK2 C

→ 124







# PLASTELEN®

## Petrolatum Tapes & Mastics



→ 22

### PLASTELEN® Petrolatum-Mastics

PLASTELEN® Petrolatum mastics moisten all metal surfaces optimally and fill the cavities in metallic structures. Together with PLASTELEN® petrolatum tapes they guarantee a permanent corrosion prevention.

- PLASTELEN®-AQ Primer P. 22
- PLASTELEN®-Jet, -Fill, -Cord P. 24
- PLASTELEN®-KS P. 26
- PLASTELEN®-KW P. 27
- PLASTELEN®-PF Mastic P. 28
- PLASTELEN®-Plast Mastic P. 29

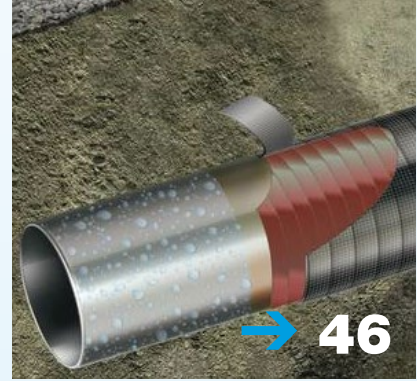


→ 30

### PLASTELEN® Petrolatum-Tapes

Based on the experience of more than 90 years, PLASTELEN® petrolatum tapes meet the highest quality standards. They distinguish themselves through their permanent plastic properties, flexibility and optimal moisturizing of surfaces.

- PLASTELEN®-Cal P. 30
- PLASTELEN®-Feu P. 32
- PLASTELEN®-Flex P. 34
- PLASTELEN®-Tape MT P. 36
- PLASTELEN®-Plast P. 38
- PLASTELEN®-Tec P. 40
- PLASTELEN®-Verte P. 42



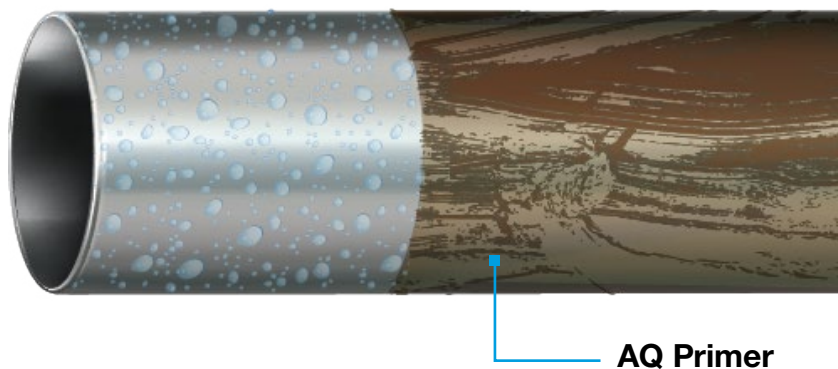
→ 46

### VivaxCoat®

A special property of VivaxCoat® is the coating of surfaces, which include a condensate film and for which therefore traditional field-joint coating systems cannot be used.

- DEPROTEC®-PUR P. 44
- VivaxCoat® P. 46





## Special advantages:

- For operating temperatures up to +80 °C (+176 °F).
- Outstanding moistening of moist surfaces.
- Rust removal with a wire brush is adequate as the surface pre-treatment.
- No pipe disconnection when restoring pipes under load.
- Free of solvent and odor.
- Compatible with all **PLASTELEN®** petrolatum tapes.

# PLASTELEN®-AQ Primer

Corrosion prevention mastic on petrolatum basis for the coating of dry and moist metal substrates.

## Description

**PLASTELEN®-AQ Primer** is a corrosion protection mastic based on petrolatum. More than 90 years of experience, especially with the petrolatum tapes (**PLASTELEN® Tape**), have been utilized for the development of **PLASTELEN®-AQ Primer**.

**PLASTELEN®-AQ Primer** was developed especially for the coating of moist pipe-lines and components. Such moist surfaces can be found, for example, on pipe-lines or coolant lines that are under load or also when the humidity in the environment is high. Normal anti-corrosion coatings

cannot be used under these conditions. The high costs for line disconnections or long waiting times for rehabilitation measures can be avoided by using **PLASTELEN®-AQ Primer**.

**PLASTELEN®-AQ Primer** is used together with the proven **PLASTELEN®** petrolatum tapes. Different tape types are available depending on the required stress class and operating temperature.

**PLASTELEN®-AQ Primer** can be used for permanent operating temperatures of up to +80 °C (+176 °F).

**PLASTELEN®-AQ Primer** is part of the corrosion prevention system **VivaxCoat®**, consisting of the corrosion prevention tape **PLASTELEN®-Tape MT** as well as the mechanical correction tape **DEPROTEC®-PUR**. The system **VivaxCoat®** fulfills the requirements of the specifications of GRTgaz (France) for the classes HR and THR.

**PLASTELEN®-AQ Primer** is applied manually or with a palette-knife to a surface free of rust and loose attachments. The moisture on moist substrates is displaced from the surface and the surface is sealed against corrosive media.





## Typical product properties

Properties	Unit	Typical value	Test method
Processing temperature	°C ( °F)	-10 to +50 (+14 to +122)	-
Permanent operating temperature	°C ( °F)	-30 to +80 (-22 to +176)	-
Dripping point PLASTELEN®-AQ Primer	°C ( °F)	> +100 (> +212)	DIN 51801
Cathodic disbondment resistance 28 days, +23 °C (+73 °F) (with PLASTELEN®-Tape MT)	mm (Radius)	≤ 7	EN 10329
Resistance against microorganism (peel test) (with PLASTELEN®-Tape MT)	-	Cohesive separation pattern	EN 10329
Thermal aging 100 days at +80 °C (+176 °F) (with PLASTELEN®-Tape MT)	-	Cohesive separation pattern	EN 10329

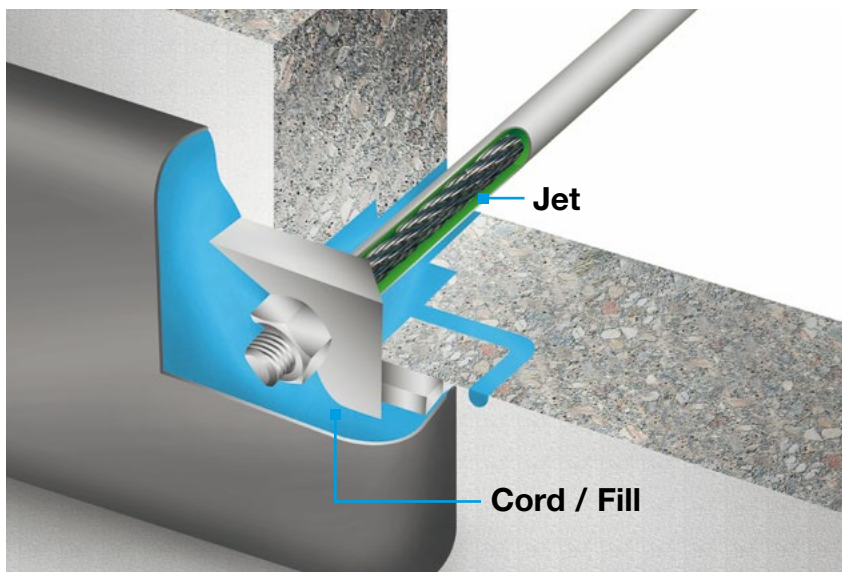
## Ordering information and form of delivery

### PLASTELEN®-AQ Primer:

Bucket 10 kg each

Additional packaging sizes available on request.





## Special advantages:

- Unsaponifiable.
- High adhesion.
- Very good moistening of steel surfaces.
- Low de-oiling.
- Low shrinking during cooling.
- Ideal for prestressed anchors, pre-stressed braids and flange connections.
- Operating temperatures up to +65 °C (+149 °F).

## PLASTELEN®-Jet, -Fill, -Cord

Permanent plastic corrosion prevention mastic on petrolatum basis for the molten pressure injection in prestressed anchor systems, prestressed braids and flange connections.

### Description

**PLASTELEN®-Jet**, **PLASTELEN®-Fill** and **PLASTELEN®-Cord** are permanent plastic, meltable corrosion prevention mastics on petrolatum basis for the use in prestressed anchor systems, prestressed braids and between the flange plates.

**PLASTELEN®-Jet** and **PLASTELEN®-Fill** are designed especially for molten pressure injections into cavities at prestressed anchor systems, **PLASTELEN®-Fill** moreover for the gap at flange

connections. They differentiate itself with respect to their temperature stability of +40 °C (+104 °F) for **PLASTELEN®-Jet** and up to +65 °C (+149 °F) for **PLASTELEN®-Fill**.

Both mastics can be injected by a machine (molten) or through cartridges (slightly heated). **PLASTELEN®-Jet** and **PLASTELEN®-Fill** are available in practical package sizes matching any construction measure.

**PLASTELEN®-Cord** has a very low melt viscosity (temperature dependent) and therefore it is ideally suited for long flow paths, e.g. of up to 50 m and small gaps and cavities that must be filled.

Therefore, **PLASTELEN®-Cord** will be processed for the filling of individual prestressed braids by using special equipment.





## Usage

### PLASTELEN®-Jet

- Pressure injection into long, narrow cavities at prestressed anchors, e.g. into the annular gap between duct and prestressed steel in the area of the free steel length.
- Filling of the core of prestressed bundles by using special equipment.
- Filling the cavities in the area of the

anchor head at permanent temperature stresses up to +40 °C (+104 °F).

### PLASTELEN®-Fill

- Filling the cavities in the area of the anchor head at permanent temperature stresses +65 °C (+149 °F).
- Filling of the annular space between prestressed anchor and fire protection duct in structural design and bridge

construction.

- Coating of steel protrusions exposed to the air.
- Molten filling of horizontal and vertical gaps at flange connections.

### PLASTELEN®-Cord

- Molten filling of individually encased prestressed braids by using special equipment.

## Typical product properties

### PLASTELEN®-Jet, PLASTELEN®-Fill, PLASTELEN®-Cord

Property	Unit	Typical properties			Test method
		PLASTELEN®-Jet	PLASTELEN®-Fill	PLASTELEN®-Cord	
Permanent operating temperature	°C ( °F)	+40 (+104)	+65 (+149)	+40 (+104)	-
Processing temperature	Machine injection	+90 to +120 (+194 to +248)	+90 to +120 (+194 to +248)	+90 to +120 (+194 to +248)	-
	Cartridge injection	+40 to +85 (+104 to +185)	+40 to +85 (+104 to +185)	-	-
Color	-	dark brown	brown	dark brown	-
Density at +23 °C (+73 °F)	g / cm <sup>3</sup>	0.94	0.92	0.89	ISO 2811
Thermal contraction coefficient +100 °C to +23 °C (+212 °F to +73 °F)	grd <sup>-1</sup>	0.61 * 10 <sup>-3</sup>	0.77 * 10 <sup>-3</sup>	0.94 * 10 <sup>-3</sup>	ISO 2811
Dripping point according to Ubbelohde	°C ( °F)	+68 (+154.4)	+83 (+181.4)	+66 (+150.8)	DIN 51801
Viscosity (Rotational viscometer)	+55 °C (+131 °F)	-	4000	500	DIN 53019-1
	+65 °C (+149 °F)	2000	1000	150	
	+85 °C (+185 °F)	450	350	50	
Water absorption (+23 °C / +73 °F)	1 day	< 0.01	< 0.01	< 0.01	DIN EN ISO 62
	23 days	0.08	0.08	0.12	
Saponification number	mg (KOH) / g	1.0	1.0	1.0	DIN EN 12068
Specific electrical resistivity	Ω · cm	> 10 <sup>9</sup>	> 10 <sup>9</sup>	> 10 <sup>9</sup>	DIN IEC 60093

## Ordering information and packaging

Product	Packaging	Content (kg)	Gross weight app. (kg)
PLASTELEN®-Jet	Box with 10 cartridges each	10 x 0.25	3.4
	Hobbock <sup>1)</sup>	20	22
	Barrel <sup>2)</sup>	170	192
PLASTELEN®-Fill	Box with 10 cartridges each	10 x 0.25	3.4
	Hobbock <sup>1)</sup>	20	22
	Barrel <sup>2)</sup>	170	192
PLASTELEN®-Cord	Hobbock <sup>1)</sup>	20	22
	Barrel <sup>2)</sup>	160	182

<sup>1)</sup> Dimensions 350 mm x 360 mm.

<sup>2)</sup> lid barrel with tension and bung hole top, dimensions 590 mm x 890 mm.





## Special advantages:

- Prevents voltage drops at linkages of installation sets.
- Permits the holiday detection by active corrosion protection.
- Slide rods remain switchable even at low temperatures.
- Processing at a relative low temperature.

# PLASTELEN®-KS

Melttable corrosion prevention mastic on petrolatum basis for the filling of sleeve pipes at installation sets.

## Description

**PLASTELEN®-KS** is a permanent plastic corrosion prevention mastic on petrolatum basis for the molten filling of sleeve pipes. Contaminations collect often in sleeve pipes of ground installation armatures, which can result in a standing water column in the sleeve pipe. At cathodic protected pipelines voltage drops may develop in the local protection potential, which can reach values of several 100 mV.

Such defects require on one hand an increased protective current and on the

other hand defects in close proximity cannot be detected or with difficulties only due to the overlapping signals. These problems can be solved effectively and cost-efficient with **PLASTELEN®-KS**.

**PLASTELEN®-KS** can be fused with simple tools (e.g. with the **PLASTELEN®-Meltomat**), which means that the previously cleaned sleeve pipes can be filled. The processing takes place at relatively low temperatures of +70 °C to +90 °C (+158 °F to +194 °F), which means that

high powered boilers are not required and that the thermal shrinkages is limited. The mastic remains permanent plastic after the solidifying, which means that the linkage can be actuated even at low temperatures.

The head of the linkage will not be filled completely to maintain this good accessibility and an encasement with, for example, **PLASTELEN®** petrolatum tape (e.g. **PLASTELEN®-Tec** or **PLASTELEN®-Plast**) can take place.

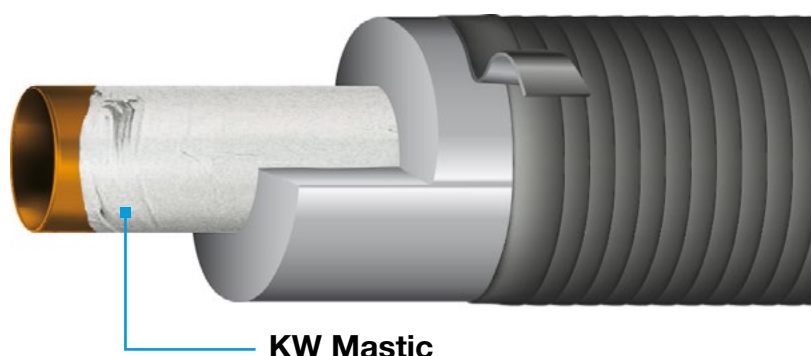
## Typical product properties

Property	Unit	Typical value	Test method
Color	-	red	-
Saponification number	mg KOH / g	≤ 2	DIN EN 12068
Maximum permanent operating temperature	°C ( °F)	+50 (+122)	-
Breakaway torque (linkage with 25 mm edge length)	-10 °C (+14 °F) Nm / (20 cm)		
Processing temperature	°C ( °F)	+70 to +90 (+158 to +194)	-

## Ordering information and packaging

Delivery in plastic bucket, fill quantity 12 kg.





KW Mastic

## Special advantages:

- Superior, long-lasting protection against corrosion.
- Suitable for refrigeration pipelines and plant.
- Permanently elastic even at low temperatures.
- Broad application temperature range of -100 °C (-148 °F) to +60 °C (+140 °F).

# PLASTELEN®-KW

Permanently plastic, petrolatum-based trowelable corrosion prevention mastic.

## Description

**PLASTELEN®-KW** is a permanently plastic, petrolatum-based corrosion protection mastic. **PLASTELEN®-KW** is optimized for corrosion prevention on cooling pipes and pipeline parts. As one example, **PLASTELEN®-KW** can be applied to half-shells or plates that are then attached as thermal insula-

tion to refrigeration lines. Once coated, these half-shells can then be applied to the pipelines. Thanks to the excellent stability exhibited by **PLASTELEN®-KW**, no additional fixing materials are required.

**PLASTELEN®-KW** reliably wets the pipe-surface while sealing the surface against

moisture. Once applied, half-shells can be wrapped with a **BUTYLEN** 2-layer tape (e.g. **BUTYLEN-PE3**) and so fixed in place. Thanks to the permanently elastic qualities of **PLASTELEN®-KW**, insulation and coverings can be easily removed, ensuring that plant components remain easily accessible.

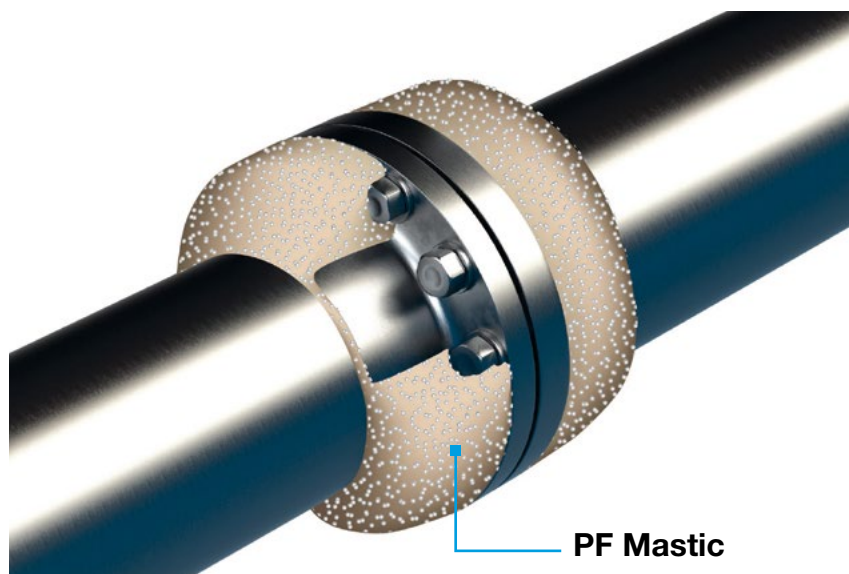
## Typical product properties

Characteristic		Unit	Typical value
Color		-	White, cream-colored
Density		g / cm <sup>3</sup>	1.26 (app.)
Working temperature	Environment	°C ( °F)	-10 to +50 (+14 to +122)
	Pipe surface	°C ( °F)	-10 to +30 (+14 to +86)
	Mastic	°C ( °F)	-10 to +30 (+14 to +86)
Operating temperature		°C ( °F)	-100 to +30 (-148 to +86)
Thermal stability, short-term		°C ( °F)	+60 (+140)

## Ordering information, packaging and storage conditions

Bucket, 12.5 kg; Store in a cool and dry place. <+40 °C (<+104 °F)





## Special advantages:

- Outstanding moldability and modeling properties.
- Easiest manual processing.
- Low density.
- High stability.
- Durable corrosion prevention through petrolatum.
- Compatible with all **PLASTELEN®** petrolatum tapes.

# PLASTELEN®-PF Mastic

Styrofoam ball containing mastic filler on petrolatum basis for the filling of cavities and the equalization of uneven surfaces for the subsequent coverage with a **PLASTELEN®** petrolatum tape.

## Description

**PLASTELEN®-PF Mastic** is a mastic filler on petrolatum basis for the filling of cavities as well as the equalization of uneven surfaces at buried pipeline components (e.g. flanges and armatures). Due to its styrofoam ball content, **PLASTELEN®-PF Mastic** can especially be easier processed at low temperatures than traditional petrolatum mastic fillers. **PLASTELEN®-PF Mastic** offers an outstanding formability and permits the easy

filling of cavities such as the gap between flange plates. This prevents cavities reliably and a complete corrosion prevention coating can be achieved.

The low density makes the transport easier and permits an outstanding stability even at the lower surface of the pipe.

**PLASTELEN®-PF Mastic** will be applied with a palette-knife to the surface to be coated. For this purpose, the mastic

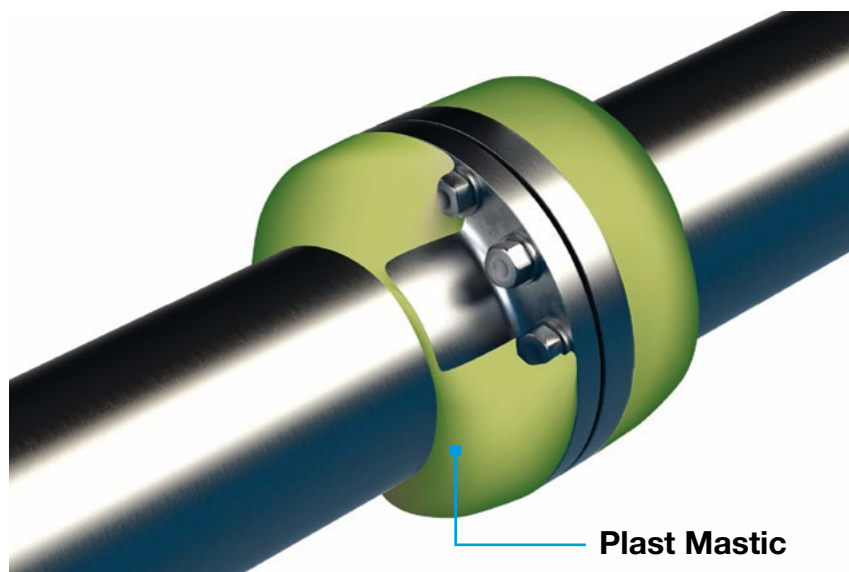
will be modeled in such a way that a **PLASTELEN®** petrolatum tape can be wrapped afterwards completely seated across the coated area.

**PLASTELEN®-PF Mastic** is compatible with all **PLASTELEN®** petrolatum tapes. The encasing with the corrosion prevention tape **PLASTELEN®-Plast** and the rockshield **DEPROTEC®-DRM PP500 Plus** has been proven.

## Typical product properties

Property	Unit	Typical value	Test method
Color	-	brown	-
Density	g / cm <sup>3</sup>	0.5 - 0.55	ISO 2811
Saponification number	mg (KOH) / g	≤ 2	DIN EN 12068
Dripping point (Ubbelohde)	°C ( °F)	≥ +65 (≥ +149)	DIN 51801
Cone penetration	1 / 10 mm	85	DIN 51804
Processing temperature	°C ( °F)	0 to +30 (+32 to +86)	-
Design temperature	°C ( °F)	-40 to +50 (-40 to +122)	-





## Special advantages:

- Ideal for the filling of cavities and for the surface equalization.
- Very good moldability and modeling properties.
- Simple manual processing.
- Durable corrosion prevention through petrolatum.
- Compatible with all **PLASTELEN®** petrolatum tapes.

# PLASTELEN®-Plast Mastic

Fill mastic on petrolatum basis for the filling of cavities and the equalization of uneven surfaces.

## Description

**PLASTELEN®-Plast Mastic** is a fill mastic on petrolatum basis for the filling of cavities as well as the equalization of uneven surfaces at buried pipeline components (e.g. flanges and armatures).

**PLASTELEN®-Plast Mastic**, due to its reinforcement with filler materials and fibers, permits a good moldability and

stability. **PLASTELEN®-Plast Mastic** will be applied manually or with a palette-knife to the surface to be coated. For this purpose the mastic will be modeled in such a way that **PLASTELEN®** petrolatum tape can wrap completely seated across the coated area.

**PLASTELEN®-Plast Mastic** is compatible with all **PLASTELEN®** petrolatum tapes, such as the corrosion prevention tape **PLASTELEN®-Plast**.

A **DEPROTEC®-DRM PP** rockshield made from robust Polypropylene non-woven can be used as an additional protection.

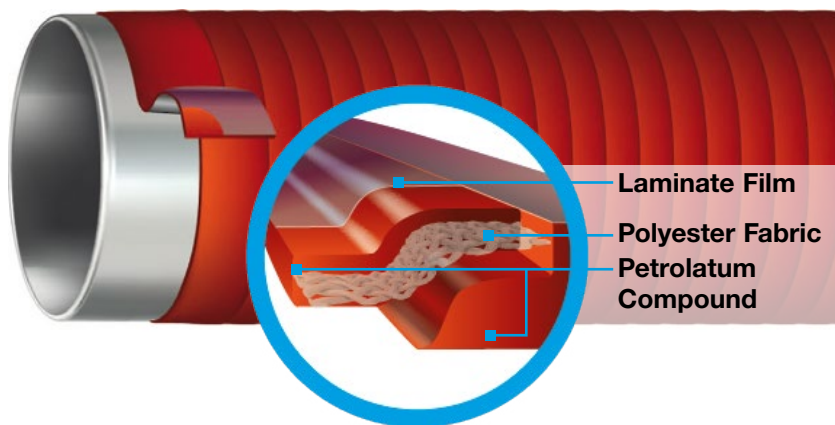
## Typical product property

Property	Unit	Typical value	Standard designation
Color	-	brown	-
Structure	+4 °C (+39 °F)	plastic, still formable, not brittle	-
	+23 °C (+73 °F)	plastic, easily formable	-
Saponification number	mg (KOH)/ g	≤ 2	DIN EN 12068
Permanent operating temperature	°C (°F)	to +50 (+122)	-
Processing temperature	°C (°F)	+4 to +30 (+39 to +86)	-

## Ordering information and packaging

Delivery in plastic bucket  
Fill quantity 2 kg and 12 kg





## Special advantages:

- For operating temperatures of -40 °C (-40 °F) to +110 °C (+230 °F).
- For design temperatures of -50 °C (-58 °F) to +120 °C (+248 °F).
- High plasticity and flexibility.
- Electrically insulating and diffusion resistant.
- No preheating of the surface required.

# PLASTELEN®-Cal

Cold applied corrosion prevention tape for mechanically unstressed pipelines and pipeline components at operating temperatures up to +110 °C (+230 °F).

## Description

**PLASTELEN®-Cal** is a corrosion prevention tape that can be processed cold on the basis of polymer modified petrolatum.

**PLASTELEN®-Cal** consist of an impregnated polyester fabric, which is coated on both sides with a corrosion prevention petrolatum mastic. The petrolatum mastic is stabilized by polymer additives and therefore permits application temperatures of up to +110 °C (+230 °F).

**PLASTELEN®-Cal** has a peel strength, which is exceptional for petrolatum tapes, even for higher temperatures, and provides a good flexibility. In addition

**PLASTELEN®-Cal** provides a single side laminated PP film, which prevents a washing out of the protective mass, e.g. caused by rising or falling groundwater.

**PLASTELEN®-Cal** will be wrapped in spirals with the film side to the outside and with at least 50% overlapping around the pipe.

**PLASTELEN®-Cal** is ideally suited for the encasing of pipelines and a pipeline armatures, which carry hot media and which are located in warm environments.

**PLASTELEN®-Cal** can also be applied to surfaces that are not preheated. For surface temperatures of less than +50 °C

(+122 °F), a coating of the surface takes place initially with the **PLASTELEN®-Cal** Primer, a petrolatum mastic that can be processed easily by hand, which achieves a fast and complete coverage of the surface and a good adhesive connection to the **PLASTELEN®-Cal** tape.

A rockshield **DEPROTEC®-DRM PP** or **BUTYLEN-Tape** can be applied across the encasement to achieve an increased mechanical protection.





## Typical product properties

Property	Unit	Typical value	Test method
Thickness	mm	≥ 1.2	-
Color	-	red	-
Carrier	-	Polyester Fabric	-
Thickness PP laminate film	µm	40	-
Elongation at break	%	≥ 15	-
Dripping point	°C ( °F)	≥ +130 (≥ +266)	DIN ISO 2176
Processing temperature	Tape	+5 to +50 (+41 to +122)	-
	Pipe surface	+40 to +110 (+104 to +230)	-
	Pipe surface (with primer)	-10 to +50 (+14 to +122)	-
Design temperature	°C ( °F)	-50 to +120 (-58 to +248)	-

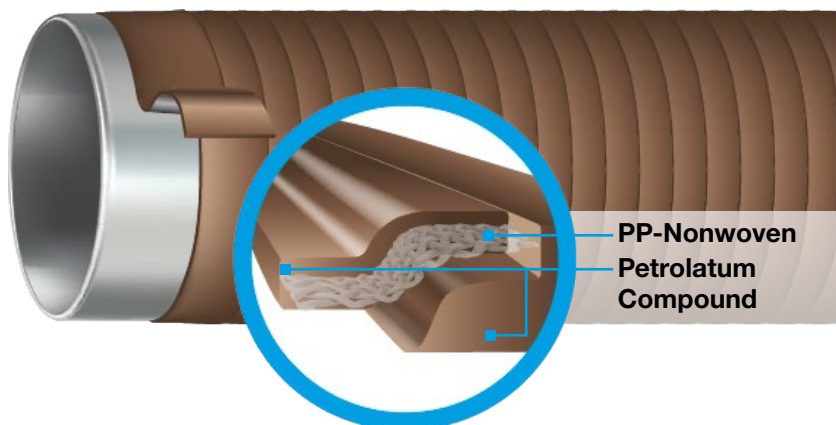
## Ordering information and packaging

Roll length: 10 m

Roll width (mm)	Rolls per box	Tape length per box (m)	Tape surface per box (m²)	Weight per box app. (kg)
50	12	120	6	9.5
100	6	60	6	9.5
150	12	120	18	26

Additional dimensions available on request.





## Special advantages:

- For operating temperatures of -40 °C (-40 °F) to +70 °C (+158 °F).
- For design temperatures of -50 °C (-58 °F) to +80 °C (+176 °F).
- High plasticity and flexibility.
- No preheating of the surface required.
- Simple manual processing.

# PLASTELEN®-Feu

Petrolatum tape for sealing and for corrosion prevention of metallic components, pipes and armatures with operating temperatures up to +70 °C (+158 °F).

## Description

**PLASTELEN®-Feu** is a cold processable corrosion prevention tape on the basis of petrolatum.

**PLASTELEN®-Feu** consists of an impregnated polypropylene nonwoven carrier, which is coated on both sides with a corrosion prevention petrolatum mastic. The petrolatum mastic is stabilized by polymer additives, which means that **PLASTELEN®-Feu** can be used at operating temperatures of -40 °C (-40 °F) to +70 °C (+158 °F). **PLASTELEN®-Feu** can be applied without heating the surface and it moistens the surface even at low temperatures. **PLASTELEN®-Feu** is based on more than 90 years of experience in the production of high quality corrosion prevention products on petrolatum basis. **PLASTELEN®-Feu** is basically impermeable against water and oxygen

and it is electrically insulating. Based on its exceptional properties combination, **PLASTELEN®-Feu** is used in many applications, e.g. as

- Corrosion prevention for pipelines, pipeline components, pipe connections and armatures.
- Corrosion prevention for constructional metallic components.
- Corrosion prevention of metal parts or pipe systems inserted into concrete or screed.
- Galvanic separation layer for metallic constructions.
- Sealing of thermally insulated metal sheet encasements at cold or heat carrying pipelines and components.
- Sealing of industry glazings and greenhouse.

**PLASTELEN®-Feu** will be wrapped as insulation layer at least with one layer and, as corrosion prevention encasement, at least with two layers, which means with 50% overlap. **PLASTELEN®-Feu** can be processed with a layer by layer application for components that are formed complicated and for which a spiral wrapping is not possible. During processing, the tape must be pressed evenly and the mastic must be spread especially in the overlaps.

A rockshield **DEPROTEC®-DRM PP** can be applied above the tape for an increased mechanical protection.

An additional petrolatum tape is available with **PLASTELEN®-Cal** for the use at higher temperature requirements +110 °C (+230 °F).





## Typical product properties

Property	Unit	Typical value	Test method
Thickness	mm	> 1,0	-
Carrier	-	Polypropylene nonwoven	-
Dripping point of the mastic	°C ( °F)	≥ +100 (≥ +212)	-
specific electrical insulation resistance	Ω · m <sup>2</sup>	≥10 <sup>6</sup>	EN 12068
UV stability		good	-
Processing temperature	Environment	-20 to +50 (-4 to +122)	
	PLASTELEN®-Feu	-10 to +40 (+14 to +104)	
Permanent operating temperature	°C ( °F)	-40 to +70 (-40 to +158)	-

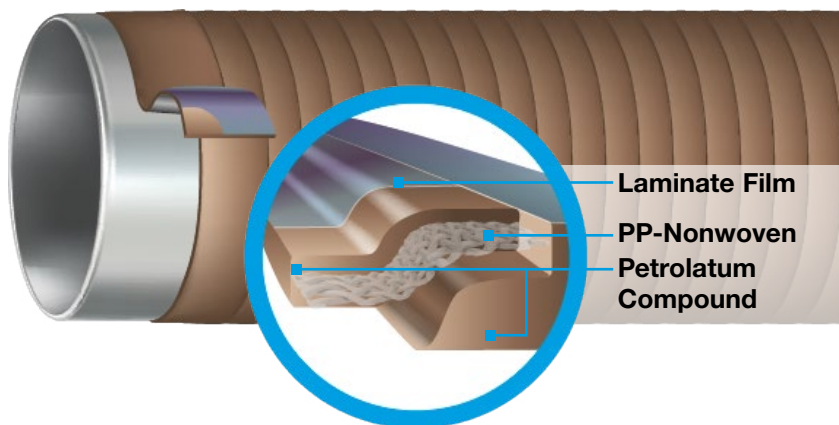
## Ordering information and packaging

Roll length: 10 m

Roll width (mm)	Rolls per box	Tape length per box (m)	Tape surface per box (m <sup>2</sup> )	Weight per box app. (kg)
20	40	400	8.0	9.0
30	36	360	10.8	12.0
50	24	240	12.0	13.2
60	18	180	10.8	12.0
100	12	120	12.0	13.2
200	6	60	12.0	13.2

Additional dimensions available on request.





## Special advantages:

- For operating temperatures of -40 °C (-40 °F) to +30 °C (+86 °F).
- For design temperatures of -50 °C (-58 °F) to +50 °C (+122 °F).
- High plasticity and flexibility.
- Electrically insulating and diffusion resistant.
- Ideally suitable for complex surfaces of pipeline components.
- Simple manual processing.

# PLASTELEN®-Flex

Petrolatum tape for the corrosion prevention encasement of pipelines, pipeline components and metal structures with operating temperatures up to +30 °C (+86 °F).

## Description

**PLASTELEN®-Flex** is a petrolatum tape that can be processed cold for the corrosion prevention encasement of pipelines and pipelines components, e.g. armatures, flange connections, branches and other metallic structures, in soil and water.

Beyond the application of pipeline construction, **PLASTELEN®-Flex** finds use in metal structures, grounding of lightning rods, pre-pressed anchors and many other components.

**PLASTELEN®-Flex** consist of an impregnated polypropylene carrier non-woven, which is coated on both sides with a corrosion prevention petrolatum mastic. In addition **PLASTELEN®-Flex** provides a single side laminated PP film,

which prevents a washing out of the protective mass, e.g. caused by rising or falling groundwater.

**PLASTELEN®-Flex** is based on more than 90 years of experience in the production of high quality corrosion prevention products on petrolatum basis.

The plastic petrolatum mastic of **PLASTELEN®-Flex** completely moistens the surface to be protected and seals it reliably against corrosive media such as water and oxygen.

**PLASTELEN®-Flex** has a thickness of 1.5 mm and therefore offers a tight encasement already with one winding process with 50% overlap with a significantly higher mechanical resistance than comparable petrolatum tapes.

Components for which a spiral type wrapping is not possible can be protected with **PLASTELEN®-Flex** using a layer by layer application.

Compatible equalization and modeling mastics on petrolatum basis are available with **PLASTELEN®-PF Mastic** and **PLASTELEN®-Plast Mastic** for the encasements of flanges and other complex geometries.

A rockshield **DEPROTEC®-DRM PP** or **BUTYLEN-Protect** can be applied across the encasement to achieve an increased mechanical protection.





## Typical product properties

Property	Unit	Typical value	Required value	Test method
Thickness	mm	≥ 1.5	-	-
Carrier		Polypropylene nonwoven	-	-
Thickness PP laminate film	µm	100	-	-
System design	Primer	No primer	-	-
	Encasement	2 layers	-	-
Specific electrical insulation resistance	Ω · m <sup>2</sup>	≥ 3·10 <sup>7</sup>	≥ 10 <sup>6</sup>	EN 12068
Cathodic disbondment 28 days, +23 °C (+73 °F)	mm	≤ 4	≤ 20	EN 12068
Impact resistance	J	> 2		EN 12068
Indentation resistance (0.1 MPa)	mm	> 2	> 0.6	EN 12068
Drip resistance +50 °C (+122 °F), 48h	-	No dripping	No dripping	EN 12068
Low temperature unrolling test +5 °C (+23 °F)	-	passed	No separation, no crack development	EN 12068
Saponification value petrolatum mastic	mg KOH / g	≤ 10	< 25	EN 12068

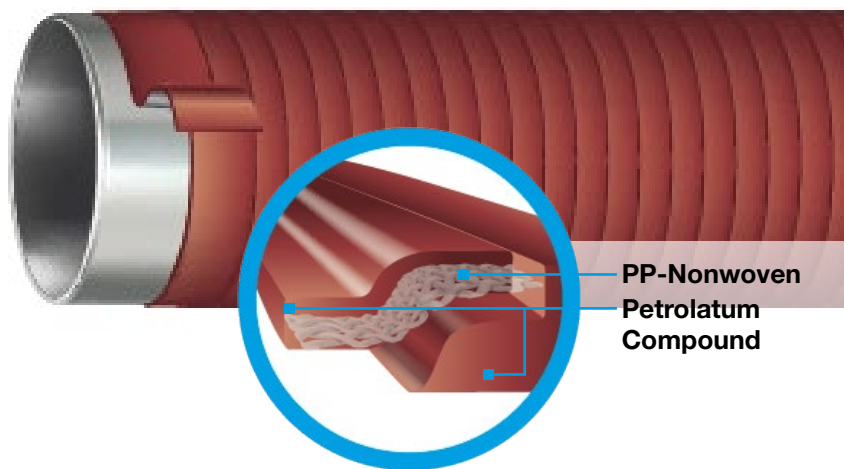
## Ordering information and packaging

Roll length: 10 m

Roll width (mm)	Rolls per box	Tape length per box (m)	Tape surface per box (m <sup>2</sup> )	Weight per box app. (kg)
30	18	180	5.4	9.2
50	12	150	6	8.9
100	6	60	6	8.9

Additional dimensions available on request.





## Special advantages:

- For permanent operating temperatures of -30 °C (-22 °F) to +60 °C (+140 °F) and short-term temperatures of -30 °C (-22 °F) to +80 °C (+176 °F).
- Easy processing on different pipe diameters and components.
- Rust removal with a wire brush is adequate.
- Free of solvent and odor.
- Outstanding qualification for high mechanical and thermal loads.
- In combination with **PLASTELEN®-AQ Primer** outstanding qualification for high mechanical and thermal loads.

# PLASTELEN®-Tape MT

Corrosion prevention tape based on petrolatum for the reliable coating of pipelines and pipeline components.

## Description

**PLASTELEN®-Tape MT** is a corrosion prevention tape based on petrolatum in accordance with EN 12068. More than 90 years of experience, especially with the petrolatum tapes (**PLASTELEN® Tape**) invented by DEKOTEC, have been utilized for the development of **PLASTELEN®-Tape MT**.

**PLASTELEN®-Tape MT** consists of a robust polypropylene nonwoven and a corrosion prevention mastic based on petrolatum, which has a high dripping point and good adhesive resistances even at high temperatures. Therefore, **PLASTELEN®-Tape MT** is extremely well qualified for high mechanical and thermal loads at permanent operating temperatures of up to +60 °C (+140 °F),

as well as short term temperatures of up to +80 °C (+176 °F).

**PLASTELEN®-Tape MT** is used in combination with **PLASTELEN®** petrolatum mastics, which are available for different requirements. For example, **PLASTELEN®-AQ Primer** permits the coating of moist substrates. **PLASTELEN®-PF Mastic** is, for example, especially qualified if large geometries must be formed (e.g. for the encasement of flanges).

**PLASTELEN®-Tape MT** is wrapped with 50% overlap over a surface that was prepared with a **PLASTELEN®** petrolatum mastic. **BUTYLEN-AS50** or **DEPROTEC®-DRM PP** rockshield can be applied as an additional mechanical protection.

A high impact resistance is achieved in combination with **BUTYLEN-AS50** and an additional tight encasement will be established.

**PLASTELEN®-Tape MT** is part of the corrosion prevention system **VivaxCoat®**, which includes **PLASTELEN®-AQ Primer**, as a water repellent anti corrosion coating or **BUTYLEN-AS50**, as a mechanical protective tape. The system **VivaxCoat®** fulfills the requirements of the specifications of GRTgaz (France) for the classes HR and THR.





## Typical product properties

Property	Unit	Typical value	Test method
Processing temperature	°C ( °F)	-10 to +50 (+14 to +122)	-
Permanent operating temperature	°C ( °F)	-30 to +60 (-22 to +140)	-
Design temperature	°C ( °F)	-30 to +80 (-22 to +176)	-
Thickness	mm	1.7	-
Dripping test at +50 °C (+122 °F)		No dripping	EN 12068
Cathodic disbondment resistance 28 days, +23 °C <sup>(1)</sup> (+73 °F)	mm (Radius)	≤ 7	EN 10329
Peel strength on steel <sup>(1)</sup>	+23 °C (+73 °F)	Cohesive separation pattern	EN 12068
	+60 °C (+140 °F)	Cohesive separation pattern	
Impact resistance <sup>(2)</sup>	J	> 15	EN 12068
Indentation resistance at +60 °C (+140 °F) <sup>(2),(3)</sup> (10MPa, 3d)	mm (Residual layer thickness)	> 1.1	EN 12068
Resistance against microorganism (peel test) <sup>(1)</sup>	-	Cohesive separation pattern	EN 10329
Heat aging 100d at +80 °C (+176 °F) <sup>(1)</sup>	-	Cohesive separation pattern	EN 10329

(1) System with PLASTELEN®-AQ Primer

(2) System with PLASTELEN®-AQ Primer and BUTYLEN-AS50

(3) System with PLASTELEN®-AQ Primer and DEPROTEC®-PUR

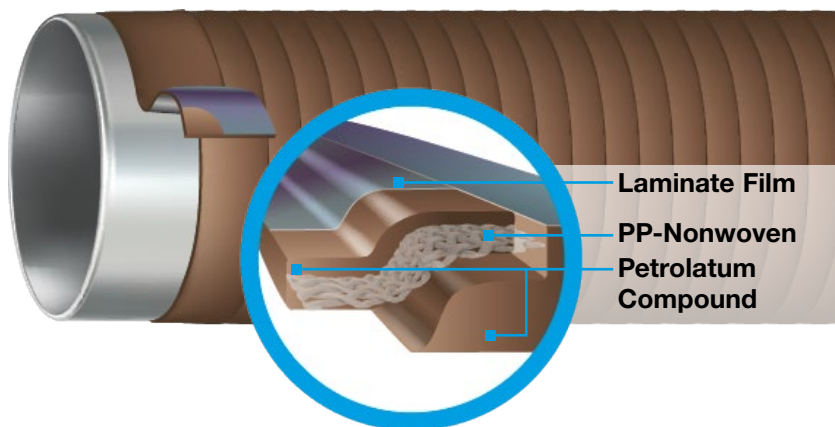
## Ordering information and packaging

Roll length: 10 m

Width (mm)	Number of rolls per box	Total tape length per box (m)	Total tape area per box (m <sup>2</sup> )	Weight per box app. (kg)
50	12	120	6	11
100	6	60	6	11
150	5	50	7.5	14

Additional dimensions available on request.





## Special advantages:

- Ideally suitable for complex surfaces of pipeline components.
- High plasticity and flexibility.
- For operating temperatures of -40 °C (-40 °F) to +30 °C (+86 °F).
- DIN-DVGW approval for stress class **A 30** in accordance with DIN 30672 and EN 12068.
- Simple manual processing.
- Reliable and permanent corrosion prevention.

# PLASTELEN®-Plast

Cold applied petrolatum tape in accordance with DIN 30672 and DIN EN 12068 for the corrosion protective encasement of pipelines, pipeline components and metal structures.

## Description

**PLASTELEN®-Plast** is a petrolatum tape in accordance with DIN 30672 and DIN EN 12068 that can be processed cold for the corrosion prevention encasement of pipelines and pipelines components, e.g. armatures, flange connections, branches and other metallic structures, in soil and water.

Beyond the application of pipeline construction, **PLASTELEN®-Plast** is used for metal structures, grounding of lightning rods or pre-pressed anchors.

**PLASTELEN®-Plast** with its advanced development is used for more than 90 years with an outstanding success and it fulfills the current quality standards for a permanent corrosion protection.

**PLASTELEN®-Plast** consist of an impregnated polypropylene carrier nonwoven, which is coated on both sides with a corrosion prevention petrolatum mastic.

In addition **PLASTELEN®-Plast** provides a single side laminated PP film, which prevents a washing out of the protective mass, e.g. caused by rising or falling groundwater.

The plastic petrolatum mastic of **PLASTELEN®-Plast** completely moistens the surface to be protected and seals it reliably against corrosive media such as water and oxygen.

**PLASTELEN®-Plast** has a DVGW approval for stress class **A 30** in accordance with DIN 30672 and DIN EN 12068 (NG-5180AO0703) and it is therefore subject to frequent internal and external quality controls.

Standard designation:

- Coating DIN 30672 – **A 30**
- Coating EN 12068 – **A 30**



The encasement system **PLASTELEN®-Plast** consists of three tape layers, which are either achieved with a wrapping process with 66% overlap or two wrapping processes with an inner wrapping with 50% overlap and an additional outer wrapping with 10 mm overlap. **PLASTELEN®-Plast** can be processed with a layer by layer application for components that are formed complicated and for which a spiral wrapping is not possible.

Compatible equalization and modeling mastics on petrolatum basis are available with **PLASTELEN®-PF Mastic** and the **PLASTELEN®-Plast Mastic** for the encasements of flanges and other complex geometries.

A rockshield **DEPROTEC®-DRM PP** or **BUTYLEN-Tape** can be applied across the encasement to achieve an increased mechanical protection.





## Typical product properties

Property	Unit	Typical value	Required value	Test method
Thickness	mm	app. 1.1	-	-
Carrier		Polypropylen-nonwoven	-	-
Thickness PP-laminate film	µm	55	-	-
System design	Primer	No primer	-	-
	Tape	3 layers	-	-
Impact resistance (3 layers)	J	> 4	> 4	EN 12068
Indentation resistance, 0,1 MPa rod load (residual layer thickness)	mm	> 2,4	> 0.6	EN 12068
Specific electrical insulation resistance	Ω · m <sup>2</sup>	≥ 3*10 <sup>7</sup>	≥ 10 <sup>6</sup>	EN 12068
Cathodic disbondment resistance +23 °C (+73 °F) 28 days	mm	≤4	≤ 20	EN 12068
Drip resistance +50 °C (+122 °F) 48h	-	No dripping	No dripping	EN 12068
Low temperature unrolling test 5 °C (+23 °F)	-	Passed	No separation, no crack development	EN 12068
Saponification number (petrolatum compound)	mg KOH / g	≤ 10	< 25	EN 12068

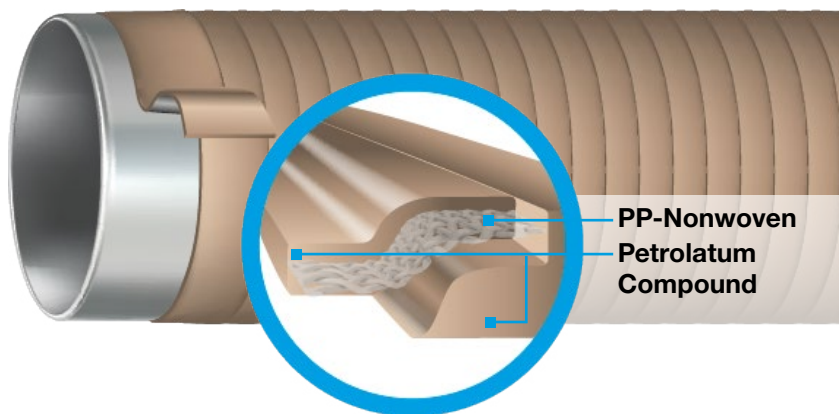
## Ordering information and packaging

Roll length: 10 m

Roll width (mm)	Rolls per box	Tape length per box (m)	Tape surface per box (m <sup>2</sup> )	Weight per box app. (kg)
20	60	600	12	13.5
30	36	360	10.8	12.5
50	24	240	12	13.5
75	12	120	9	10.5
100	12	120	12	13.5
150	6	60	9	10.5
200	6	60	12	13.5
250	4	40	10	11.5
300	4	40	12	13.5
400	4	40	16	18.0

Additional dimensions available on request.





## Special advantages:

- For operating temperatures of -40 °C (-40 °F) to +35 °C (+95 °F).
- For design temperatures of -40 °C (-40 °F) to +50 °C (+122 °F).
- High plasticity and flexibility.
- Electrically insulating and diffusion resistant.
- Ideally suitable for complex surfaces of pipeline components.
- Easiest manual processing.

# PLASTELEN®-Tec

Plastic petrolatum tape for sealing and for corrosion prevention at metallic components, pipes and armatures with operating temperatures up to +35 °C (+95 °F).

## Description

**PLASTELEN®-Tec** is a corrosion prevention tape that can be processed cold on the basis of petrolatum.

**PLASTELEN®-Tec** consist of an impregnated polypropylene carrier non-woven, which is coated on both sides with a corrosion prevention petrolatum mastic. The petrolatum mastic is stabilized by polymer additives, which means that it can be used at operating temperatures of -40 °C (-40 °F) to +35 °C (+95 °F).

**PLASTELEN®-Tec** is impermeable for water and highly resistant against hydrous electrolyte solution.

**PLASTELEN®-Tec** is based on more than 90 years of experience in the production of high quality corrosion prevention products on petrolatum basis.

**PLASTELEN®-Tec** is used in many applications, e.g. as

- Corrosion prevention for structural metallic components in buildings and above ground systems,
- Corrosion prevention of metal parts or pipe systems inserted into concrete or screed,
- Galvanic separation layer for metallic constructions,
- Corrosion prevention of cooling lines or heat insulating insulations.

**PLASTELEN®-Tec** will be wrapped as insulation layer at least with one layer and, as corrosion prevention encasement with 50% overlap, at least with two

layers, or processed layer by layer with an adequate overlap.

An alternative corrosion prevention tape with a laminated PP film is available with **PLASTELEN®-Plast** for buried pipelines, which provides an increased resistance against washing out, e.g. due to rising and falling groundwater.

**PLASTELEN®-Tape MT** +60 °C (+140 °F), **PLASTELEN®-Feu** +70 °C (+158 °F) and **PLASTELEN®-Cal** +110 °C (+230 °F) are additional corrosion prevention tapes with the proven DEKOTEC quality for applications with higher temperature requirements.





## Typical product properties

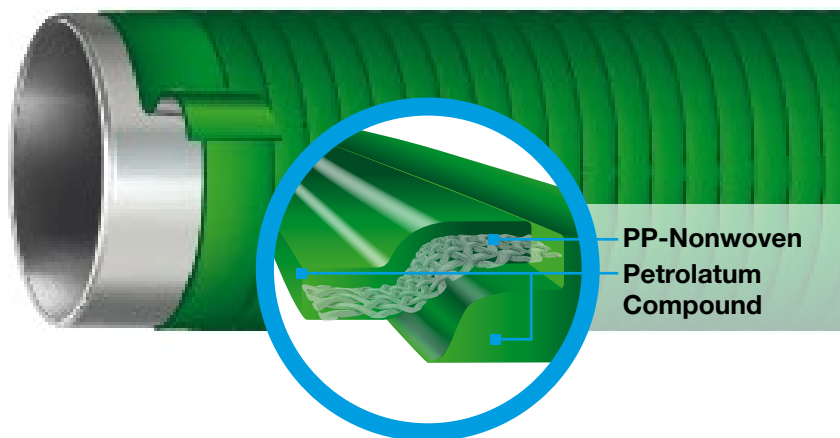
Property	Unit	Typical value	Required value	Test method
Thickness	mm	ca. 1.1	-	-
Carrier	-	Polypropylene nonwoven	-	-
Specific electrical insulation resistance	$\Omega \cdot m^2$	$\geq 10^7$	$\geq 10^6$	EN 12068
Drip resistance 48h, +50 °C (+122 °F)	-	No dripping	No dripping	EN 12068
Dripping point	°C ( °F)	app. +60 (app. +140)	-	-
Low temperature unrolling test +5 °C (+23 °F)	-	passed	No separation, no crack development	EN 12068
Saponification value (petrolatum mastic)	mg KOH / g	$\leq 10$	< 25	EN 12068
UV stability	-	good	-	-
Permanent operating temperature	°C ( °F)	-40 to +35 (-40 to +95)	-	-
Design temperature	°C ( °F)	-40 to +50 (-40 to +122)	-	-

## Ordering information and packaging

Roll length: 10 m

Width (mm)	Number of rolls per box	Tape length per box (m)	Tape surface per box (m <sup>2</sup> )	Weight per box app. (kg)
50	24	240	12	13.2
100	12	120	12	13.2
150	6	60	9	10.0
200	6	60	12	13.2

Additional dimensions available on request.



## Special advantages:

- For design temperatures up to +50 °C (+122 °F).
- Permanently plastic.
- Can be processed cold without primer.
- Resistant against acids, lyes and salts.
- Impermeable for water and gas.
- Flexible and adaptable.
- Fulfills GrDF standard MBAA023 and BAA023.

# PLASTELEN®-Verte

Plastic petrolatum tape for sealing and corrosion prevention at metallic components, cable connections, pipelines and armatures.

## Description

**PLASTELEN®-Verte** is a cold applied corrosion prevention tape based on petrolatum in accordance with EN 12068 and it fulfills the standards MBAA023 and BAA023 of Gaz Réseau Distribution France (GRDF).

**PLASTELEN®-Verte** consist of an impregnated polypropylene carrier non-woven, which is coated on both sides with a corrosion prevention petrolatum mastic. The petrolatum mastic is stabilized by polymer and mineral additives, which means that it can be used at design temperatures of -50 °C (+58 °F) and up to +50 °C (+122 °F).

**PLASTELEN®-Verte** is moisture impermeable and highly resistant against acids, lyes and salts.

**PLASTELEN®-Verte** is based on more than 90 years of experience in the production of high quality corrosion prevention products on petrolatum basis.

**PLASTELEN®-Verte** is used in many applications, e.g. as

- Corrosion prevention for structural metallic components in buildings and above ground systems;
- Corrosion prevention of metal parts or pipe systems inserted into concrete or screed;
- Galvanic separation layer for metallic constructions;
- Temporary sealing of leaks in low-pressure gas pipes;

**PLASTELEN®-Verte** will be wrapped as insulation layer at least with one layer and, as corrosion prevention encasement, at least with two layers, which means wrapped with at least 50% overlapping or layer-by-layer with appropriate overlapping.

A rockshield **DEPROTEC®-DRM PP** or **BUTYLEN-Tape** can be applied across the encasement to achieve an increased mechanical protection.

**PLASTELEN®-Tape MT** +60 °C (+140 °F), **PLASTELEN®-Feu** +70 °C (+158 °F) and **PLASTELEN®-Cal** +110 °C (+230 °F) are additional corrosion prevention tapes with the proven DEKOTEC quality for applications with higher temperature requirements.





## Typical product properties

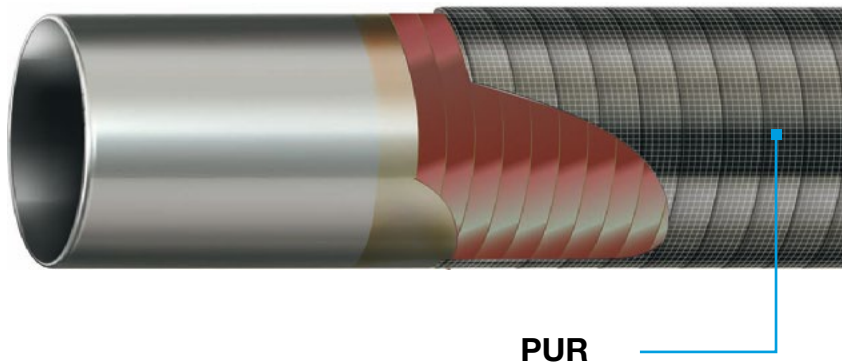
Property	Unit	Typical value	Required value	Test method
Thickness	mm	app. 1.1	-	-
Color	-	Brown-green	-	-
Carrier	-	Polypropylene nonwoven	-	-
Dielectric strength	kV / mm	≥ 9	-	-
Specific electrical insulation resistance	$\Omega \cdot m^2$	≥ 10 <sup>10</sup>	≥ 10 <sup>10</sup>	EN 12068
Tape strength	N / cm	≥ 60	-	EN 12068
Elongation at break	%	≥ 7	-	EN 30672
Dripping point	°C (°F)	app. +60 (app. +140)	-	-
Saponification number	mg KOH / g	≤ 0.25	< 25	EN 12068
Permanent operating temperature	°C (°F)	-50 to +30 (-58 to +86)	-	-
Design temperature	°C (°F)	-50 to +50 (-58 to +122)	-	-

## Ordering information and packaging

Roll length: 10 m

Roll width (mm)	Rolls per box	Tape length per box (m)	Tape surface per box (m <sup>2</sup> )	Weight per box app. (kg)
50	24	240	12	18
100	12	120	12	18
150	12	120	18	25
200	6	60	12	17

Additional dimensions available on request.



## Special advantages:

- Increases mechanical resistance of coatings.
- High protection against cutting.
- Fast curing within 20 minutes.
- Ready-to-use no laminating necessary.
- Tool-free application.
- For temperatures up to +110 °C (+230 °F).

# DEPROTEC®-PUR

Glass fiber bandage for additional mechanical protection of anti-corrosion coatings.

## Description

**DEPROTEC®-PUR** is a glass fiber bandage for the additional mechanical protection of anti-corrosion coatings and field-joint coating. The glass fiber fabric is soaked in a polyurethane resin and it hardens – depending on the ambient conditions – within approximately 20 minutes to a hard and permanent protective encasement.

**DEPROTEC®-PUR** can be processed quickly and easily and, based on its flexibility during processing, it can also be used for complex geometries, e.g.

for armatures and flanges. Tools are not required for processing. Extensive and errorprone lamination, as needed for many GRP systems, is not required.

The hardened polyurethane and the resistant glass fibers result in a high mechanical stability at temperatures of up to +110 °C (+230 °F).

**DEPROTEC®-PUR** can be used where anti-corrosion coatings are subjected to strong mechanical stresses. Therefore, it gives encasements made from **PLASTELEN®** petrolatum tapes a signi-

ficantly higher mechanical resistance.

**DEPROTEC®-PUR** can also be used in combination with **BUTYLEN** tapes, e.g. for large area repairs with the **BUTYLEN-Mastic**. **DEPROTEC®-PUR** therefore guarantees an additional stability and prevents an overly cold flow of the butyl mastic.

**DEPROTEC®-PUR** increases the impact resistance and the indentation resistance of field-joint coatings significantly and offers a very good protection against cuttings.





## Processing

The provided gloves should be worn when processing **DEPROTEC®-PUR**. The bandage will be wrapped around the coated pipeline in spirals with little tensile stress. Depending on the required degree of reinforcement, the bandage can be applied single layer overlapping

or with multiple layers. The thickness of one layer is approximately 0.9 mm.

For a multi-layer processing and when using several rolls, the work should progress speedily before the first layer hardens to ensure that the layers grow together. The material can be slightly

moistened to accelerate the hardening. The end pieces of the rolls should be pressed tightly to prevent a rising of the corners. **LIQUITOL®-FK2 C** (50 ml) is outstandingly qualified for the fast adhesion of the end pieces of the rolls.

## Typical product properties

Reinforcement of BUTYLEN-AS40 Plus	Without DEPROTEC®-PUR	2 layers of DEPROTEC®-PUR	4 layers of DEPROTEC®-PUR	Test method
Impact resistance	15 J	22 J	40 J	DIN EN 12068

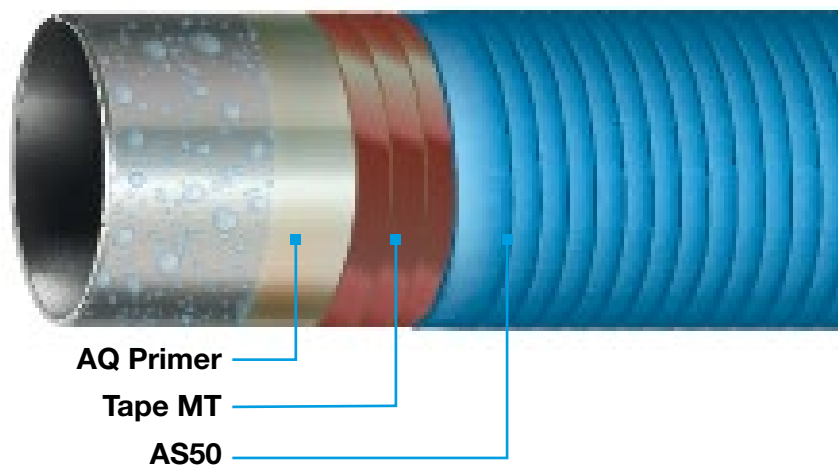
## Ordering information and form of delivery

Dimensions: 97 mm x 4.5 m

Box with 12 rolls each and 12 pairs of disposable gloves

Surface: 5.3 m<sup>2</sup> per box

Color: black



AQ Primer

Tape MT

AS50

## Special advantages:

- Only little surface pre-treatment is required.
- Fulfills class HR and THR in accordance with SP-PC RV02 and RV08 of GRTgaz for temperatures up to +60 °C (+140 °F).
- Easy application, even on moist substrates, without special tools.
- Coating of pipes under load is possible.
- Very good resistance against salt containing atmospheres and soils.
- Free of solvent and odor.

# VivaxCoat®

Coating system for a permanent corrosion prevention of steel pipes, armatures in new building and rehabilitation.

## Description

**VivaxCoat®** is a durable corrosion prevention system on the basis of petrolatum. More than 90 years of experience, especially with the petrolatum tapes invented by DEKOTEC have been utilized for the development of **VivaxCoat®**. **VivaxCoat®** was especially developed for the rehabilitation of pipeline coatings.

A special property of **VivaxCoat®** is the coating of lines, which include a condensate film and for which therefore other field-joint coating systems cannot be used. Such moist surfaces can be found, for example, on pipelines or lines that are under load or also when the humidity in the environment is high.

High costs for the pipeline interruptions or long waiting times for the processing of the coating work will be prevented by using **VivaxCoat®**.

**VivaxCoat®** is especially suitable for permanent corrosion prevention of pipelines

installed in the soil, armatures and flanges with permanent operating temperatures up to +60 °C (+140 °F). The system fulfills the requirements RV02 and RV08 of GRTgaz (France) for the classes HR and THR.

The corrosion prevention system **VivaxCoat®** consists of the coating mastic **PLASTELEN®-AQ Primer**, the corrosion prevention tape **PLASTELEN®-Tape MT** as well as **DEPROTEC®-PUR** or **BUTYLEN-AS50** the mechanical protective tape.

**PLASTELEN®-AQ Primer** permits an easy coating of metallic pipelines and armatures, manually or with a putty knife. A special formulation permits the out-standing moistening even for moist substrates.

**PLASTELEN®-Tape MT** is a corrosion prevention tape that can be easily processed, it is based on petrolatum with an internal resistant Polypropylene non-woven. It provides a permanent corrosion

prevention at operating temperatures of up to +60 °C (+140 °F).

**DEPROTEC®-PUR** creates an extremely resistant mechanical encasement around the corrosion prevention coating and protects it against impacts and cuttings. **DEPROTEC®-PUR** consists of a glass fiber fabric and a moisture hardening polyurethane. **DEPROTEC®-PUR** can be processed easily and safe and it cures under normal conditions after app. 20 minutes.

**BUTYLEN-AS50** is a co-extruded 3-ply tape with a two-sided asymmetrical butyl rubber coating. This 3-ply design establishes an essentially gas and water type encasement in the overlapping area of the tape through self-amalgamation of the upper and lower butyl rubber coating. Due to its tape thickness of 1.1 mm **BUTYLEN-AS50** provides an excellent mechanical protection of the inner corrosion prevention coating.





## Typical product properties

Property	Unit	Typical value		Test method
Priming Paste	-	PLASTELEN®-AQ Primer		
Corrosion prevention tape	-	PLASTELEN®-Tape MT (2 layers)		
Mechanical protection tape	-	DEPROTEC®-PUR (2 layers)	BUTYLEN-AS50 (3 layers)	
Service temperature	°C (°F)	-30 to +60 (-22 to +140)	-30 to +60 (-22 to +140)	-
Dripping point PLASTELEN®-AQ Primer	°C (°F)	> +100 (> +212)	> +100 (> +212)	DIN 51801
Dripping point PLASTELEN®-Tape MT	°C (°F)	> +80 (> +176)	> +80 (> +176)	DIN 51801
Thickness (system)	mm	> 4	> 6	-
Indentation resistance +23 °C / +60 °C (+73 °F / +140 °F) (Remaining layer thickness) (3 days, 10MPa)	mm	> 3	> 5 / > 2	EN 12068
Impact resistance	J	> 15	> 20	GrtGaz RV08
	J		> 15	EN 10329
Peel strength on pipe surface (+23 °C / +60 °C) (+73 °F / +140 °F)	-	Cohesive separation pattern	Cohesive separation pattern	EN 10329
Peel strength on PE factory coating (+23 °C / +60 °C) (+73 °F / +140 °F)	-	Cohesive separation pattern	Cohesive separation pattern	EN 10329
Peel strength on steel after thermal aging 100days @ +80 °C (+176 °F) +23 °C / +60 °C (+73 °F / +140 °F)	-	Cohesive separation pattern	Cohesive separation pattern	EN 10329
Cathodic disbondment resistance 28 days, +23 °C (+73 °F) (radius)	mm	7	7	EN 10329
Resistance against micro-organism (peel test)	-	Cohesive separation pattern	Cohesive separation pattern	EN 10329

## Ordering information and packaging

### PLASTELEN®-AQ Primer

10 kg bucket

### PLASTELEN®-Tape MT

Roll length: 10 m

Width (mm)	Number of rolls per box	Total tape length per box (m)	Total tape area per box (m <sup>2</sup> )	Weight per box app. (kg)
50	12	120	6	11
100	6	60	6	11
150	5	50	7.5	14

Additional dimensions available on request.

### DEPROTEC®-PUR

Dimensions: 97 mm x 4.55 m

12 Rolls per box

### BUTYLEN-AS50

	Core diameter (mm)	Width (mm)	Tape length (m)	Tape area per roll (m <sup>2</sup> )	Number of rolls	Content per box		
						Total tape area (m <sup>2</sup> )	Total tape length (m)	App. weight (kg)
BUTYLEN-AS50	41	30	10	0.3	18	5.4	180	9.5
		50	10	0.5	12	6	120	9.5
		100	10	1.0	6	6	60	8
		150	10	1.5	6	9	180	12
	78	100	50	5	3	15	150	18.5
		150	50	7.5	2	15	100	18.5

Additional lengths and widths are available on request.







# BUTYLEN

## Tapes and Tape Systems



### BUTYLEN Primers and Special Tapes

Very flexible tapes that can be processed easily with a wide range of applications as corrosion prevention, sealing or electrical insulation. The butyl rubber layer adapts to uneven substrates and results in a self-amalgamation in the overlapping area.

- BUTYLEN-HT, -HT25, -MT25 Primer P. 52
- BUTYLEN-E & -N P. 54



### BUTYLEN Single Tape Systems

Real co-extruded 3-ply tapes. A comprehensive corrosion prevention and mechanical prevention is achieved with only one tape. The outer and inner wrapping amalgamate completely due to the 3-ply design of the tape.

- BUTYLEN-AS39 P P. 56
- BUTYLEN-AS40 Plus P. 58
- BUTYLEN-AS50 P. 60
- BUTYLEN-S10 P. 62



### BUTYLEN Multi Tape Systems

The inner layer made of a self-amalgamating 3-ply tape provides a permanent corrosion prevention. The outer layer consists of a robust two or three-layer tape and protects the inner layer reliably against mechanical stresses.

- BUTYLEN-AS30/-R20 MP P. 64
- BUTYLEN-AS39 P/-R20 HT P. 66
- BUTYLEN-AS40 Plus/-090 P. 68
- BUTYLEN-AS40 Plus/-R20 HT P. 70
- BUTYLEN-AS40 Plus/-R25 HT P. 72
- BUTYLEN-AS50/-R20 HT P. 74
- BUTYLEN-E10/-090 P. 76
- BUTYLEN-ET100/-R20 HT P. 78
- BUTYLEN-N15/-PE3 P. 80
- BUTYLEN-N15/-PE5 P. 82
- BUTYLEN-N60/-S20 P. 84
- BUTYLEN-S10/-090 P. 86
- BUTYLEN System 1 to 6 P. 88







### DEKOMAT® Processing Equipment

Wrapping devices especially adapted to construction site conditions for the processing of all **BUTYLEN**- and **DEKOTEC**® tapes.



- DEKOMAT®-mini P. 102
- DEKOMAT®-1 P. 102
- DEKOMAT®-KGR Junior P. 102
- DEKOMAT®-11 P. 102

# BUTYLEN 3-ply tapes

BUTYLEN Tape	AS30	032-65 AS	AS39 P	AS40 Plus	AS50
Cross section					
Tape type	3-ply tape (asymmetrical)	3-ply tape (asymmetrical)	3-ply tape (asymmetrical)	3-ply tape (asymmetrical)	3-ply tape (asymmetrical)
Tape thickness	0.5 mm	0.65 mm	0.8 mm	0.8 mm	1.1 mm
Carrier film thickness (app.)	0.18 mm	0.18 mm	0.28 mm	0.28 mm	0.5 mm
Outside color	black	black	black, blue or yellow	black, blue or yellow	black, blue or yellow
Inside color	gray	gray	gray	gray	gray





BUTYLEN Tape	E10	E12	E15	ET100
Cross section				
Tape type	Butyl rubber tape	Butyl rubber tape	Butyl rubber tape	Butyl rubber tape
Tape thickness	1.0 mm	1.2 mm	1.5 mm	1.0 mm
Carrier film thickness (app.)	25 µm	25 µm	25 µm	25 µm
Outside color	black	black	black	black
Inside color	black	black	black	black




BUTYLEN Tape	N8	N10	N12	N15	N60
Cross section					
Tape type	Butyl rubber tape	Butyl rubber tape	Butyl rubber tape	Butyl rubber tape	3-ply tape (asymmetrical)
Tape thickness	0.8 mm	1.0 mm	1.2 mm	1.5 mm	1.2 mm
Carrier film thickness (app.)	0.07 mm	0.07 mm	0.07 mm	0.07 mm	0.14 mm
Outside color	gray	gray	gray	gray	gray
Inside color	gray	gray	gray	gray	gray

BUTYLEN Tape	S10	S20
Cross section		
Tape type	3-ply tape (symmetrical)	3-ply tape (asymmetrical)
Tape thickness	0.8 mm	0.5 mm
Carrier film thickness (app.)	0.15 mm	0.28 mm
Outside color	black	black
Inside color	gray	gray

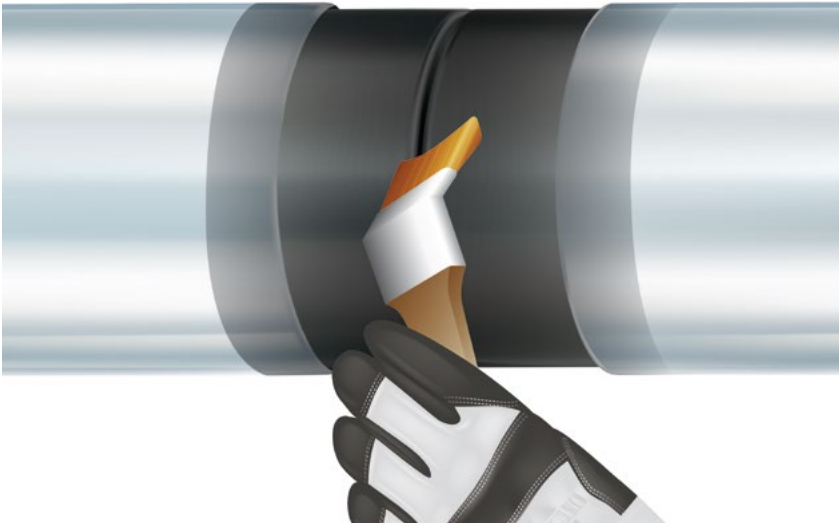


## BUTYLEN 2-ply tapes

BUTYLEN Tape	040	090	PE3	PE5
Cross section				
Tape type	Two-ply tape	Two-ply tape	Two-ply tape	Two-ply tape
Tape thickness	0.4 mm	0.4 mm	0.4 mm	0.5 mm
Carrier film thickness (app.)	0.22 mm	0.26 mm	0.22 mm	0.3 mm
Outside color	black	yellow	black	black
Inside color	black	gray	gray	gray

BUTYLEN Tape	R20 HT	R20 MP	R25 HT
Cross section			
Tape type	Two-layer tape	Two-layer tape	Two-layer tape
Tape thickness	0.5 mm	0.5 mm	0.65 mm
Carrier film thickness (app.)	0.3 mm	0.3 mm	0.33 mm
Outside color	black, white or blue	black, white or blue	black, yellow or white
Inside color	black	black	black





## Special advantages:

- Perfectly adapted to **BUTYLEN** tapes and tape systems.
- Outstanding resistance against cathodic disbondment.
- For steel and other metal surfaces.
- Compatible with factory coatings made of PE, PP, FBE, PU, CTE and bitumen.
- For the application with roller or brush.
- Dries fast and is easily processed.

# BUTYLEN-HT, -HT25, -MT25 Primer

Solvent based primer for BUTYLEN tapes and tape systems.

## Description

**BUTYLEN-HT/-MT Primer** is an integral part of all **BUTYLEN** tape systems and is applied as prime coat before the wrapping of the **BUTYLEN** tapes on the metal surface and adjacent factory coatings.

**BUTYLEN-HT/-MT Primer** is based on naphtha (petroleum spirit) and it includes butyl rubber as well as resins for an optimal adhesive connection between the **BUTYLEN** tapes and the pipe surface.

**BUTYLEN-HT/-MT Primer** is available on the basis of two solvents with different volatilization ranges. This means that optimal processing conditions are achieved for cold (e.g., **BUTYLEN-HT Primer** as well as warm (e.g. **BUTYLEN-MT25 Primer**) climatic conditions.

**BUTYLEN-HT/-MT Primer** provide a high yield. A thin covering coating is adequate. The areal coverage is app. 0.2 liter per m<sup>2</sup>.

**BUTYLEN-HT/-MT Primer** improves the peel strength of **BUTYLEN** tape systems on the metal surface as well as on the factory coating and therefore supports the permanent corrosion protection.

**BUTYLEN-HT/-MT Primer** can also be used to temporarily protect sandblasted surfaces against a rust film.

The surface must be cleaned (surface cleanliness ST2 or SA 2.5 in accordance with ISO 8501-3) before **BUTYLEN-HT/-MT Primer** is applied.

It is recommended to repeat the prime coat at the latest after 6 hours if the application of a **BUTYLEN** tape system cannot be started immediately after the drying of the primer.

**BUTYLEN-HT/-MT Primer** can be processed with a brush or a painter's roller.

The prime coat must be dry before the application of the **BUTYLEN** tapes. The drying time is approximately 5 to 25 minutes depending on the primer type, the ambient temperature, the air movement and the moisture.





## Typical product properties

Property	Unit	Typical values			Test method
		HT	HT25	MT25	
Solvents	-	Petroleum spirit	Petroleum spirit	Petroleum spirit	-
Flash point	°C (°F)	-18 (-0.4)	-18 (-0.4)	≥ +23 (≥ +73)	DIN EN 57
Density	+23 °C (+73 °F) g/cm <sup>3</sup>	0.79	0.78	0.80	DIN 51757
Solids content	wt%	30	24	≥ 23	ISO 1515
Aromatics content	wt%	< 0.0005	< 0.0005	< 0.01	-
Drying time for manual application <sup>1)</sup>	min (app.)	5 to 10	5 to 10	20 to 25	-
Maximum waiting time for the BUTYLEN tape application	h	< 8	< 8	< 8	-
Consumption	l/m <sup>2</sup>	0.2	0.2	0.2	-
Operating temperature <sup>2)</sup>	°C (°F)	-60 to +100 (-76 to +212)	-60 to +100 (-76 to +212)	-60 to +100 (-76 to +212)	-

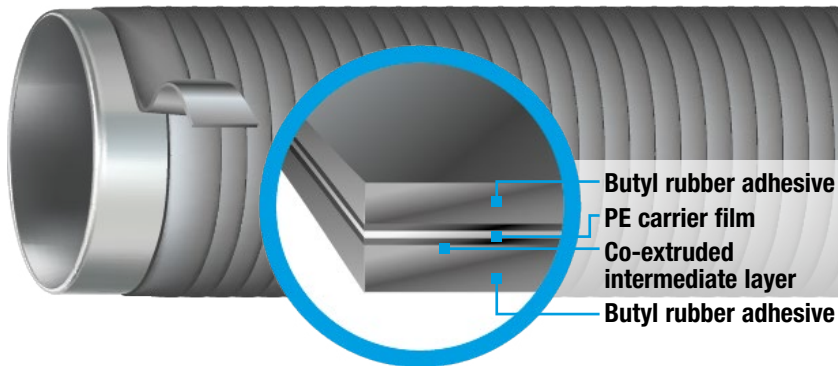
<sup>1)</sup> Depending on the temperature, humidity, air movement and surface temperature of the pipe.

<sup>2)</sup> Depending on the BUTYLEN tape system used.

Processing temperature	
Environment	-40 °C to +60 °C (-40 °F to +140 °F)
Pipe surface	min. +3 °C (+5.4 °F) above the dew point max. +85 °C (+185 °F)

## Ordering information and packaging

Packaging	Content (l)	Gross weight (kg)
4 cans per box	1	0.92
Metal bucket	5	4.70
Metal bucket	10	8.70
Barrel	180	168



## Special advantages:

- Can be processed in a cold condition, no flame required.
- High flexibility and adaptability.
- Fast self-amalgamation.
- Electrically highly insulating.
- Oxygen and water impermeable.
- Used in pipeline and plant construction, in chassis and vehicle manufacturing as well as the electrical and telecommunication industry.

# BUTYLEN-E, BUTYLEN-N

Self-amalgamating plastic tapes on the basis of butyl rubber for the corrosion prevention and the electrical insulation of pipes and metal parts.

## Description

**BUTYLEN-E** and **BUTYLEN-N** are plastic tapes that are processed cold. They are butyl rubber based for permanent corrosion prevention encasements and electrical insulations.

The **BUTYLEN-E/-N** tapes grow together in the overlapping area to a hose-type encasement, which is basically impermeable against water and oxygen and it is electrically highly insulating.

All **BUTYLEN-E/-N** tapes include a polyethylene carrier film, which prevents an overstretching of the tapes during wrapping. Due to its flexibility and adaptability, the **BUTYLEN-E/-N** tapes adapt especially well to the substrate structure.

Based on these properties, the **BUTYLEN-E/-N** tapes are used in many application areas:

- Corrosion prevention encasement of metallic pipelines at welding connections, containers and systems.
- Corrosion prevention coating for press fitting systems.
- Galvanic isolation at the connection of metals to prevent contact corrosion.
- Sealing of rivet and screw connections in chassis and vehicle manufacture.
- Insulation and sealing of sleeve necks for cable glands in cable sleeves.
- Cable glands at boxes, housings and cabinets.
- Roof inserts of electrical and phone cables and antenna masts.

The colors of the **BUTYLEN-E/-N** tapes are different (gray or black) and they are available in several tape thicknesses (overview see table overleaf).

The use of **BUTYLEN-HT Primer** is recommended to improve the adhesive strength to the surface.

**BUTYLEN-E/-N** tapes are processed with a slight tension wrapped in spirals. The overlap for this application is normally 50% of the tape width.

In addition, **BUTYLEN-E/-N** tapes can be equipped with an outer wrapping made from a two-layer tape, e.g. **BUTYLEN-PE3**, **BUTYLEN-PE5** or **BUTYLEN-R20 HT**. The outer resistant polyethylene carrier film of these tapes results in a significantly increased mechanical strength of the coating.





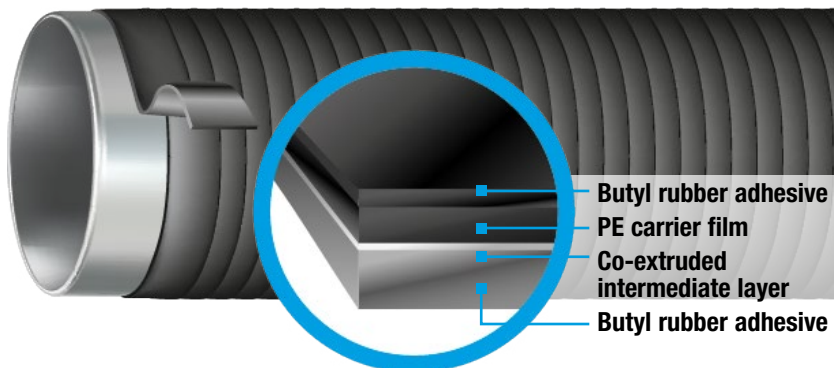
## Typical product properties

Product name	Unit	Tape thickness	Color
BUTYLEN-N8	mm	0.8	Gray
BUTYLEN-N10	mm	1.0	Gray
BUTYLEN-N12	mm	1.2	Gray
BUTYLEN-N15	mm	1.5	Gray
BUTYLEN-E10	mm	1.0	Black
BUTYLEN-E12	mm	1.2	Black
BUTYLEN-E15	mm	1.5	Black

Property	Unit	BUTYLEN-N10 Typical value	BUTYLEN-E10 Typical value	Prüfmethode
Tape thickness	mm	≥ 1.0	≥ 1.0	ISO 4591
Thick carrier film	µm	70	25	ISO 4591
Elongation at break	%	500	200	DIN 30672
Tensile strength	N / mm <sup>2</sup>	3	0.75	DIN 53515
Permeability for water vapor (+23 °C (+73 °F), single layer)	g / m <sup>2</sup> · 24 h	≤ 0.05	≤ 0.1	DIN 53122
Permeability for oxygen (+23 °C (+73 °F), single layer)	g / m <sup>2</sup> · 24 h · bar	≤ 0.0001	≤ 0.0001	DIN 53536
Dielectric strength	kV / mm	40	40	DIN 53481
Volume resistivity	Ω · cm	≥ 10 <sup>15</sup>	≥ 10 <sup>15</sup>	DIN 53482
Design temperature	°C ( °F)	+70 (+158)	+70 (+158)	-

## Ordering information and packaging

	Roll length (m)	Roll width (mm)	Box content			
			Number of rolls	Total tape length (m)	Total tape area (m <sup>2</sup> )	Weight per box app. (kg)
BUTYLEN-N8	15	30	18	270	8.1	9
		50	12	180	9.0	9.5
		100	6	90	9.0	9.5
BUTYLEN-N10/-E10	12,5	30	18	225	6.8	9
		50	12	150	7.5	10
		100	6	75	7.5	10
BUTYLEN-N12/-E12	10	50	12	120	6.0	10
		75	12	120	9.0	15
		100	6	60	6.0	10
BUTYLEN-N15	7,5	30	18	135	4.1	8.5
		50	12	90	4.5	9.2
		100	6	45	4.5	9.2
BUTYLEN-E15	5	30	12	60	1.8	4.0
		50	8	40	2.0	4.5
		100	4	20	2.0	4.5



### Special advantages:

- Real co-extruded 3-ply tape.
- Proven corrosion prevention technology for more than 40 years.
- Easy processing through adaptable and highly tear-resistant carrier film.
- DIN-DVGW approved system: **C 50** (EN 12068, DIN 30672).
- Compatible with factory coatings made of PE, PP, FBE, PU, CTE and bitumen.
- For temperatures up to +85 °C (+185 °F).

## BUTYLEN-AS39 P

Single tape system for the corrosion prevention coating of metal pipes and pipelines in accordance with DIN 30672, EN 12068, and ASTM. Corrosion prevention system proven for decades – for high mechanical and corrosive stresses.

### Description

**BUTYLEN-AS39 P** is a cold applied single tape system for the corrosion prevention of metal pipes and pipelines in a high mechanical and corrosive stress classes.

With its outstanding properties, **BUTYLEN-AS39 P** is the proven corrosion prevention technology for cold applied corrosion prevention tapes since 1973. Due to the innovative formula, the tapes grow completely together in the overlapping area and create a long-lasting hose-type coating.

**BUTYLEN-AS39 P** is a system approved by DIN-DVGW (**C 50**).

Approved by:

Standard designation:  
(Reg.No.: NV5180AL0268)

- EN 12068 – **C 50**
- DIN 30672 – **C 50**

**BUTYLEN-AS39 P** is basically impermeable for water vapor and oxygen and it is resistant against soil bacteria and electrolytes.

**BUTYLEN-AS39 P** is compatible with factory coatings made of PE, PP, FBE, PU, CTE and Bitumen.

**BUTYLEN-AS39 P** consists of:

**BUTYLEN-HT Primer**

A solvent containing primer in accordance with EN 12068 and DIN 30672 for the corrosion prevention with **BUTYLEN** tapes. Please refer to the separate product information of the **BUTYLEN-HT Primer**.

**BUTYLEN-AS39 P**

A real co-extruded 3-ply plastic tape made from stabilized polyethylene carrier materials with butyl rubber adhesive.

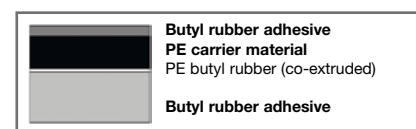
**BUTYLEN-AS39 P** has a thickness of  $\geq 0.8$  mm.

**BUTYLEN-AS39 P** fulfills the international standards DIN 30672, EN 12068, and ASTM.

**Supplementary products:**

**BUTYLEN-W** and **-WP Mastic** as permanently plastic formable butyl rubber mastic for the equalization of unevennesses and cavities.

**DEPROTEC®-DRM PP** pipe protection sleeves and rockschields made of polypropylene non-woven material for the additional mechanical protection of **BUTYLEN** encasements with shock absorbing and load distributing effects.



BUTYLEN-AS39 P





## Typical product properties

Property	Unit	BUTYLEN-AS39 P Typical value	Test method
Carrier film color	-	Black	-
Butyl adhesive color inside	-	Gray	-
Butyl adhesive color outside	-	Black or yellow	-
Total thickness		≥ 0.8	
Carrier film thickness app.	mm	≥ 0.28	ISO 4591 ASTM D1000
Inside adhesive layer thickness app.		≥ 0.5	
Outside adhesive layer thickness app.		≥ 0.02	
Elongation at break	%	≥ 600	DIN 30672
Tape strength	+23 °C (+73 °F) N / cm	≥ 100	EN 12068
Dielectric strength	kV / mm	≥ 40	DIN 53481
Water absorption	+23 °C (+73 °F) 1 day / 30 days %	≤ 0.1 / ≤ 0.4	DIN 53495 ASTM D570
Water vapor permeability	g / m <sup>2</sup> · 24 h	≤ 2 · 10 <sup>-1</sup>	DIN 53122
Brittleness temperature	°C / (°F)	-46±4 (-51±7.2) -58±4 (-72±7.2)	DIN 53372 GOST 10354

### BUTYLEN-AS39 P (4 layers) with BUTYLEN-HT primer

Property	Unit	BUTYLEN-AS39 P Typical value	Required value	Test method
Electrical insulation resistance	Ω · m <sup>2</sup>	≥ 10 <sup>10</sup>	≥ 10 <sup>8</sup>	EN 12068
Contact resistance	Ω · cm	≥ 10 <sup>15</sup>	-	DIN 53482 ASTM D257
Peel resistance metal / primer / AS39 P	N / cm	+23 °C (+73 °F)    +50 °C (+122 °F)	≥ 10    ≥ 1	EN 12068 ASTM D1000
		≥ 25    ≥ 2.5		
Peel resistance layer to layer AS39 P / AS39 P	N / cm	+23 °C (+73 °F)    +50 °C (+122 °F)	≥ 8    ≥ 2	EN 12068
		≥ 33    ≥ 2.5		
Indentation resistance - residual layer thickness at stamp load: 10 N / mm <sup>2</sup> (Stamp-Ø 1.80 mm – four-layer)	mm	+50 °C (+122 °F) ≥ 0.8	> 0.6	EN 12068
Impact resistance (4 layer)	J	≥ 15	≥ 15	EN 12068
Cathodic disbondment resistance	mm	≤ 6	-	ASTM G8
Lap shear strength	N / cm <sup>2</sup>	+23 °C (+73 °F)	≥ 5	EN 12068
		≥ 15		
on factory coating		≥ 15	≥ 5	

BUTYLEN tapes can be easily applied manually. The processing with the original DEKOMAT® wrapping devices is even

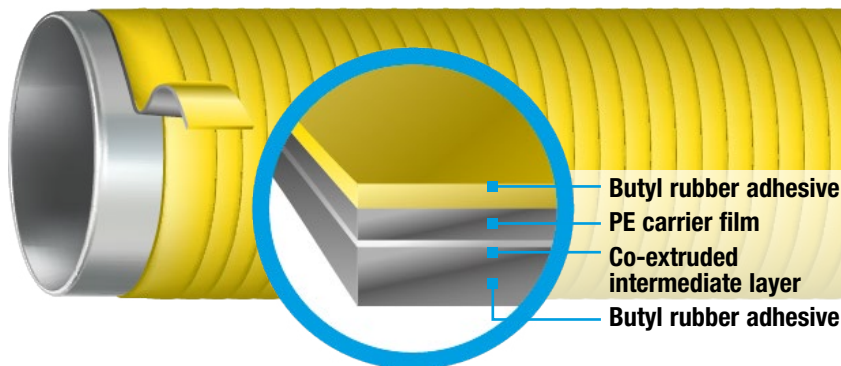
more efficient. For BUTYLEN tapes with widths of > 50 mm, we recommend the use of the DEKOMAT® wrapping device

to guarantee an excellent processing quality.

## Ordering information and packaging

	Roll length (m)	Roll width (mm)	m <sup>2</sup> / roll	Rolls	m <sup>2</sup>	Content per box	
						lin. m	kg (app.)
BUTYLEN-AS39 P core Ø 78 mm	70	100	7	3	21	210	19
	70	150	10,5	2	21	140	19

Additional lengths and widths are available on request.



**Special advantages:**

- Real co-extruded 3-ply tape.
- Proven corrosion prevention technology for more than 40 years.
- Easy processing through adaptable and highly tear-resistant carrier film.
- DIN-DVGW approved system: **B 50 and C 50** (EN 12068, DIN 30672).
- Compatible with factory coatings made of PE, PP, FBE, PU, CTE and bitumen.
- For temperatures up to +85 °C (+185 °F).

# BUTYLEN-AS40 Plus


Single tape system for the corrosion prevention coating of metal pipes and pipelines in accordance with DIN 30672, EN 12068, ASTM and AWWA. Corrosion prevention system proven for decades – for high mechanical and corrosive stresses.

## Description

**BUTYLEN-AS40 Plus** is a cold applied single tape system for the corrosion prevention of metal pipes and pipelines in a high mechanical and corrosive stress classes.

With its outstanding properties, **BUTYLEN-AS40 Plus** is the proven corrosion prevention technology for cold applied corrosion prevention tapes since 1973. Due to the innovative formula, the tapes grow completely together in the overlapping area and create a long-lasting hose-type coating.

**BUTYLEN-AS40 Plus** is a system approved by DIN-DVGW and it can be processed, depending on the protection class, three-layer (**B 50**) or four-layer (**C 50**).

Approved by:  Standard designation (four-layer) (Reg.No.:NV5180AL0188)

- EN 12068 – **C 50**
- DIN 30672 – **C 50**

Standard reference (three-layer) (Reg.No.:NV5180AR0756)

- EN 12068 – **B 50**
- DIN 30672 – **B 50**

**BUTYLEN-AS40 Plus** is basically impermeable for water vapor and oxygen and it is resistant against soil bacteria and electrolytes.

**BUTYLEN-AS40 Plus** is compatible with factory coatings made of PE, PP, FBE, PU, CTE and Bitumen.

**BUTYLEN-AS40 Plus** consists of: **BUTYLEN-HT Primer**

A solvent containing primer in accordance with EN 12068 and DIN 30672 for the corrosion prevention with **BUTYLEN** tapes. Please refer to the separate product information of the **BUTYLEN-HT Primer**.

**BUTYLEN-AS40 Plus**

A real co-extruded 3-ply plastic tape made from stabilized polyethylene carrier

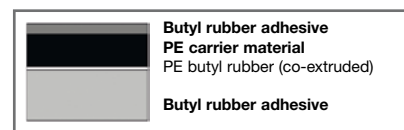
materials with butyl rubber adhesive.

**BUTYLEN-AS40 Plus** fulfills the international standards DIN 30672, EN 12068, ASTM and AWWA.

**Supplementary products:**

**BUTYLEN-W** and **-WP Mastic** as permanently plastic formable butyl rubber mastic for the equalization of unevennesses and cavities.

**DEPROTEC®-DRM PP** rockschilds and rockshield hose made of polypropylene non-woven material for the additional mechanical protection of **BUTYLEN** encasements with shock absorbing and load distributing effects.



BUTYLEN-AS40 Plus





## Typical product properties

Property	Unit	BUTYLEN-AS40 Plus Typical value	Test method
Carrier film color	-	Black	-
Butyl adhesive color inside	-	Gray	-
Butyl adhesive color outside	-	Black, yellow or blue	-
Total thickness		≥ 0.8	
Carrier film thickness app.	mm	≥ 0.28	ISO 4591 ASTM D1000
Inside adhesive layer thickness app.		≥ 0.5	
Outside adhesive layer thickness app.		≥ 0.02	
Elongation at break	%	≥ 600	DIN 30672
Tape strength	+23 °C (+73 °F) N / cm	≥ 100	EN 12068
Dielectric strength	kV / mm	≥ 40	DIN 53481
Water absorption	+23 °C (+73 °F) 1 day / 30 days %	≤ 0.1 / ≤ 0.4	DIN 53495 ASTM D570
Water vapor permeability	g / m <sup>2</sup> · 24 h	≤ 2 · 10 <sup>-1</sup>	DIN 53122
Brittleness temperature	°C (°F)	-46 ± 4 (-51 ± 7.2)	DIN 53372
		-58 ± 4 (-72 ± 7.2)	GOST 10354

### BUTYLEN-AS40 Plus (3 & 4 layers) with BUTYLEN-HT Primer

Property	Unit	BUTYLEN-AS40 Plus Typical value		Required value		Test method
Specific electrical insulation resistance	Ω · m <sup>2</sup>	≥ 10 <sup>10</sup>		≥ 10 <sup>8</sup>		EN 12068
Volume resistivity	Ω · cm	≥ 10 <sup>15</sup>		-		DIN 53482 ASTM D257
Peel resistance metal / primer / AS40 P	N / cm	+23 °C (+73 °F) +50 °C (+122 °F)		≥ 10	≥ 1	EN 12068
		≥ 25	≥ 2.5			
Peel resistance layer to layer AS40 Plus / AS40 Plus	N / cm	+23 °C (+73 °F) +50 °C (+122 °F)		-	-	ASTM D1000
		≥ 33	≥ 2.5			
Indentation resistance - residual layer thickness at stamp load: (10 N / mm <sup>2</sup> , Stamp-Ø 1.80 mm – 4 layer) (10 N / mm <sup>2</sup> , Stamp-Ø 5.65 mm – 3 layer)	mm	+50 °C (+122 °F)		≥ 15	≥ 2	EN 12068
		≥ 0.8 / 10 (fulfills class C)	≥ 0.8 / 1 (fulfills class B)			
Impact resistance (4 layer)/(3 layer)	J	≥ 15 (class C) / ≥ 10 (class B)		≥ 15	≥ 10	EN 12068
Cathodic disbondment resistance	mm	≤ 6		-	-	ASTM G8
Lap shear strength	N / cm <sup>2</sup>	+23 °C (+73 °F)		≥ 5	-	EN 12068
		on steel	≥ 15			
on factory coating		≥ 15		≥ 5	-	

BUTYLEN tapes can be easily applied manually. The processing with the original DEKOMAT® wrapping devices is even

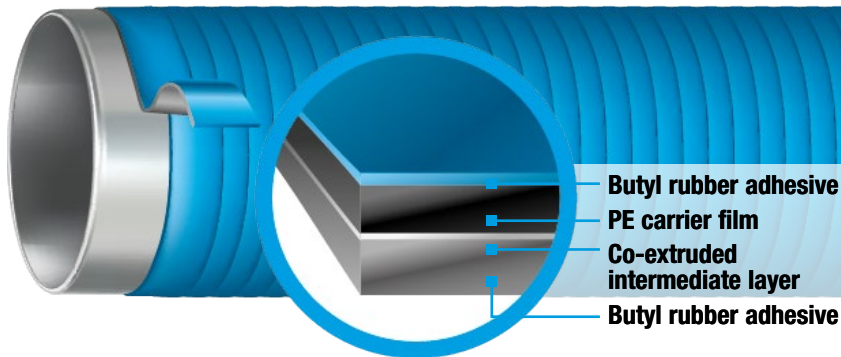
more efficient. For BUTYLEN tapes with widths of > 50 mm, we recommend the use of the DEKOMAT® wrapping device

to guarantee an excellent processing quality.

## Ordering information and packaging

	Roll length (m)	Roll width (mm)	m <sup>2</sup> / roll	Rolls	Content per box		
					m <sup>2</sup>	lin. m	kg (app.)
BUTYLEN-AS40 Plus core Ø 41 mm	15	30	0.45	18	8.1	270	9.3
	15	50	0.75	12	9	180	10.2
	15	100	1.5	6	9	90	10.2
	15	150	2.25	6	13.5	90	15.3

Additional lengths and widths are available on request.



## Special advantages:

- For operating temperatures up to +50 °C (+122 °F).
- Compatible with factory coatings made of PE, PP, FBE, PU and bitumen.
- DIN-DVGW approved system: **B 50** (EN 12068, DIN 30672).
- Fulfills class **B 50** in accordance with EN 12068, already with one wrapping with 50% overlap.
- Extremely cost efficient and easy application with maximum protection against corrosion and mechanical stress.
- Especially qualified for the requirements of the water pipe construction.

# BUTYLEN-AS50

Single tape system for outstanding corrosion prevention of metal pipes and pipelines in accordance with DIN 30672, EN 12068, ASTM and AWWA. For extreme corrosion conditions and mechanical stresses

## Description

**BUTYLEN-AS50** is a cold applied single tape system for outstanding corrosion prevention of metal pipes with outstanding economic and qualitative properties.

Due to the innovative formula, the tapes grow completely together in the overlapping area and create a long-lasting hose-type coating.

**BUTYLEN-AS50** significantly exceeds the requirements of the stress class **B 50** in accordance with EN 12068 and DIN 30672, using only one wrapping process with 50% overlap.

The **BUTYLEN-AS50** is basically impermeable against water vapor and oxygen and it is resistant against soil bacteria and soil electrolytes.

**BUTYLEN-AS50** is compatible with factory coatings made from PE, PP, FBE, PU and bitumen.

**BUTYLEN-AS50** consists of:

### **BUTYLEN-HT Primer**

A solvent containing prime coat in accordance with EN 12068 and DIN 30672 for corrosion prevention with **BUTYLEN** tapes. Please refer to the separate product information of the **BUTYLEN-HT Primer**.

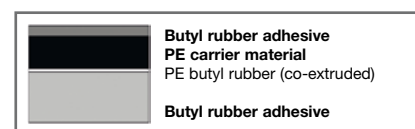
### **BUTYLEN-AS50**

A real co-extruded 3-ply plastic tape made from stabilized polyethylene carrier materials with butyl rubber adhesive on both sides.

Due to its intermediate layer, **BUTYLEN-AS50** features an outstanding connection between adhesive and carrier film.

**BUTYLEN-AS50** fulfills the international standards DIN 30672, EN 12068, ASTM and AWWA and provides the following approval: DIN-DVGW (Reg.-No. NV-5180CL0054).

Approved by:



BUTYLEN-AS50





## Typical product properties

Property	Unit	BUTYLEN-AS50 Typical value	Test method
Carrier film color	-	Black	-
Butyl adhesive color inside	-	Gray	-
Butyl adhesive color outside	-	Black	-
Total thickness		≥ 1.1	
Carrier film thickness app.	mm	≥ 0.6	ISO 4591 ASTM D1000
Inside adhesive layer thickness app.		≥ 0.5	
Outside adhesive layer thickness app.		≥ 0.08	
Elongation at break	%	≥ 550	DIN 30672
Tape strength	+23 °C (+73 °F) N / cm	≥ 95	EN 12068
Dielectric strength	kV / mm	≥ 40	DIN 53481
Water absorption	+23 °C (+73 °F) 1 day / 30 days %	≤ 0.1 / ≤ 0.4	DIN 53495 ASTM D570
Water vapor permeability	g / m <sup>2</sup> · 24 h	≤ 2 · 10 <sup>-1</sup>	DIN 53122
Brittleness temperature	°C (°F)	-46 ± 4 (-51 ± 7.2)	DIN 53372
		-58 ± 4 (-72 ± 7.2)	GOST 10354

### BUTYLEN-AS50 with BUTYLEN-HT Primer

Property	Unit	BUTYLEN-AS50 Typical value	Required value	Test method
Specific electrical insulation resistance	Ω · m <sup>2</sup>	≥ 10 <sup>10</sup>	≥ 10 <sup>9</sup>	EN 12068
Contact resistance	Ω · cm	≥ 10 <sup>15</sup>	-	DIN 53482 ASTM D257
Peel resistance metal / primer / tape	N / cm	+23 °C (+73 °F) +50 °C (+122 °F)	≥ 4	≥ 0.4
		≥ 20 ≥ 2		
Peel resistance layer to layer AS50 / AS50	N / cm	+23 °C (+73 °F) +50 °C (+122 °F)	≥ 8	≥ 2
		≥ 30 ≥ 2.5		
Indentation resistance - residual layer thickness at stamp load: (10 N / mm <sup>2</sup> , Stamp-Ø 5.65 mm)	mm	+50 °C (+122 °F) ≥ 0.8 / 1 (fulfills class B)	> 0.6	EN 12068
Impact resistance	J	≥ 10	≥ 8	EN 12068
Cathodic disbondment resistance	mm	≤ 6	n.a.	ASTM G8
Lap shear strength on steel	N / cm <sup>2</sup>	+23 °C (+73 °F) +50 °C (+122 °F)	≥ 5	EN 12068
		≥ 15 ≥ 0.1		
on factory coating		≥ 15 ≥ 0.1	≥ 5	

**BUTYLEN** tapes can be easily applied manually. The processing with the original **DEKOMAT**® wrapping devices is even

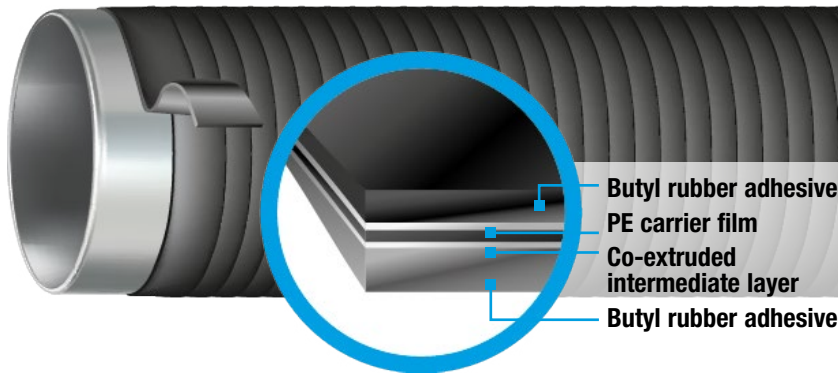
more efficient. For **BUTYLEN** tapes with widths of > 50 mm, we recommend the use of the **DEKOMAT**® wrapping device

to guarantee an excellent processing quality.

## Ordering information and packaging

	Roll length (m)	Roll width (mm)	m <sup>2</sup> / roll	Rolls	Content per box		
					m <sup>2</sup>	lin. m	kg (app.)
BUTYLEN-AS50 core Ø 41 mm	10	30	0.3	18	5,4	180	9.5
	10	50	0.5	12	6	120	9.5
	10	100	1	6	6	60	8
	10	150	1.5	6	9	60	12
BUTYLEN-AS50 core Ø 78 mm	50	100	5	3	15	150	18.5
	50	150	7.5	2	15	100	18.5

Additional lengths and widths are available on request.



## Special advantages:

- Co-extruded 3-ply tape with an especially adapting carrier film.
- Single tape system for flanges, T-fittings and other fittings.
- DIN-DVGW approved system: **B 50** (EN 12068, DIN 30672).
- tested in accordance with ASTM.
- Compatible with factory coatings made of PE, PP, FBE, PU, CTE and bitumen.
- For temperatures up to +50 °C (+122 °F).

# BUTYLEN-S10

Single tape system for the corrosion prevention coating of metal pipes, pipelines and containers in accordance with DIN 30672, EN 12068, ASTM and AWWA. For extreme corrosion conditions and mechanical stresses on uneven substrates.

## Description

**BUTYLEN-S10** is a cold applied single tape system for corrosion prevention of metal pipes, pipelines and fittings. It is especially suitable for uneven substrates and complicated geometries.

An especially adaptable carrier film makes it possible that **BUTYLEN-S10** adapts perfectly to uneven surfaces and parts that are formed with a complicated shape.

Due to the innovative formula, the tapes grow completely together in the overlapping area and create a long-lasting hose-type coating.

**BUTYLEN-S10** is a system approved by DIN-DVGW (**B 50**) with an impact resistance that is equivalent to class C.

Standard designation:  
(Reg.No.:NV5180BQ0011)

- EN 12068 – **B 50**
- DIN 30672 – **B 50**



**BUTYLEN-S10** is basically impermeable for water vapor and oxygen and it is resistant against soil bacteria and electrolytes.

**BUTYLEN-S10** is compatible with factory coatings made of PE, PP, FBE, PU, CTE and Bitumen.

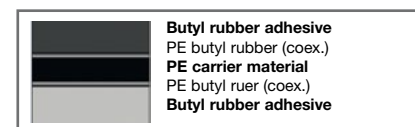
The system **BUTYLEN-S10** consists of:

### **BUTYLEN-HT Primer**

a solvent containing primer, which provides an optimal adhesion of the **BUTYLEN** tapes with the substrate.

Please refer to the separate product information of the **BUTYLEN-HT Primer**.

**BUTYLEN-S10**, a co-extruded 3-ply plastic tape made from stabilized polyethylene carrier materials with butyl rubber adhesive on both sides.



BUTYLEN-S10





## Typical product properties

Property	Unit	Typical value	Test method
Carrier film color	-	black	-
Butyl adhesive color inside	-	gray	-
Butyl adhesive color outside	-	black	-
Total thickness		≥ 0.8	
Carrier film thickness app.	mm	≥ 0.14	ISO 4591 ASTM D1000
Inside adhesive layer thickness app.		≥ 0.38	
Outside adhesive layer thickness app.		≥ 0.28	
Elongation at break	%	≥ 250	DIN 30672
Tape strength	+23 °C (+73.4 °F) N / cm	≥ 40	EN 12068
Dielectric strength	kV/mm	≥ 10	DIN 53481
Water absorption	+23 °C (+73 °F) 1 day / 30 days	≤ 0.1 / ≤ 0.4	DIN 53495 ASTM D570
Water vapor permeability	g / m <sup>2</sup> · 24 h	≤ 2 · 10 <sup>-1</sup>	DIN 53122
Brittleness temperature	°C (°F)	-46 ± 4 (-50.8 ± 7.2) -58 ± 4 (-72.4 ± 7.2)	DIN 53372 GOST 10354

### BUTYLEN-S10 (4 layers) with BUTYLEN-HT Primer

Property	Unit	Typical value	Required value	Test method
Systems building	Primer	BUTYLEN-HT		
	Tape	BUTYLEN-S10, 4 layers		
Specific electrical insulation resistance	Ω · m <sup>2</sup>	≥ 10 <sup>10</sup>	≥ 10 <sup>9</sup>	EN 12068
Contact resistance	Ω · cm	≥ 10 <sup>15</sup>	-	DIN 53482 ASTM D257
Peel resistance metal / primer / S10	N / cm	+23 °C (+73 °F)    +50 °C (+122 °F)	≥ 4            ≥ 0.4	EN 12068
		≥ 20            ≥ 3		
Peel resistance layer to layer S10 / S10	N / cm	+23 °C (+73 °F)    +50 °C (+122 °F)	≥ 8            ≥ 2	EN 12068
		≥ 25            ≥ 3		
Indentation resistance - residual layer thickness	+50 °C (+122 °F), 1MPa mm	≥ 0.8	> 0.6	EN 12068
Impact resistance (four-layer)	J	≥ 15 (fulfills class C)	≥ 10	EN 12068
Cathodic disbondment resistance	mm	≤ 8	-	ASTM G8
Lap shear strength +23 °C (+73 °F)	on steel	≥ 15	≥ 5	
	on PE	≥ 15	≥ 5	

**BUTYLEN** tapes can be easily applied manually. The processing with the original **DEKOMAT**® wrapping devices is even

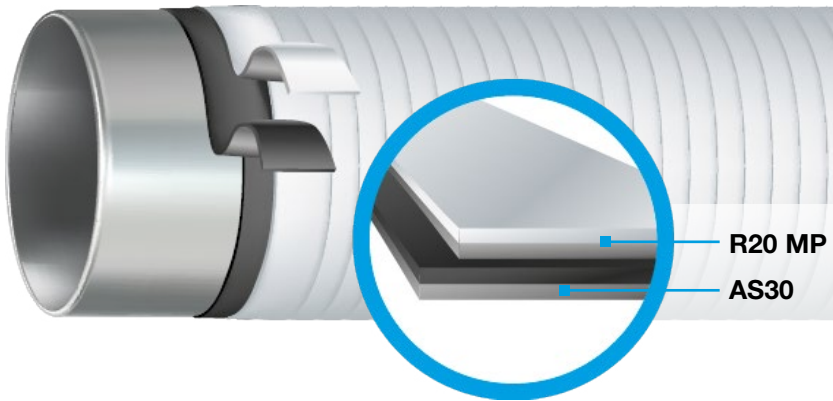
more efficient. For **BUTYLEN** tapes with widths of > 50 mm, we recommend the use of the **DEKOMAT**® wrapping device

to guarantee an excellent processing quality.

## Ordering information and packaging

	Core diameter (mm)	Width (mm)	Tape length (m)	Tape area (m <sup>2</sup> )	Content per box			
					Number of rolls	Total tape area (m <sup>2</sup> )	Total tape length (m)	App. Weight (kg)
<b>BUTYLEN-S10</b>	41	30	15	0.45	18	8.1	270	9.7
		50	15	0.75	12	9	180	10.6
		100	15	1.5	6	9	90	10.5
		150	15	2.25	6	13.5	90	15.75

Additional dimensions available on request.



### Special advantages:

- Real co-extruded 3-ply tape.
- No spiral corrosion hazard as compared to the two-ply tape.
- DIN-DVGW certified systems for class **B 50** in accordance with EN 12068.
- Compatible with factory coatings made of PE, PP, FBE, PU, CTE and bitumen.
- Outstanding tape elasticity and elongation at break.
- Cost effective system with outstanding price/performance ratio.

## BUTYLEN-AS30/-R20 MP

Two-tape system for the corrosion prevention coating of metal pipes and pipelines in accordance with DIN 30672 and EN 12068.

### Description

**BUTYLEN-AS30/-R20 MP** is a cold applied tape system for corrosion prevention of metal pipes and pipelines with outstanding economic and qualitative properties. Due to the innovative formula, the tapes grow completely together in the overlapping area and create a long-lasting hose-type encasement.

**BUTYLEN-AS30/-R20 MP** fulfills the requirements of the impact resistance of class **B 50** in accordance with EN 12068 and even the indentation resistance of class **C 50**.

**BUTYLEN-AS30/-R20 MP** is basically impermeable for water vapor and oxygen and it is resistant against soil bacteria and electrolytes.

**BUTYLEN-AS30/-R20 MP** is compatible with factory coatings made of PE, PP, FBE, PU, CTE und Bitumen.

Standard designation:  
(Reg.No.: NG-5180CP0056)

- EN 12068 – **B 50**



The system **BUTYLEN-AS30/-R20 MP** consists of:

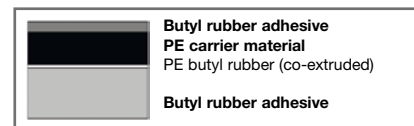
- **BUTYLEN-HT Primer**

A solvent containing primer for corrosion prevention in combination with **BUTYLEN** tapes. For the processing in hot environments, the **BUTYLEN-MT25 Primer** can be used as an alternative. Please refer to the separate product data sheet **BUTYLEN-Primer**.

- **BUTYLEN-AS30**

A real co-extruded 3-ply plastic tape made from stabilized polyethylene carrier materials with butyl rubber adhesive on both sides.

**BUTYLEN-AS30** grows completely together in the overlapping area and creates a hose-type encasement, which results in a reliable and durable corrosion protection.

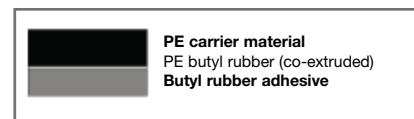


Schematic cross section of **BUTYLEN-AS30**.

An outstanding connection between the adhesive and the carrier film is guaranteed by the co-extruded intermediate layer.

- **BUTYLEN-R20 MP**

A co-extruded two-layer plastic tape made from robust white polyethylene carrier film with a single side butyl rubber coating. An outstanding connection between the adhesive and the carrier film is achieved by the co-extruded intermediate layer. The butyl rubber adhesive layer grows completely together with the outside layer of **BUTYLEN-AS30**.



Schematic cross section of **BUTYLEN-R20 MP**.





## Typical product properties

### BUTYLEN-AS30 and BUTYLEN-R20 MP

Property	Unit	BUTYLEN-AS30 Typical value	BUTYLEN-R20 MP Typical value	Test method
Carrier film color	-	Black	White	-
Butyl adhesive color inside	-	Gray	Black	-
Butyl adhesive color outside	-	Black	-	-
Total thickness		≥ 0.5	≥ 0.5	
Carrier film thickness app.	mm	≥ 0.3	≥ 0.3	ISO 4591 ASTM D1000
Inside adhesive layer thickness app.		≥ 0.2	≥ 0.2	
Outside adhesive layer thickness app.		≥ 0.08	-	
Elongation at break	%	≥ 600	≥ 500	DIN 30672
Tape strength	+23 °C (+73 °F) N / cm	≥ 65	≥ 65	EN 12068
Dielectric strength	kV / mm	≥ 40	≥ 50	ASTM D149

### BUTYLEN-AS30/-R20 MP with BUTYLEN-HT Primer

Property	Unit	BUTYLEN-AS30/-R20 MP Typical value		Required value		Test method
Specific electrical insulation resistance	$\Omega \cdot m^2$	≥ 10 <sup>11</sup>		≥ 10 <sup>6</sup>		EN 12068
Volume resistivity	$\Omega \cdot cm$	≥ 10 <sup>16</sup>		-		ASTM D257
Peel resistance metal / primer / tape	N / cm	+23 °C (+73 °F)    +50 °C (+122 °F)		≥ 4	≥ 0.4	EN 12068
		≥ 15	≥ 2.0			
Peel resistance layer to layer	N / cm	+23 °C (73 °F)    +50 °C (+122 °F)		-	-	ASTM D1000
		AS30 / AS30	≥ 22			
AS30 / R20 MP		≥ 22	≥ 3.5	≥ 8	≥ 2	EN 12068
R20 MP / R20 MP		≥ 4	≥ 3.5	≥ 2	≥ 2	
Indentation resistance - residual layer thickness		+50 °C (+122 °F)				
for stamp load 1N / mm <sup>2</sup> , stamp-Ø 5.65 mm	mm	> 1.3 (fulfills class B)		> 0.6		EN 12068
for stamp load 10 N / mm <sup>2</sup> , stamp-Ø 1.8 mm		> 0.6 (fulfills class C)		> 0.6		
Impact resistance	J	≥ 10		≥ 8		EN 12068
Cathodic disbondment resistance (radius)	mm	< 2		< 20		EN 12068
Lap shear strength		+23 °C (+73 °F)				EN 12068
on steel	N / cm <sup>2</sup>	≥ 8		≥ 5		EN 12068
on factory coating		≥ 8		≥ 5		
Water vapor permeability	g / m <sup>2</sup> · 24 h	< 0.2		-		ASTM E96

BUTYLEN tapes can be easily applied manually. The processing with the original DEKOMAT® wrapping devices is even

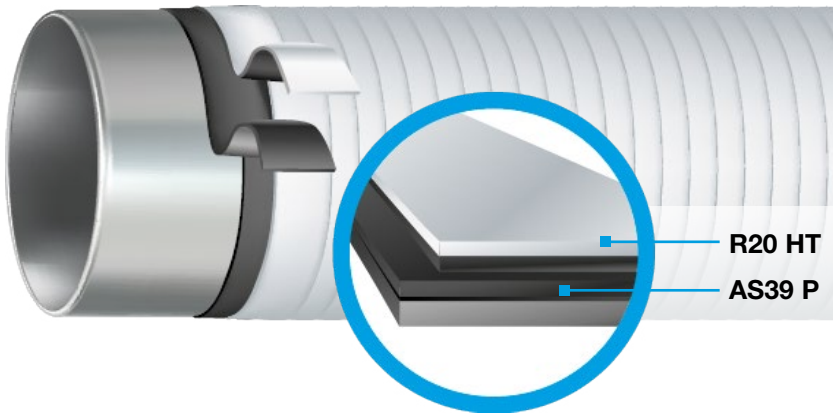
more efficient. For BUTYLEN tapes with width of > 50 mm, we recommend the use of the DEKOMAT® wrapping device

to guarantee an excellent processing quality.

## Ordering information and packaging

	Core diameter (mm)	Width (mm)	Tape length (m)	Tape area per roll (m <sup>2</sup> )	Content per box			
					Number of rolls	Total tape area (m <sup>2</sup> )	Total tape length (m)	App weight (kg)
BUTYLEN-AS30	41	50	30	1.5	10	15	300	10
		100	30	3.0	5	15	150	10
	78	150	30	4.5	5	22.5	150	15
		100	70	7	3	21	210	13
		150	70	10.5	2	21	140	13
BUTYLEN-R20 MP	41	50	30	1.5	12	18	360	11
		100	30	3.0	6	18	180	11
	78	150	30	4.5	6	27	180	17
		100	70	7	3	21	210	13
		150	70	10.5	2	21	140	13

Additional dimensions available on request.



### Special advantages:

- Real co-extruded 3-ply tape as the inner layer and two-layer tape as the outer layer.
- Excellent mechanical protection and excellent corrosion prevention combined with an outstanding tape elasticity.
- Proven success for more than 30 years on thousands of kilometers.
- DIN-DVGW approved system: **C 50** (EN 12068, DIN 30672)
- Compatible with factory coatings made of PE, PP, FBE, PU, CTE and bitumen.
- For temperatures up to +85 °C (+185 °F).

## BUTYLEN-AS39 P/-R20 HT

Two-tape system for the corrosion prevention coating of metal pipes and pipelines in accordance with DIN 30672, EN 12068 and ASTM. For extreme corrosion conditions and extreme mechanical stresses – corrosion prevention system with a proven success rate of many thousand kilometers pipeline construction and rehabilitation worldwide.

### Description

**BUTYLEN-AS39 P/-R20 HT** is a cold applied two-tape system for the corrosion prevention of metal pipes and pipelines in extreme corrosion conditions and mechanical stresses. Due to the innovative formula, the tapes grow completely together in the overlapping area and create a long-lasting hose-type coating.

The **BUTYLEN-AS39 P/-R20 HT** system is covered by a DIN-DVGW certificate (Reg.-No.: NV-5180BO0176).

Standard designation:

- EN 12068 – **C 50**
- DIN 30672 – **C 50**



**BUTYLEN-AS39 P/-R20 HT** has proven itself in a multitude of construction projects and has many approvals of pipeline network operators such as Indian Oil Corporation Ltd.

**BUTYLEN-AS39 P/-R20 HT** is basically impermeable for water vapor and oxygen and it is resistant against soil bacteria and electrolytes.

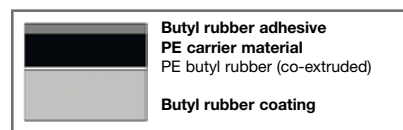
**BUTYLEN-AS39 P/-R20 HT** is compatible with factory coatings made of PE, PP, FBE, PU, CTE and Bitumen.

**BUTYLEN-AS39 P/-R20 HT** consists of:

**BUTYLEN-HT Primer**

A solvent containing primer in accordance with EN 12068 and DIN 30672 for the corrosion prevention with

**BUTYLEN** tapes.



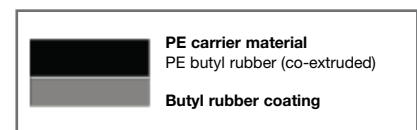
BUTYLEN-AS39 P

**BUTYLEN-AS39 P**

A real co-extruded 3-ply plastic tape made from stabilized polyethylene carrier materials with butyl rubber adhesive on both sides.

**BUTYLEN-R20 HT**

A real co-extruded two-layer plastic tape made from stabilized polyethylene carrier film with a butyl rubber adhesive on one side. The outstanding connection between the adhesive and the carrier film is guaranteed by the co-extruded intermediate layer. The adhesive layer grows completely together with the outside layer of **BUTYLEN-AS39 P**.



BUTYLEN-R20 HT





## Typical product properties

Property	Unit	BUTYLEN-AS39 P Typical value	BUTYLEN-R20 HT Typical value	Test method
Carrier film color	-	Black	White, black or blue	-
Butyl adhesive color inside	-	Gray	Black	-
Butyl adhesive color outside	-	Black	-	-
Total thickness		≥ 0.8	≥ 0.5	
Carrier film thickness app.	mm	≥ 0.2	≥ 0.3	ISO 4591 ASTM D1000
Inside adhesive layer thickness app.		≥ 0.5	≥ 0.2	
Outside adhesive layer thickness app.		≥ 0.1	-	
Elongation at break	%	≥ 600	≥ 550	DIN 30672
Tape strength	+23 °C (+73 °F) N / cm	≥ 100	≥ 65	EN 12068
Dielectric strength	kV/mm	≥ 40	≥ 35	DIN 53481
Water absorption	+23 °C (+73 °F) 1 day / 30 days %	≤ 0.1 / ≤ 0.4	≤ 0.1 / ≤ 0.4	DIN 53495 ASTM D570
Water vapor permeability	g / m <sup>2</sup> · 24 h	≤ 2 · 10 <sup>-1</sup>	≤ 5 · 10 <sup>-2</sup>	DIN 53122
Brittleness temperature	°C (°F)	-46 ± 4 (-51 ± 7.2) -58 ± 4 (-72 ± 7.2)	-46 ± 4 (-51 ± 7.2) -58 ± 4 (-72 ± 7.2)	DIN 53372 GOST 10354

### BUTYLEN-AS39 P/-R20 HT with BUTYLEN-HT Primer

Property	Unit	BUTYLEN-AS39 P/-R20 HT Typical value		Required value		Test method
Electrical insulation resistance	Ω · m <sup>2</sup>	≥ 10 <sup>10</sup>		≥ 10 <sup>8</sup>		EN 12068
Contact resistance	Ω · cm	≥ 10 <sup>15</sup>		-		DIN 53482 ASTM D257
Peel resistance metal / primer / tape	N / cm	+23 °C (+73 °F)	+50 °C (+122 °F)	+23 °C (+73 °F)	+50 °C (+122 °F)	EN 12068 ASTM D1000
		≥ 25	≥ 3	≥ 10	≥ 1	
Peel resistance layer to layer	N / cm	+23 °C (+73 °F)	+50 °C (+122 °F)	-		EN 12068
		AS39 P / AS39 P	AS39 P / R20 HT	R20 HT / R20 HT		
AS39 P / AS39 P		≥ 30	≥ 4	≥ 15	≥ 2	
AS39 P / R20 HT		≥ 30	≥ 3	≥ 2	≥ 2	
R20 HT / R20 HT		≥ 3	≥ 3	≥ 2	≥ 2	
Indentation resistance - residual layer thickness at stamp load 10 N / mm <sup>2</sup> (stamp-Ø 1.8 mm)	mm	+50 °C (+122 °F)				EN 12068
		≥ 1.1		≥ 0.6		
Impact resistance	J	≥ 16		≥ 15		EN 12068
Cathodic disbondment resistance	mm	≤ 6		< 20		ASTM G8
Lap shear strength	N / cm <sup>2</sup>	+23 °C (+73 °F)				EN 12068
		≥ 15		≥ 5		
on factory coating		≥ 15		≥ 5		

BUTYLEN tapes can be easily applied manually. The processing with the original DEKOMAT® wrapping devices is even

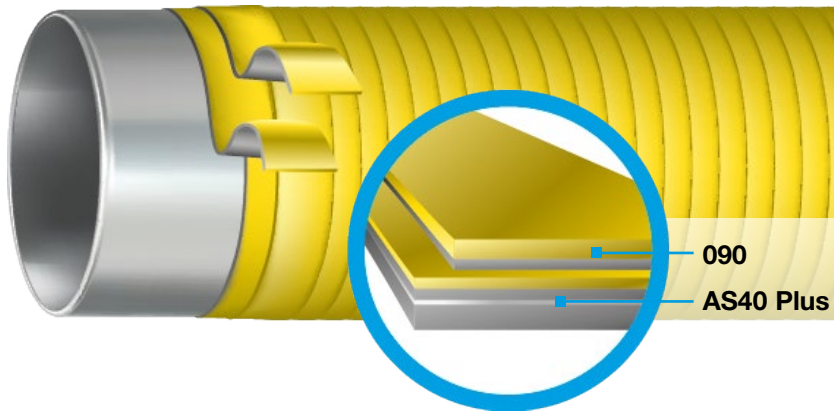
more efficient. For BUTYLEN tapes with width of > 50mm, we recommend the use of a DEKOMAT® wrapping device to

guarantee an excellent processing quality.

## Ordering information and packaging

		Roll length (m)	Roll width (mm)	m <sup>2</sup> / roll	Rolls	Content per box			
						m <sup>2</sup>	lin. m	kg (app.)	
BUTYLEN-AS39 P	Core Ø 41 mm	15	50	0.75	12	9	180	9.0	
		15	100	1.5	6	9	90	10.2	
	Core Ø 78 mm	15	150	2.25	6	13.5	90	13.0	
		70	100	7	3	21	210	19.0	
BUTYLEN-R20 HT	Core Ø 41 mm	30	50	1.5	12	18	360	11.0	
		30	100	3.0	6	18	180	11.0	
	Core Ø 78 mm	30	150	4.5	6	27	180	17.0	
		70	100	7	3	21	210	13.0	
			70	150	10.5	2	21	140	13.0

Additional lengths and widths are available on request.



## Special advantages:

- Approval by GRTgaz (FR) for the stress class HR (RV02).
- Fulfills the stress class **B 50** of EN 12068 operating temperatures up to +50 °C (+122 °F).
- Compatible with factory coatings made of PE, PP, FBE, PUR and bitumen.
- Outstandingly qualified for the corrosion prevention in gas pipe networks.

# BUTYLEN-AS40 Plus/-090

Two-tape system for the field-joint coating of pipelines especially gas pipe networks.

## Description

**BUTYLEN-AS40 Plus/-090** is a tape system for the permanent corrosion prevention for buried pipelines.

**BUTYLEN-AS40 Plus/-090** is outstandingly qualified for the use on pipes with smaller nominal pipe sizes. The yellow color of the outside tape is adapted to the use in gas pipe networks.

**BUTYLEN-AS40 Plus/-090** fulfills the requirements for stress class **B 50** in accordance with EN 12068. In addition **BUTYLEN-AS40 Plus/-090** fulfills the requirements for stress class HR of the specification RV02 by GRTgaz (France) (certificate No.106).

Standard designation:

- EN 12068 – **B 50**



**BUTYLEN-AS40 Plus** as inside tape, fulfills essentially the corrosion prevention of the encasement system.

**BUTYLEN-AS40 Plus** is a co-extruded 3-ply tape with a two-sided asymmetrical butyl rubber coating.

This 3-ply design establishes an essentially gas and water type encasement in the overlapping area of the tape through self-amalgamation of the upper and lower butyl rubber coating.

**BUTYLEN-090** is used as the outside tape in the encasement system and provides the mechanical protection of the inside tape. **BUTYLEN-090** is a flexible two-layer tape with a polyethylene outside layer and an inside butyl rubber coating, which welds together with the outside layer of the inside tape. Both **BUTYLEN** tapes can be processed efficiently with the **DEKOMAT®** wrapping devices.





## Typical product properties

Property	Unit	BUTYLEN-AS40 Plus Typical value	BUTYLEN-090 Typical value	Test method
Carrier film color	-	Black	Yellow	-
Butyl adhesive color inside	-	Gray	Gray	-
Butyl adhesive color outside	-	Black	-	-
Tape thickness		≥ 0.8	≥ 0.4	
Carrier film thickness app.	mm	≥ 0.28	≥ 0.26	ISO 4591 ASTM D1000
Inside adhesive layer thickness app.		≥ 0.44	≥ 0.14	
Outside adhesive layer thickness app.		≥ 0.08	-	
Water absorption (1 d/ 30 d)	%	≤ 0.1 / ≤ 0.4	-	ASTM D570
Elongation at break	%	≥ 600	≥ 400	DIN 30672
Tape strength	N / cm	≥ 100	≥ 35	EN 12068
Dielectric strength	kV / mm	≥ 40	-	ASTM D149

### BUTYLEN-AS40 Plus/-090 with BUTYLEN-HT Primer

Property		Unit	Typical value	Required value	Test method
System design	Primer		BUTYLEN-HT Primer	-	-
	Inner tape		BUTYLEN-AS40 Plus, 2 layers	-	-
	Outer tape		BUTYLEN-090, 2 layers	-	-
Total thickness		mm	≥ 2.4	-	-
Specific electrical insulation resistance		Ω · m <sup>2</sup>	≥ 10 <sup>10</sup>	≥ 10 <sup>6</sup>	EN 12068
Peel strength on steel	+23 °C (+73 °F)	N / cm	≥ 25	≥ 4	EN 12068
	+50 °C (+122 °F)		≥ 2.5	≥ 0.4	EN 12068
Peel strength layer to layer	AS40 Plus / AS40 Plus	N / cm	≥ 30	≥ 8	EN 12068
	AS40 Plus / 090		≥ 30	≥ 8	
	090 / 090		≥ 2	≥ 2	
Indentation resistance (residual layer thickness)	+23 °C (+73 °F) (1N / mm <sup>2</sup> )	mm	≥ 0.6	≥ 0.6	EN 12068
Impact resistance		J	≥ 16	≥ 15	GdF RV 02
		J	≥ 10	≥ 8	EN 12068
Cathodic disbondment resistance		mm	≤ 6	≤ 20	EN 12068
Lap shear strength +23° C (+73 °F)	on steel	N / cm <sup>2</sup>	≥ 15	≥ 5	EN 12068
	on PE	N / cm <sup>2</sup>	≥ 15	≥ 5	EN 12068

BUTYLEN tapes can be easily applied manually. The processing with the original DEKOMAT® wrapping devices is even

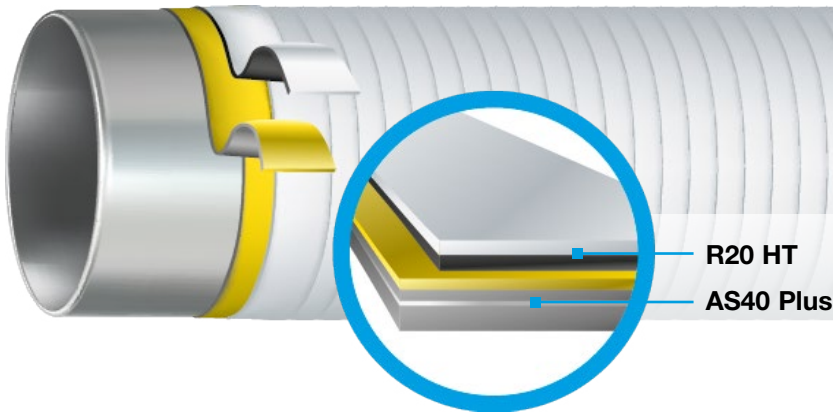
more efficient. For BUTYLEN tapes with width of > 50 mm, we recommend the use of the DEKOMAT® wrapping device

to guarantee an excellent processing quality.

## Ordering information and packaging

		Roll length (m)	Roll width (mm)	Number Rolls	Box content		Weight per box app. (kg)
					Total tape length (m)	Tape area (m <sup>2</sup> )	
BUTYLEN-AS40 Plus	Core ø 41mm	15	30	18	270	8.1	9.3
		15	50	12	180	9	10.2
	Core ø 78mm	15	100	6	90	9	10.1
		70	100	3	210	21	19
BUTYLEN-090	Core ø 41mm	70	150	2	140	21	19
		30	30	18	540	16.2	9
	Core ø 78mm	30	50	12	360	18	10
		30	100	6	180	18	10
	Core ø 78mm	150	100	3	450	45	21

Additional dimensions available on request.



### Special advantages:

- Real co-extruded 3-ply tape as the inner layer and two-ply tape as the outer layer.
- Excellent mechanical protection and excellent corrosion prevention combined with an outstanding tape elasticity.
- DIN-DVGW approved system: **C 50** (EN 12068, DIN 30672).
- Compatible with factory coatings made of PE, PP, FBE, PU, CTE and bitumen.
- For temperatures up to +85 °C (+185 °F).

## BUTYLEN-AS40 Plus/-R20 HT

Two-tape system for the corrosion prevention coating of metal pipes and pipelines in accordance with DIN 30672 and EN 12068.

### Description

**BUTYLEN-AS40 Plus/-R20 HT** is a cold applied two-tape system for the corrosion prevention of metal pipes and pipelines in extreme corrosion conditions and mechanical stresses. Compared to the single tape system **BUTYLEN-AS40 Plus**, a robust and UV resistant surface of the encasement is achieved with the outside tape **BUTYLEN-R20 HT**.

The **BUTYLEN-AS40 Plus/-R20 HT** system is covered by a DIN-DVGW certificate (Reg.-No.: DV-5180BT0429).

Standard designation:

- EN 12068 – **C 50**
- DIN 30672 – **C 50**



**BUTYLEN-AS40 Plus/-R20 HT** provides a self-amalgamation of the tapes in the overlapping area, which means that a tight and durable hose-

type encasement is established. **BUTYLEN-AS40 Plus/-R20 HT** is basically impermeable for water vapor and oxygen and it is resistant against soil bacteria and electrolytes.

**BUTYLEN-AS40 Plus/-R20 HT** is compatible with factory coatings made of PE, PP, FBE, PU, CTE and Bitumen.

The system **BUTYLEN-AS40 Plus/-R20 HT** consists of:

**BUTYLEN-HT Primer**

A solvent containing primer in accordance with EN 12068 and DIN 30672 for the corrosion prevention with **BUTYLEN** tapes.

**BUTYLEN-AS40 Plus**

A real co-extruded 3-ply plastic tape made from stabilized polyethylene carrier with butyl rubber adhesive on both sides.

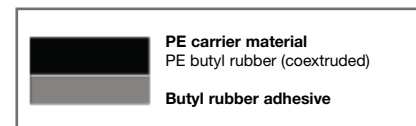
**BUTYLEN-R20 HT**

A real co-extruded two-ply plastic tape made from stabilized polyethylene carrier film with a butyl rubber adhesive on one side.

The outstanding connection between the adhesive and the carrier film is guaranteed by the co-extruded intermediate layer. The adhesive layer grows completely together with the outside layer of **BUTYLEN-AS40 Plus**.



BUTYLEN-AS40 Plus



BUTYLEN-R20 HT





## Typical product properties

Property	Unit	BUTYLEN-AS40 Plus Typical value	BUTYLEN-R20 HT Typical value	Test method
Carrier film color	-	Black, yellow or blue	White, black or blue	-
Butyl adhesive color inside	-	Gray	Black	-
Butyl adhesive color outside	-	Black	-	-
Tape thickness		≥ 0.8	≥ 0.5	
Carrier film thickness app.	mm	≥ 0.2	≥ 0.3	ISO 4591
Inside adhesive layer thickness app.		≥ 0.5	≥ 0.2	ASTM D1000
Outside adhesive layer thickness app.		≥ 0.1	-	
Elongation at break	%	≥ 600	≥ 550	DIN 30672
Tape strength	+23 °C (+73 °F) N / cm	≥ 100	≥ 65	EN 12068
Dielectric strength	kV/mm	≥ 40	≥ 35	DIN 53481
Water absorption	+23 °C (+73 °F) 1 day / 30 days %	≤ 0.1 / ≤ 0.4	≤ 0.1 / ≤ 0.4	DIN 53495 ASTM D570
Water vapor permeability	g / m <sup>2</sup> · 24 h	≤ 2 · 10 <sup>-1</sup>	≤ 5 · 10 <sup>-2</sup>	DIN 53122

### BUTYLEN-AS40 Plus/-R20 HT with BUTYLEN-HT Primer

Property	Unit	BUTYLEN-AS40 Plus/-R20 HT Typical value		Required value		Prüfmethode
Specific electrical insulation resistance	Ω · m <sup>2</sup>	≥ 10 <sup>10</sup>		≥ 10 <sup>8</sup>		EN 12068
Volume resistivity	Ω · cm	≥ 10 <sup>15</sup>		-		DIN 53482 ASTM D257
		+23 °C (+73 °F)	+50 °C (+122 °F)	+23 °C (+73.4 °F)	+50 °C (+122 °F)	
Peel resistance metal / primer / tape	N / cm	≥ 25	≥ 3	≥ 10	≥ 1	EN 12068
		≥ 45	≥ 5	-	-	ASTM D1000
Peel strength layer to layer		+23 °C (+73 °F) +50 °C (+122 °F)				
AS40 Plus / AS40 Plus	N / cm	≥ 30	≥ 4	≥ 10	≥ 2	EN 12068
AS40 Plus / R20 HT		≥ 30	≥ 3	≥ 2	≥ 2	
R20 HT / R20 HT		≥ 3	≥ 3	≥ 2	≥ 2	
Indentation resistance - residual layer thickness at stamp load 10 N/mm <sup>2</sup> (stamp-Ø 1.8 mm)	mm	+50 °C (+122 °F)				EN 12068
		≥ 1.1		≥ 0.6		
Impact resistance	J	≥ 16		≥ 15		EN 12068
Cathodic disbondment resistance	mm	≤ 6		< 20		ASTM G8
Lap shear strength		+23 °C (+73 °F)				
on steel	N / cm <sup>2</sup>	≥ 15		≥ 5		EN 12068
on factory coating		≥ 15		≥ 5		

**BUTYLEN** tapes can be easily applied manually. The processing with the original **DEKOMAT**<sup>®</sup> wrapping devices is even

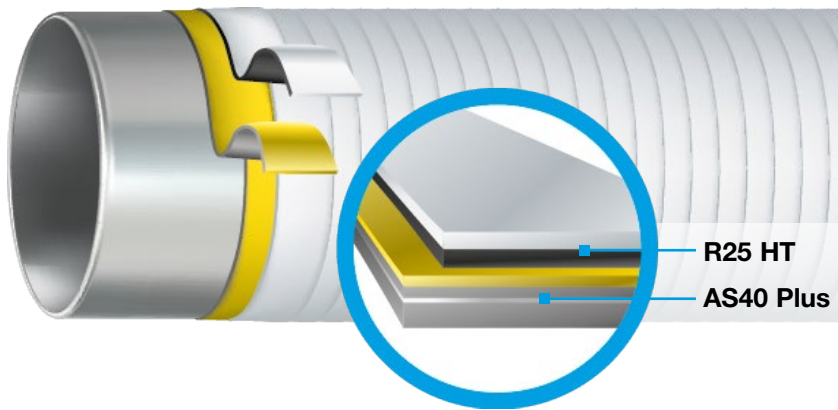
more efficient. For **BUTYLEN** tapes with widths of > 50 mm, we recommend the use of the **DEKOMAT**<sup>®</sup> wrapping device

to guarantee an excellent processing quality.

## Ordering information and packaging

		Width (mm)	Tape length (m)	Tape area per roll (m <sup>2</sup> )	Number of rolls	Content per box		
						Total tape area (m <sup>2</sup> )	Total tape length (m)	App. weight (kg)
<b>BUTYLEN-AS40 Plus</b>	Core Ø 41 mm	30	15	0.45	16	8	270	7.0
		50	15	0.75	12	9	180	9.0
		100	15	1.5	6	9	90	10.2
	Core Ø 78 mm	100	70	7	3	21	210	19.0
		150	70	10.5	2	21	140	19.0
<b>BUTYLEN-R20 HT</b>	Core Ø 41 mm	50	30	1.5	12	18	360	11.0
		100	30	3.0	6	18	180	11.0
	Core Ø 78 mm	100	70	7	3	21	210	13.0
		150	70	10.5	2	21	140	13.0

Additional lengths and widths are available on request.



### Special advantages:

- Approval by GRTgaz (FR) for the stress class STHR (RV02).
- Fulfills the stress class **C 50** in accordance with EN 12068.
- Proven corrosion prevention through co-extruded 3-ply tape.
- Compatible with factory coatings made of PE, PP, FBE, PUR and bitumen.

## BUTYLEN-AS40 Plus/-R25 HT

Two-tape system for the field-joint coating of pipelines, especially in case of very high mechanical stress and large nominal pipe sizes.

### Description

**BUTYLEN-AS40 Plus/-R25 HT** is a coating system for the permanent corrosion prevention of pipelines satisfying the highest requirements for mechanical stresses and durability. **BUTYLEN-AS40 Plus/-R25 HT** is designed for the field-joint coating or the rehabilitation of corrosion prevention coatings on transport lines, especially for large nominal pipe sizes.

The **BUTYLEN-AS40 Plus/-R25 HT** system fulfills the requirements for the stress class **C 50** in accordance with EN 12068 and additionally the high

requirements for the stress class STHR of the RV02 specification by GRTgaz (France) (certificate No. 214).

Standard designation:

- EN 12068 – **C 50**



**BUTYLEN-AS40 Plus** inside tape, fulfills essentially the corrosion prevention of the encasement system. **BUTYLEN-AS40 Plus** is a co-extruded 3-ply tape.

This three-layer design establishes an essentially gas and water type encasement in the overlapping area of the tape through self-amalgamation of the upper and lower butyl rubber coating.

**BUTYLEN-R25 HT** is a robust two-layer tape consisting of an outside layer made of high density polyethylene and an inside butyl rubber coating, which grows together with the outside layer of the inside tape.

The high strength polyethylene outside layer and the relative large tape thickness of 0.65 mm provide an outstanding mechanical protection of the corrosion prevention encasement.

Both **BUTYLEN** tapes can be processed efficiently with the **DEKOMAT®** wrapping devices.





## Typical product properties

Property	Unit	BUTYLEN-AS40 Plus Typical value	BUTYLEN-R25 HT Typical value	Test method
Carrier film color	-	Black	White, black or yellow	-
Butyl adhesive color inside	-	Gray	Black	-
Butyl adhesive color outside	-	Black	-	-
Tape thickness		≥ 0.8	≥ 0.65	
Carrier film thickness app.	mm	≥ 0.28	≥ 0.33	ISO 4591 ASTM D1000
Inside adhesive layer thickness app.		≥ 0.44	≥ 0.32	
Outside adhesive layer thickness app.		≥ 0.08	-	
Water absorption (1 d/ 30 d)	%	≤ 0.1/ ≤ 0.4	≤ 0.1/ ≤ 0.4	ASTM D570
Elongation at break	%	≥ 600	≥ 450	DIN 30672
Tape strength	N / cm	≥ 100	≥ 65	EN 12068
Dielectric strength	kV / mm	≥ 40	-	ASTM D149

### BUTYLEN-AS40 Plus/-R25 HT with BUTYLEN-HT Primer

Property		Einheit	Typischer Wert	Erforderlicher Wert	Prüfmethode
System design	Primer		BUTYLEN-HT Primer	-	-
	Inner tape		BUTYLEN-AS40 Plus, 2 layers	-	-
	Outer tape		BUTYLEN-R25 HT, 2 layers	-	-
Total thickness		mm	≥ 2.9	-	-
Specific electrical insulation resistance		Ω · m <sup>2</sup>	≥ 10 <sup>10</sup>	≥ 10 <sup>8</sup>	EN 12068
Peel strength on steel	+23 °C (+73 °F)	N / cm	≥ 25	≥ 10	EN 12068
	+50 °C (+122 °F)		≥ 2.5	≥ 1	EN 12068
Peel strength layer to layer	AS40 Plus / AS40 Plus	N / cm	≥ 30	≥ 15	EN 12068
	AS40 Plus / R25 HT		≥ 30	≥ 15	
	R25 HT / R25 HT		≥ 3	≥ 2	
Indentation resistance (residual layer thickness)	+23 °C (+73 °F) (15 MPa)	mm	≥ 0.6	≥ 0.6	EN 12068
Impact resistance		J	≥ 30		GdF RV 02
		J	≥ 17	≥ 15	EN 12068
Cathodic disbondment resistance		mm	< 6	≤ 20	EN 12068
Lap shear strength +23 °C (+73 °F)	on steel	N / cm <sup>2</sup>	≥ 15	≥ 5	EN 12068
		N / cm <sup>2</sup>	≥ 15	≥ 5	

BUTYLEN tapes can be easily applied manually. The processing with the original DEKOMAT® wrapping devices is even

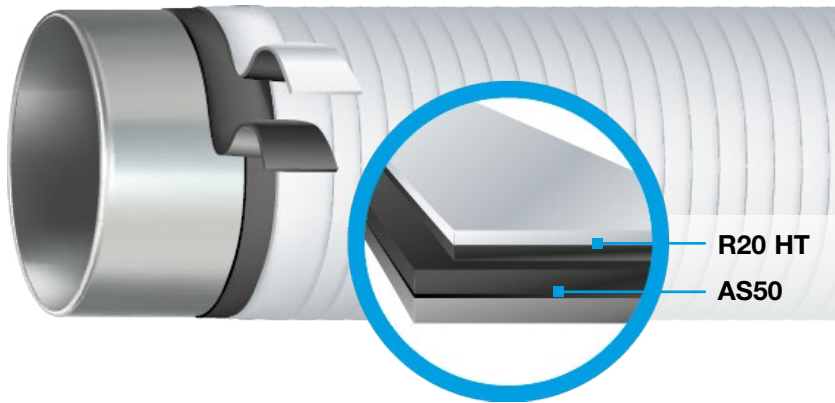
more efficient. For BUTYLEN tapes with widths of > 50 mm, we recommend the use of the DEKOMAT® wrapping device

to guarantee an excellent processing quality.

## Ordering information and packaging

		Width (mm)	Tape length (m)	Tape area per roll (m <sup>2</sup> )	Number of rolls	Content per box		
						Total tape area (m <sup>2</sup> )	Total tape length (m)	App. weight (kg)
BUTYLEN-AS40 Plus	Core Ø 41 mm	30	15	0.45	18	8.1	270	7.0
		50	15	0.75	12	9	180	9.0
		100	15	1.5	6	9	90	10.2
	Core Ø 78 mm	100	70	7	3	21	210	19.0
		150	70	10.5	2	21	140	19.0
BUTYLEN-R25 HT	Core Ø 41 mm	30	24	0.72	18	13	432	10.0
		50	24	1.2	12	14.4	288	11.0
	Core Ø 78 mm	100	24	2.4	6	14.4	144	11.0
		100	100	10	3	30	300	22.5

Additional lengths and widths are available on request.



### Special advantages:

- Real co-extruded 3-ply tape.
- Maximum mechanical protection and maximum corrosion prevention combined with an outstanding tape elasticity.
- Exceeds the requirements of stress class **C 50** in accordance with EN 12068.
- DIN-DVGW approved system: **C 50** (EN 12068, DIN 30672).
- Compatible with factory coatings made of PE, PP, FBE, PU, CTE and bitumen.
- For temperatures up to +85 °C (+185 °F).

## BUTYLEN-AS50/-R20 HT

Two-tape system for the corrosion prevention coating of metal pipes and pipelines in accordance with DIN 30672, EN 12068, ASTM and AWWA. For extreme corrosion conditions and extreme mechanical stresses.

### Description

**BUTYLEN-AS50/-R20 HT** is a cold applied two-tape system for the corrosion prevention of metal pipes and pipelines with outstanding properties.

An indentation resistance of  $\geq 1.2$  mm, which exceeds the requirements of  $\geq 0.6$  mm for stress class C by 100% and an impact resistance of  $\geq 20$ J are proof for the uniqueness of this tape system.

**BUTYLEN-AS50/-R20 HT** is a system approved by DIN-DVGW (Reg.No.: NV5180CN0381) and by SASOL.



Standard designation:

- EN 12068 – **C 50**
- DIN 30672 – **C 50**

**BUTYLEN-AS50/-R20HT** is basically impermeable for water vapor and oxygen and it is resistant against soil bacteria and electrolytes.

**BUTYLEN-AS50/-R20 HT** is compatible with factory coatings made of PE, PP, FBE, PU, CTE and Bitumen.

The system **BUTYLEN-AS50/-R20 HT** consists of:

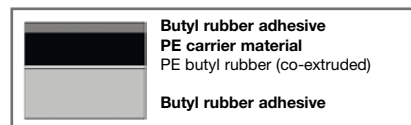
#### **BUTYLEN-HT Primer**

A solvent containing primer in accordance with EN 12068 and DIN 30672 for corrosion prevention with **BUTYLEN** tapes. Please refer to the separate product information of the **BUTYLEN-HT primer**.

#### **BUTYLEN-AS50**

A real co-extruded 3-ply plastic tape made from stabilized polyethylene carrier material with butyl rubber adhesive.

**BUTYLEN-AS50** has a thickness of  $\geq 1.1$  mm. **BUTYLEN-AS50** fulfills the international standards DIN 30672, EN 12068, ASTM and AWWA.

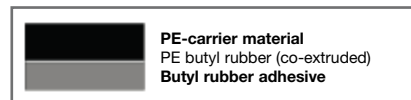


BUTYLEN-AS50

#### **BUTYLEN-R20 HT**

A real co-extruded two-ply plastic tape made from stabilized white polyethylene carrier film with a butyl rubber adhesive on one side. Outstanding connection between the adhesive and the carrier film is guaranteed by the co-extruded intermediate layer. The adhesive layer grows completely together with the outside layer of **BUTYLEN-AS50**.

**BUTYLEN-R20 HT** fulfills the international standards DIN 30672, EN 12068, ASTM and AWWA.



BUTYLEN-R20 HT





## Typical product properties

Property	Unit	BUTYLEN-AS50 Typical value	BUTYLEN-R20 HT Typical value	Test method
Carrier film color	-	Black	White, black, blue	-
Butyl adhesive color inside	-	Gray	Black	-
Butyl adhesive color outside	-	Black	-	-
Total thickness		≥ 1.1	≥ 0.5	
Carrier film thickness app.	mm	≥ 0.5	≥ 0.3	ISO 4591
Inside adhesive layer thickness app.		≥ 0.5	≥ 0.2	
Outside adhesive layer thickness app.		≥ 0.1	-	
Elongation at break	%	≥ 550	≥ 550	DIN 30672
Tape strength	+23 °C (+73 °F) N / cm	≥ 95	≥ 65	EN 12068
Dielectric strength	kV/mm	≥ 40	≥ 35	DIN 53481
Water absorption	+23 °C (+73 °F) 1 day / 30 days %	≤ 0.1 / ≤ 0.4	≤ 0.1 / ≤ 0.4	DIN 53495 ASTM D570
Water vapor permeability	g / m <sup>2</sup> · 24 h	≤ 2 · 10 <sup>-1</sup>	≤ 5 · 10 <sup>-2</sup>	DIN 53122
Brittleness temperature	°C ( °F)	-46 ± 4 (-50.8 ± 7.2)	-46 ± 4 (-50.8 ± 7.2)	DIN 53372
		-58 ± 4 (-72.4 ± 7.2)	-58 ± 4 (-72.4 ± 7.2)	GOST 10354

### BUTYLEN-AS50/-R20 HT with BUTYLEN-HT Primer

Property	Unit	BUTYLEN-AS50/-R20 HT Typical value		Required value		Test method
Specific electrical insulation resistance	Ω · m <sup>2</sup>	≥ 10 <sup>10</sup>		≥ 10 <sup>9</sup>		EN 12068
Volume resistivity	Ω · cm	≥ 10 <sup>15</sup>		-		DIN 53482 ASTM D257
Peel resistance metal/primer/tape	N / cm	+23 °C (+73 °F)	+50 °C (+122 °F)	≥ 10	≥ 1	EN 12068
		≥ 30	≥ 2.5			
Peel strength layer to layer	N / cm	+23 °C (+73 °F)	+50 °C (+122 °F)	≥ 15	≥ 2	EN 12068
		AS50 / AS50	AS50 / R20 HT			
AS50 / R20 HT		≥ 25	≥ 3	≥ 15	≥ 2	
R20 HT / R20 HT		≥ 5	≥ 3	≥ 2	≥ 2	
Indentation resistance - residual layer thickness at stamp load (stamp-0 1.8 mm)	mm	+50 °C (+122 °F)		≥ 0.6		EN 12068
		≥ 1.2 (Class C exceeded by 100%)				
Impact resistance	J	≥ 20		≥ 15		EN 12068
Cathodic disbondment resistance	mm	≤ 6		-		ASTM G8
Lap shear strength	N / cm <sup>2</sup>	+23 °C (+73 °F)		≥ 5		EN 12068
		on steel	on factory coating			
on steel		≥ 15		≥ 5		
on factory coating		≥ 15		≥ 5		

BUTYLEN tapes can be easily applied manually. The processing with the original DEKOMAT® wrapping devices is even

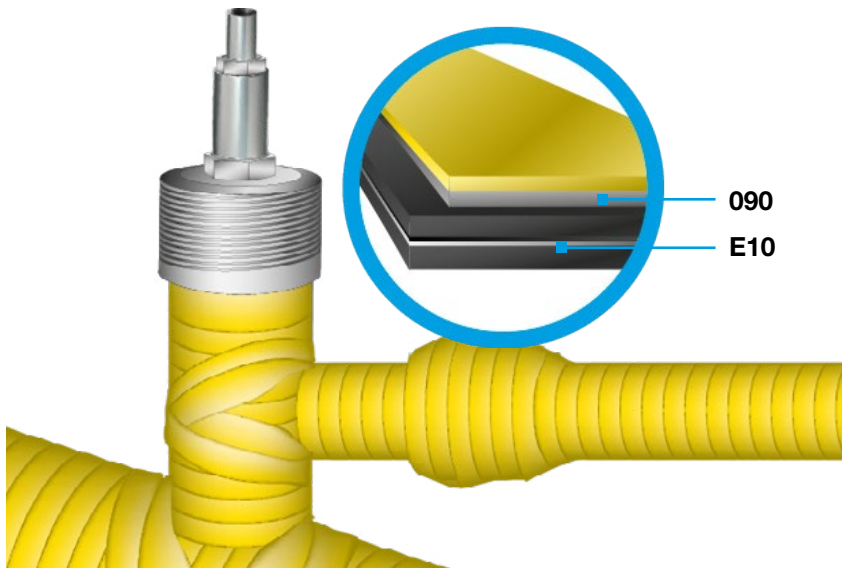
more efficient. For BUTYLEN tapes with widths of > 50 mm, we recommend the use of the DEKOMAT® wrapping device

to guarantee an excellent processing quality.

## Ordering information and packaging

	Core diameter (mm)	Width (mm)	Tape length (m)	Tape area per roll (m <sup>2</sup> )	Number of rolls	Content per box		
						Total tape area (m <sup>2</sup> )	Total tape length (m)	App. weight (kg)
BUTYLEN-AS50	41	50	10	0.5	12	6	120	9.5
		100	10	1.0	6	6	60	8.0
	78	150	10	1.5	6	9	60	12.0
		100	50	5	3	15	150	18.5
		150	50	7.5	2	15	100	18.5
BUTYLEN-R20 HT	41	50	30	1.5	12	18	360	11.0
		100	30	3.0	6	18	180	11.0
	78	150	30	4.5	6	27	180	17.0
		100	70	7	3	21	210	13.0
		150	70	10.5	2	21	140	13.0

Additional lengths and widths are available on request.



## Special advantages:

- Real co-extruded 3-ply tape.
- Optimal for encasements in distribution networks.
- Outstanding formability of the inside and outside tape.
- Fulfills the stress class **B 30** in accordance with EN 12068.
- Approval by Gaz de France (FR) for the stress class HR (RV02).
- For operating temperatures up to +30 °C (+86 °F).

# BUTYLEN-E10/-090

Two-tape system for the field-joint coating of pipelines and pipeline components.

## Description

**BUTYLEN-E10/-090** is a durable corrosion prevention system for pipelines and pipeline components.

**BUTYLEN-E10/-090** is optimized for the requirements in urban supply networks. The high flexibility and elasticity of **BUTYLEN-E10** and **BUTYLEN-090** permit a fast and safe application of the field-joint coating system on the pipeline components, such as T-fittings and house connection valves. The system is also ideally qualified for pipes with small nominal pipe diameter, even for tight construction site conditions.

**BUTYLEN-E10/-090** fulfills the requirements for stress class **B 30** in accordance with EN 12068.

**BUTYLEN-E10/-090** has an approval by Gaz de France (France) for stress class R in accordance with the specifications RV02 (certificate No. 25).

Standard designation

- EN 12068 – **B 30**



**BUTYLEN-E10** as inside tape, fulfills essentially the corrosion prevention of the encasement system. **BUTYLEN-E10** consists of a double-sided butyl rubber coating, which is applied to the PE carrier film. This three-layer design establishes an essentially gas and water tight encasement in the overlapping area of the tape through self-amalgamation of the upper and lower butyl rubber coating. The large tape thickness of 1.0 mm

permits an optimal coverage of the surface, also for uneven surfaces.

**BUTYLEN-090** is used as the outside tape in the encasement system.

**BUTYLEN-090** is a flexible two-ply tape with a polyethylene outside layer and an inside butyl rubber layer, which amalgamates with the outside layer of the inside tape. **BUTYLEN-090** acts as mechanical protection layer for the corrosion prevention tape located on the inside.

Both **BUTYLEN** tapes can be processed efficiently with the **DEKOMAT®** wrapping devices.





## Typical product properties

Property	Unit	BUTYLEN-E10 Typical value	BUTYLEN-090 Typical value	Test method
Carrier film color	-	-	yellow	-
Butyl adhesive color inside	-	black	gray	-
Butyl adhesive color outside	-	black	-	-
Tape thickness		≥ 1.0	≥ 0.4	
Carrier film thickness app.	mm	≥ 0.025	≥ 0.26	ISO 4591 ASTM D1000
Inside adhesive layer thickness app.		≥ 0.5	≥ 0.14	
Outside adhesive layer thickness app.		≥ 0.45	-	
Elongation at break	%	≥ 200	≥ 400	DIN 30672
Tape strength	N / cm	-	≥ 35	EN 12068

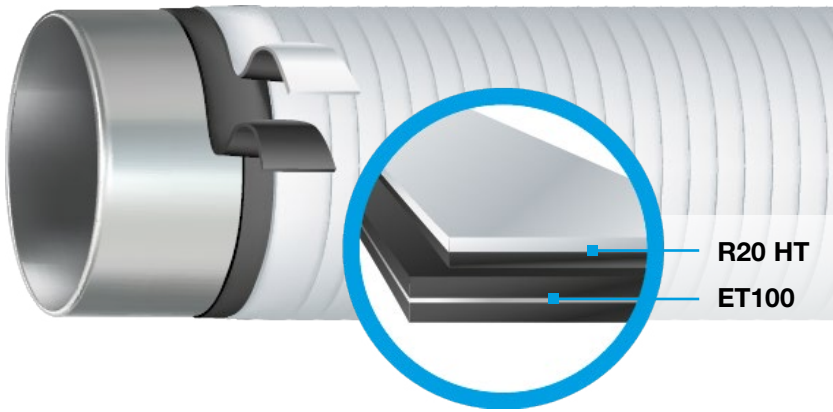
### BUTYLEN-E10/-090 with BUTYLEN-HT Primer

Property		Unit	Typical value	Required value	Test method
System design	Primer		BUTYLEN-HT	-	-
	Inner tape		BUTYLEN-E10, 2 layers	-	-
	Outer tape		BUTYLEN-090, 2 layers	-	-
Total thickness		mm	≥ 2.8	-	-
Specific electrical insulation resistance		Ω · m <sup>2</sup>	≥ 10 <sup>10</sup>	≥ 10 <sup>9</sup>	EN 12068
Peel resistance +23 °C (+73 °F)	steel	N / cm	≥ 15	≥ 4	EN 12068
	PE factory coating	N / cm	≥ 10	≥ 2	EN 12068
Peel strength layer to layer	E10 / E10	N / cm	≥ 30	≥ 8	EN 12068
	E10 / 090		≥ 20	≥ 8	
	090 / 090		≥ 2	≥ 2	
Indentation resistance (residual layer thickness)	+23 °C (+73 °F) (1 MPa)	mm	≥ 1	≥ 0.6	EN 12068
Impact resistance		J	≥ 10	≥ 8	EN 12068
Cathodic disbondment resistance		mm	≤ 8	≤ 20	EN 12068
Lap shear strength	on steel	N / cm <sup>2</sup>	≥ 10	≥ 5	EN 12068

## Ordering information and packaging

	Core diameter (mm)	Width (mm)	Tape length (m)	Tape area per roll (m <sup>2</sup> )	Number of rolls	Content		App. Weight (kg)
						Total tape area (m <sup>2</sup> )	Total tape length (m)	
BUTYLEN-E10	41	30	12.5	0.375	18	6.75	225	9
		50	12.5	0.625	12	7.5	150	10
		100	12.5	1.25	6	7.5	75	10
BUTYLEN-090	41	30	30	0.9	18	16.2	540	9
		50	30	1.5	12	18	360	10
		100	30	3.0	6	18	180	10

Additional dimensions available on request.



### Special advantages:

- Excellent corrosion prevention for pipelines with increased temperature stress.
- Especially thick and adaptable inner layer made from butyl rubber tape with a thickness of 1.0 mm.
- Exceeds the requirements of stress class **B 70** in accordance with EN 12068.
- Enagás / Spain approved system: **B 70** (EN 12068, DIN 30672).
- Compatible with factory coatings made of PE, PP, FBE, PU, CTE and bitumen.
- For temperatures up to +100 °C (+212 °F).

## BUTYLEN-ET100/-R20 HT

High temperature two-tape system for the corrosion prevention coating of metal pipes and pipelines in accordance with DIN 30672, EN 12068, ASTM and AWWA. Especially qualified for high operating temperatures for district heating pipelines, oil lines and station construction (compressors/compactors).

### Description

**BUTYLEN-ET100/-R20 HT** is a cold applied high temperature two-tape system for the corrosion prevention of metal pipes and pipelines. **BUTYLEN-ET100/-R20 HT** features outstanding properties especially for increased operating temperatures, e.g. for district heating pipelines, compressor stations and for oil lines.

**BUTYLEN-ET100/-R20 HT** is a system approved by Enagás S.A. (Spain).

Standard designation:

- EN 12068 – **B 70**
- DIN 30672 – **B 70**



**BUTYLEN-ET100/-R20 HT** is essentially impermeable to water vapor and oxygen and is resistant against soil bacteria and electrolytes. **BUTYLEN-ET100/-R20 HT** is compatible with factory coatings made of PE, PP, FBE, PU, CTE and bitumen.

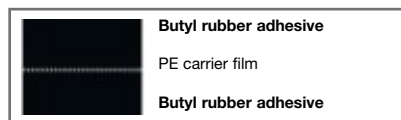
**BUTYLEN-ET100/-R20 HT** consists of:

#### BUTYLEN-HT Primer

A solvent containing primer in accordance with EN 12068 and DIN 30672 for the corrosion prevention with **BUTYLEN** tapes. Please refer to the separate product information of the **BUTYLEN-HT Primer**.

#### BUTYLEN-ET100

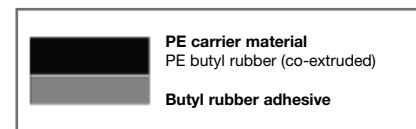
A real co-extruded 3-ply butyl rubber tape with butyl rubber adhesive on both sides of a carrier film made of stabilized polyethylene film. The special formulation of the butyl rubber adhesive in the **BUTYLEN-ET100/-R20 HT** gives the tape an extraordinary temperature stability up to +100 °C (+212 °F). **BUTYLEN-ET100** has a thickness of ≥ 1.0 mm. **BUTYLEN-ET100/-R20 HT** fulfills the international standards DIN 30672, EN 12068, ASTM and AWWA.



BUTYLEN-ET100

#### BUTYLEN-R20 HT

A real co-extruded 2-ply plastic tape made from stabilized polyethylene carrier film with a butyl rubber adhesive on one side. Outstanding connection between the adhesive and the carrier film is guaranteed by the co-extruded intermediate layer. The adhesive layer grows completely together with the outside layer of **BUTYLEN-ET100**. **BUTYLEN-R20 HT** fulfills the international standards DIN 30672, EN 12068, ASTM and AWWA.



BUTYLEN-R20 HT

#### DEPROTEC®-DRM PP1000 Plus Rockshield

As a mechanically protecting outside layer, we recommend the use of **DEPROTEC®-DRM PP1000 Plus Rockshield** as an additional mechanically protection for operating temperatures above +70 °C (+158 °F).



## Typical product properties

### BUTYLEN-ET100 and BUTYLEN-R20 HT

Property	Unit	BUTYLEN-ET100 Typical value	BUTYLEN-R20 HT Typical value	Test method
Carrier film color	-	Colorless	White	-
Butyl adhesive color inside	-	Black	Black	-
Butyl adhesive color outside	-	Black	-	-
Total thickness		≥ 1.0	≥ 0.5	
Carrier film thickness app.	mm	≥ 0.025	≥ 0.3	ISO 4591 ASTM D1000
Inside adhesive layer thickness app.		≥ 0.5	≥ 0.2	
Outside adhesive layer thickness app.		≥ 0.5	-	
Elongation at break	%	≥ 200	≥ 550	DIN 30672
Tape strength	+23 °C (+73 °F) N / cm	-	≥ 65	EN 12068
Dielectric strength	kV / mm	≥ 35	≥ 35	DIN 53481
Water absorption	+23 °C (+73 °F) 1 day / 30 days %	≤ 0.1 / ≤ 0.4	≤ 0.1 / ≤ 0.4	DIN 53495 ASTM D570
Water vapor permeability	g / m <sup>2</sup> · 24 h	≤ 2 · 10 <sup>-1</sup>	≤ 5 · 10 <sup>-2</sup>	DIN 53122
Brittleness temperature	°C (°F)	-46 ± 4 (-51 ± 7.2)	-46 ± 4 (-51 ± 7.2)	DIN 53372
		-58 ± 4 (-72 ± 7.2)	-58 ± 4 (-72 ± 7.2)	GOST 10354

### BUTYLEN-ET100/-R20 HT with BUTYLEN-HT Primer

Property	Unit	Typical value					Standard	
Specific electrical insulation resistance	Primer	BUTYLEN-HT Primer					-	
	Inner tape	BUTYLEN-ET100 (2 layers)						
	Outer tape	BUTYLEN-R20 HT (2 layers)						
	Mechanical protection	DEPROTEC®-DRM PP1000 Plus Rockshield						
Thickness of the encasement (without DEPROTEC®-DRM PP1000 Plus rockshield)	mm	3.0					-	
Specific electrical insulation resistance	Ω · m <sup>2</sup>	>10 <sup>10</sup>					DIN EN 12068	
Volume resistivity	Ω · cm	>10 <sup>15</sup>					ASTM D 257	
Impact resistance	J	16					DIN EN 12068	
			+23 (+73)	+50 (+122)	+70 (+158)	+85 (+185)		+100 (+212)
Peel strength on steel	N / cm	30	5	2.5 **	1.4 **	0.8 **	DIN EN 12068	
Lap shear strength	N / cm <sup>2</sup>	15	6	5 **	4.8 **	4.5 **	DIN EN 12068	
Indentation resistance. residual layer thickness of the tape system without rockshield	mm	Extra load 10 N / mm <sup>2</sup> . Stamp-Ø 1.8 mm	-	2.1	1.6	0.9	-	DIN EN 12068
		Extra load 1 N / mm <sup>2</sup> . Stamp-Ø 5.65 mm	-	-	2.1	1.8	0.9	
Cathodic disbondment (radius)	mm	8	28	-	-	-	DIN EN 12068	
		8	-	-	-	-	ASTM G 8	

\*\* Values after 7 days conditioning at the test temperature.

**BUTYLEN** tapes can be easily applied manually. The processing with the original **DEKOMAT**® wrapping devices is even

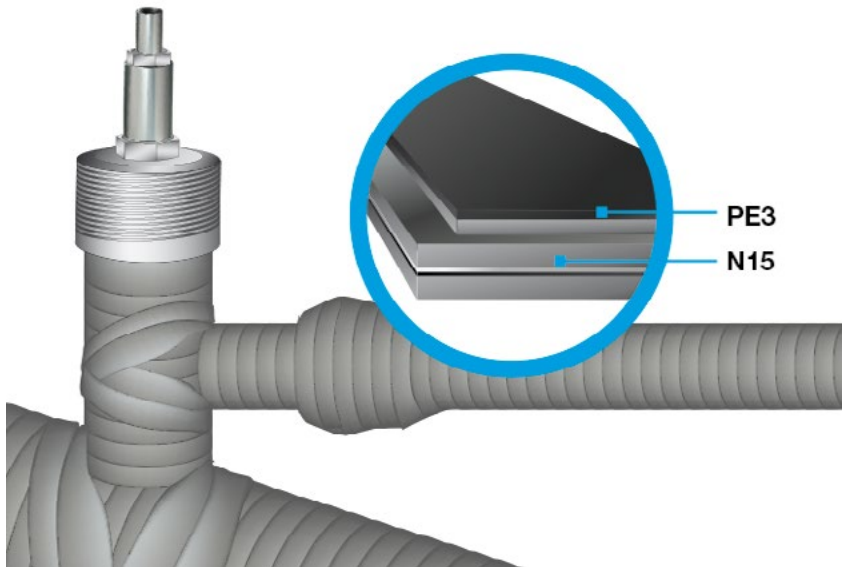
more efficient. For **BUTYLEN** tapes with widths of > 50 mm, we recommend the use of the **DEKOMAT**® wrapping device

to guarantee an excellent processing quality.

## Ordering information and packaging

	Roll length (m)	Roll width (mm)	m <sup>2</sup> / roll	Rolls	Content per box		
					m <sup>2</sup>	lin. m	kg (app.)
BUTYLEN-ET100 core Ø 41 mm	12.5	30	0.375	18	6.0	225	8.0
	12.5	50	0.625	12	7.5	150	10.0
	12.5	100	1.25	6	7.5	75	10.0
	12.5	150	1.875	6	11.25	75	15.0
BUTYLEN-R20 HT core Ø 41 mm	30	30	0.9	18	16.2	540	10.0
	30	50	1.5	12	18	360	11.0
	30	100	3.0	6	18	180	11.0
	30	150	4.5	6	27	180	17.0





## Special Advantages:

- Especially thick and adaptable inner layer, made from 1.5 mm-grade butyl rubber tape.
- DIN-DVGW approved system: **B 30** (EN 12068).
- Outstanding formability offered by inner and outer tape.
- Ideal for field coatings in distribution networks.
- Easy to work with, even for manual wrapping.
- Compatible with factory coatings made from PE, PP, FBE, PU, CTE and bitumen.

# BUTYLEN-N15/-PE3

Two-tape system for corrosion prevention coating of metal pipes, pipelines, containers and fittings according to EN 12068 and DIN 30672.

## Description

**BUTYLEN-N15/-PE3** is a cold-applied two-tape system for the corrosion protection of metal pipes and fittings.

**BUTYLEN-N15/-PE3** is optimized to meet the requirements of municipal supply networks. The great flexibility and elasticity shown by **BUTYLEN-N15** and **BUTYLEN-PE3** enables rapid and reliable application of coating system on pipeline parts such as T-fittings and house connection valves. The system is also ideally suited to pipes with small nominal pipe sizes, even in tight construction site conditions.

**BUTYLEN-N15/-PE3** has been certified by the DVGW for a stress class of **B 30** as defined by EN 12068 (reg. no.: NV-5180CQ0257).

Standard designation:

- coating EN 12068 – **B 30**
- coating DIN 30672 – **B 30**



**BUTYLEN-N15/-PE3** is effectively impermeable to water vapor and oxygen, and is resistant to soil bacteria and electrolytes.

**BUTYLEN-N15/-PE3** is compatible with factory coatings made from PE, PP, FBE, PU, CTE and bitumen.

As an inner tape, **BUTYLEN-N15** assumes the major corrosion prevention properties of the system. **BUTYLEN-N15** consists of a double-sided butyl rubber adhesive coating, which is applied to the co-extruded PE film located on the inside. In the overlapping area of the tape, this 3-ply design establishes a wrapping that is effectively impermeable to gas and water by means of the self-amalgamation of the upper and lower butyl rubber layer. The adaptable butyl rubber adhesive layer makes it possible for **BUTYLEN-N15** to adapt optimally to uneven substrates.

**BUTYLEN-PE3** is a genuine co-extruded 2-ply polymeric tape made from a stabilized black polyethylene carrier film with a butyl rubber adhesive on one side. The thickness is  $\geq 0.4$  mm. The co-extruded intermediate layer ensures an outstanding bond between the adhesive and the carrier film. The adhesive layer fuses completely with the outer layer of **BUTYLEN-N15**.

**BUTYLEN-PE3** is used as the outer tape in the wrapping system. A single layer (wrap with approx. 1 cm of overlap) of **BUTYLEN-PE3** tape is sufficient to satisfy the medium stress class B of EN 12068 and DIN 30672.

Both **BUTYLEN** tapes can be effectively processed with the **DEKOMAT**<sup>®</sup> wrapping machines.



## Typical product properties

Property	Unit	BUTYLEN-N15 Typical value	BUTYLEN-PE3 Typical value	Test method
Carrier film color	-	Black	Black	-
Butyl adhesive color (inner)	-	Gray	Gray	-
Butyl adhesive color (outer)	-	Gray	-	-
Total thickness		≥ 1.5	≥ 0.4	
Carrier film thickness (app.)	mm	≥ 0.07	≥ 0.22	ISO 4591
Inner adhesive layer thickness (app.)		≥ 0.75	≥ 0.18	ASTM D1000
Outer adhesive layer thickness (app.)		≥ 0.68	-	
Elongation at break	%	-	≥ 250	DIN 30672
Tensile strength	+23 °C (+73 °F)	N / cm	≥ 40	EN 12068
Dielectric strength		kV/mm	≥ 40	DIN 53481
Water absorption	+23 °C (+73 °F) 1 day / 30 days	%	≤ 0.1 / ≤ 0.4	DIN 53495 ASTM D570
Water vapor permeability		g / m <sup>2</sup> · 24 h	≤ 2 <sup>*</sup> · 10 <sup>-1</sup>	DIN 53122
Brittleness temperature	°C ( °F)	-46 ± 4 (-50.8 ± 7.2)	-	DIN 53372
		-58 ± 4 (-72.4 ± 7.2)	-	GOST 10354

Property	Unit	Typical value	Required value	Test method	
System design	Primer	BUTYLEN-HT	-	-	
	Inner tape	BUTYLEN-N15, 2 layers	-	-	
	Outer tape	BUTYLEN-PE3, 1 layers	-	-	
Total thickness	mm	≥ 3.4	-	-	
Electrical wrapping resistance	Ω · m <sup>2</sup>	≥ 10 <sup>11</sup>	≥ 10 <sup>6</sup>	EN 12068	
Peel resistance +23 °C (+73 °F)	Steel	N / cm	≥ 15	≥ 4	EN 12068
	PE factory coating	N / cm	≥ 15	≥ 2	EN 12068
Peel resistance layer / layer	N15 / N15	N / cm	≥ 30	≥ 8	EN 12068
	N15 / PE3	N / cm	≥ 15	≥ 8	
	PE3 / PE3	N / cm	≥ 2	≥ 2	
Elndentation resistance (residual layer thickness)	+23 °C (+73 °F) (1 MPa)	mm	≥ 1,2	≥ 0.6	EN 12068/ RV02
Impact resistance		J	≥ 8	≥ 8	EN 12068
cathodic disbondment resistance		mm	<13	≤ 20	EN 12068
Lap shear strength	on steel	N / cm <sup>2</sup>	≥ 10	≥ 5	EN 12068

BUTYLEN tapes can easily be applied manually. Application is even more efficient with original DEKOMAT® wrapping

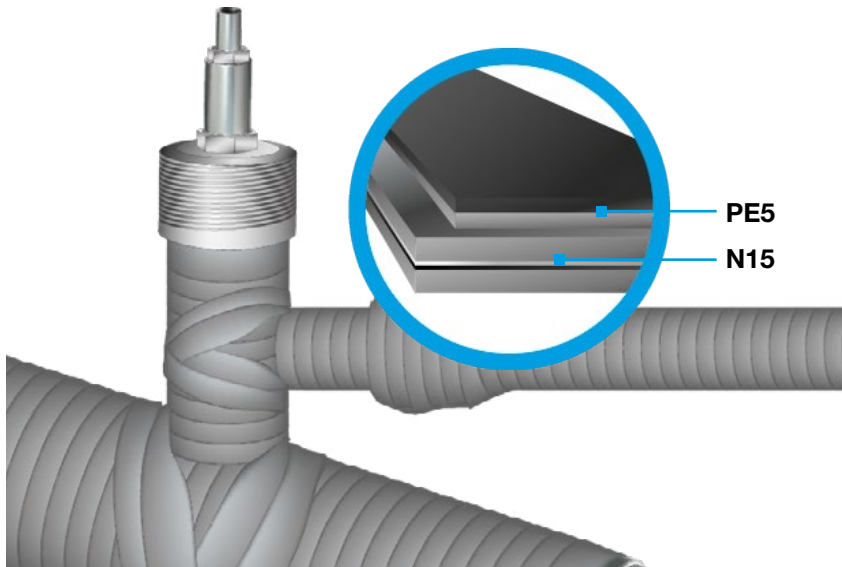
machines. For BUTYLEN tapes with widths >50 mm, we recommend the deployment of a DEKOMAT® wrapping

machine, to ensure final workmanship is of a superior quality.

## Ordering information and packaging

	Core diameter (mm)	Width (mm)	Tape length (m)	Tape area per roll (m <sup>2</sup> )	Number of rolls	Content		
						Total tape area (m <sup>2</sup> )	Total tape length (m)	App. Weight (kg)
BUTYLEN-N15	41	30	7.5	0.225	18	4.05	135	9.5
		50	7.5	0.375	12	4.5	90	10.5
		100	7.5	0.75	6	4.5	45	10.5
		150	7.5	1.125	6	6.75	45	15.5
BUTYLEN-PE3	41	30	20	0.6	18	10.8	360	5
		50	20	1	12	12	240	6
		100	20	2	6	12	120	6

Additional lengths and widths are available on request.



## Special advantages:

- Especially thick and adaptable inner layer made from butyl rubber tape with a thickness of 1.5 mm.
- Due to its very thick butyl rubber layer on both tape sides, excellent qualification for uneven substrates.
- Outstanding corrosion prevention with especially easy processability, especially for complicated components.
- DIN-DVGW approved system: **C 30** (EN 12068, DIN 30672)
- Compatible with factory coatings made of PE, PP, FBE, PU, CTE and bitumen.

# BUTYLEN-N15/-PE5

Two-tape system for the corrosion prevention coating of metal pipes, pipelines and containers in accordance with DIN 30672, EN 12068, ASTM and AWWA. For extreme corrosion conditions and mechanical stresses on uneven substrates.

## Description

**BUTYLEN-N15/-PE5** is a cold applied two-tape system for corrosion prevention of metal pipes and moldings with special qualification for the application of uneven substrates and complicated geometries.

A flexible butyl rubber adhesive layer with a thickness of 1.5 mm makes it possible for **BUTYLEN-N15** to adapt optimally to uneven substrates even with complicated geometries.

**BUTYLEN-N15/-PE5** is a system approved by DIN-DVGW (Reg. No.: NG5180AL0257).

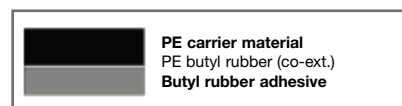
Standard designation:

- EN 12068 – **C 30**
- DIN 30672 – **C 30**



**BUTYLEN-N15/-PE5** is essentially impermeable for water vapor and oxygen and it is resistant against soil bacteria and electrolytes.

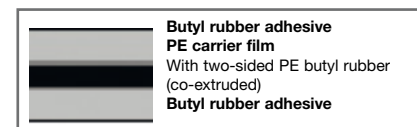
**BUTYLEN-N15/-PE5** is compatible with factory coatings made of PE, PP, FBE, PU, CTE and Bitumen.



BUTYLEN-PE5

The system **BUTYLEN-N15/-PE5** consists of: **BUTYLEN-HT Primer** is a solvent containing primer in accordance with EN 12068 and DIN 30672 for corrosion prevention with **BUTYLEN** tapes.

Please refer to the separate product information of the **BUTYLEN-HT Primer**.



BUTYLEN-N15

**BUTYLEN-N15** is a real co-extruded 3-ply butyl rubber tape with butyl rubber adhesive on both sides and a carrier film made from stabilized polyethylene film. **BUTYLEN-N15** has a thickness of  $\geq 1.5$ mm. **BUTYLEN-N15** fulfills the international standards DIN 30672, EN 12068, ASTM and AWWA.





## Typical product properties

Property	Unit	BUTYLEN-N15 Typical value	BUTYLEN-PE5 Typical value	Prüfmethode
Carrier film color	-	black	black	-
Butyl adhesive color inside	-	gray	gray	-
Butyl adhesive color outside	-	gray	-	-
Total thickness		≥ 1.5	≥ 0.5	
Carrier film thickness app.	mm	≥ 0.07	≥ 0.3	ISO 4591 ASTM D1000
Inside adhesive layer thickness app.		≥ 0.75	≥ 0.2	
Outside adhesive layer thickness app.		≥ 0.68	-	
Elongation at break	%	-	≥ 450	DIN 30672
Tape strength	+23 °C (+73 °F) N / cm	-	≥ 60	EN 12068
Dielectric strength	kV/mm	≥ 40	≥ 40	DIN 53481
Water absorption	+23 °C (+73 °F) 1 day / 30 days %	≤ 0.1 / ≤ 0.4	≤ 0.1 / ≤ 0.4	DIN 53495 ASTM D570
Water vapor permeability	g / m <sup>2</sup> · 24 h	≤ 2 · 10 <sup>-1</sup>	≤ 5 · 10 <sup>-2</sup>	DIN 53122
Brittleness temperature	°C ( °F)	-46 ± 4 (-50.8 ± 7.2)	-46 ± 4 (-50.8 ± 7.2)	DIN 53372
		-58 ± 4 (-72.4 ± 7.2)	-58 ± 4 (-72.4 ± 7.2)	GOST 10354

### BUTYLEN-N15/-PE 5 with BUTYLEN-HT Primer

Property	Einheit	BUTYLEN-N15/-PE5 Typical value		Required value		Test method
Specific electrical insulation resistance	Ω · m <sup>2</sup>	≥ 10 <sup>12</sup>		≥ 10 <sup>8</sup>		EN 12068
Volume resistivity	Ω · cm	≥ 10 <sup>15</sup>		-		DIN 53482 ASTM D257
Peel strength metal / primer / tape	N / cm	+23 °C (+73 °F)    +30 °C (+86 °F)		≥ 10	≥ 1	EN 12068 ASTM D1000
		≥ 15	≥ 1,5			
Peel strength layer to layer	N / cm	+23 °C (+73 °F)    +30 °C (+86 °F)		≥ 10	≥ 2	EN 12068
		≥ 18	≥ 1,8			
N15 / N15	N / cm	≥ 30	≥ 2	≥ 10	≥ 2	EN 12068
N15 / PE5		≥ 15	≥ 2	≥ 10	≥ 2	
PE5 / PE5		≥ 2	≥ 2	≥ 2	≥ 2	
Indentation resistance - residual layer thickness for stamp load (stamp-Ø 1.8 mm)	mm	+30 °C (+86 °F)		≥ 0.6		EN 12068
Impact resistance	J	≥ 15		≥ 15		EN 12068
Cathodic disbondment resistance	mm	≤ 10		-		ASTM G8
Total system thickness		≥ 4				
2 layers BUTYLEN-N15	mm	≥ 3		-		ISO 4591 ASTM D1000
2 layers BUTYLEN-PE5		≥ 1				

BUTYLEN tapes can be easily applied manually. The processing with the original DEKOMAT® wrapping devices is even

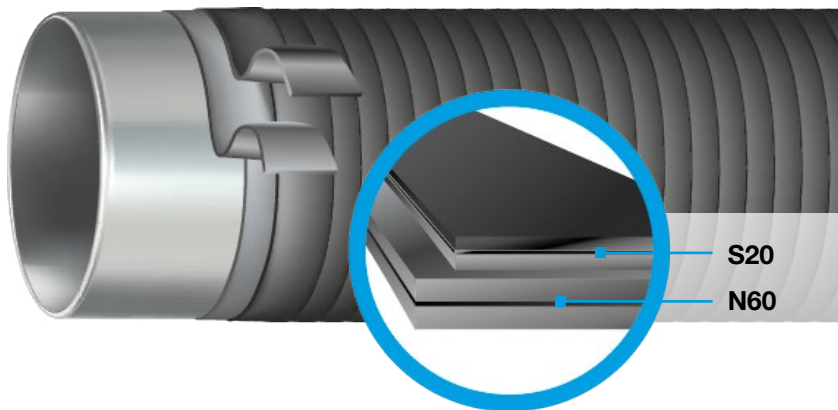
more efficient. For BUTYLEN tapes with widths of > 50 mm, we recommend the use of the DEKOMAT® wrapping device

to guarantee an excellent processing quality.

## Ordering information and packaging

	Core diameter (mm)	Width (mm)	Tape length (m)	Tape area per roll (m <sup>2</sup> )	Number of rolls	Content per box		
						Total tape area (m <sup>2</sup> )	Total tape length (m)	App. Weight (kg)
BUTYLEN-N15	41	30	7.5	0.225	18	4.05	135	9.5
		50	7.5	0.375	12	4.5	90	10.5
		100	7.5	0.75	6	4.5	45	10.5
		150	7.5	1.125	6	6.75	45	15.5
BUTYLEN-PE5	41	30	15	0.45	18	8.1	270	6.0
		50	15	0.75	12	9.0	180	6.0
		50	30	1.5	12	18.0	360	11.0
		100	30	3	6	18.0	180	11.0
		150	30	4.5	6	27.0	180	16.5

Additional lengths and widths are available on request.



## Special advantages:

- The system consists of two real co-extruded 3-ply tapes.
- Adapts to ideally two large beads and edges.
- High performance corrosion prevention system with successful application on the gas transport pipes OPAL and NEL.
- DIN-DVGW approved system: **C 50** (EN 12068, DIN 30672).
- Compatible with factory coatings made of PE, PP, FBE, PU, CTE and bitumen.
- For temperatures up to +70 °C (+158 °F).

## BUTYLEN-N60/-S20

Two-tape system for the corrosion prevention of metal pipes and pipelines in accordance with DIN 30672, EN 12068, ASTM and AWWA. Based on the good adaptability to unevennesses, especially qualified for the demanding use on pipes with large diameters.

### Description

**BUTYLEN-N60/-S20** is a cold applied two-tape system for the corrosion prevention of metal pipes and pipelines with small to very large diameters.

By using 3-ply tapes as inside and outside tape, each in 2 layers, all 4 tape layers of the system grow completely together due to the innovative formula.

**BUTYLEN-N60/-S20** is a system approved by DIN-DVGW (Reg.No.: NV5180BN0071), GASCADE and by Open Grid Europe.

Standard designation:

EN 12068 – **C 50**

DIN 30672 – **C 50**



**BUTYLEN-N60/-S20** is basically impermeable for water vapor and oxygen and it is resistant against soil bacteria and electrolytes.

**BUTYLEN-N60/-S20** is compatible with factory coatings made of PE, PP, FBE, PU, CTE and Bitumen.

**BUTYLEN-N60/-S20** consists of:

#### **BUTYLEN-HT Primer**

A solvent containing primer in accordance with EN 12068 and DIN 30672 for corrosion prevention with **BUTYLEN** tapes. Please refer to the separate product information of the **BUTYLEN-HT Primer**.

#### **BUTYLEN-N60**

A real co-extruded three-layer plastic tape made from stabilized polyethylene carrier material with butyl rubber adhesive.

**BUTYLEN-N60** has a thickness of  $\geq 1.2$  mm. The butyl rubber adhesive layer is especially thick with  $\geq 1.0$  mm, providing the best corrosion protection.

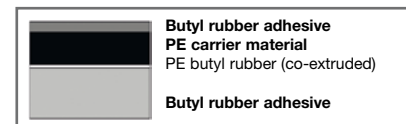
**BUTYLEN-N60** fulfills the international standards DIN 30672, EN 12068, ASTM and AWWA.

#### **BUTYLEN-S20**

A real co-extruded 3-ply plastic tape made from stabilized polyethylene carrier materials with butyl rubber adhesive.

**BUTYLEN-S20** has a thickness of  $\geq 0.5$  mm. The adhesive layer grows completely together with the outside layer of **BUTYLEN-N60** and with itself in the overlapping area.

**BUTYLEN-S20** fulfills the international standards DIN 30672, EN 12068, ASTM and AWWA.



**BUTYLEN-N60 and BUTYLEN-S20 design**  
(different thicknesses)



## Typical product properties

Property	Unit	BUTYLEN-N60 Typical value	BUTYLEN-S20 Typical value	Test method
Carrier film color	-	black	black	-
Butyl adhesive color inside	-	gray	gray	-
Butyl adhesive color outside	-	gray	black	-
Total thickness	mm	≥ 1.2	≥ 0.5	
Carrier film thickness app.	mm	≥ 0.14	≥ 0.28	ISO 4591 ASTM D1000
Inside adhesive layer thickness app.	mm	≥ 1.0	≥ 0.16	
Outside adhesive layer thickness app.	mm	≥ 0.06	≥ 0.06	
Elongation at break	%	≥ 450	≥ 600	DIN 30672
Tape strength	+23 °C (+73 °F) N / cm	≥ 40	≥ 100	EN 12068
Dielectric strength	kV / mm	≥ 40	≥ 40	DIN 53481
Water absorption	+23 °C (+73 °F) 1 day / 30 days %	≤ 0.1 / ≤ 0.4	≤ 0.1 / ≤ 0.4	DIN 53495 ASTM D570
Water vapor permeability	g / m <sup>2</sup> · 24 h	≤ 2 · 10 <sup>-1</sup>	≤ 2 · 10 <sup>-2</sup>	DIN 53122
Brittleness temperature	°C (°F)	-46 ± 4 (-51 ± 7.2) -58 ± 4 (-72 ± 7.2)	-46 ± 4 (-51 ± 7.2) -58 ± 4 (-72 ± 7.2)	DIN 53372 GOST 10354

### BUTYLEN-N60/-S20 with BUTYLEN-HT Primer

Property	Unit	BUTYLEN-N60/-S20 Typical value	Required value	Test method	
Specific electrical insulation resistance	Ω · m <sup>2</sup>	≥ 10 <sup>11</sup>	≥ 10 <sup>9</sup>	EN 12068	
Volume resistivity	Ω · cm	≥ 10 <sup>15</sup>	-	DIN 53482 ASTM D257	
Peel strength Metal / primer / BUTYLEN-N60	N / cm	+23 °C (+73 °F)    +50 °C (+122 °F)			
		≥ 30                    ≥ 2.5	≥ 10                    ≥ 1	EN 12068	
Peel strength layer to layer	N / cm	+23 °C (+73 °F)    +50 °C (+122 °F)			
		N60 / N60	≥ 30                    ≥ 3.5	≥ 15                    ≥ 2	EN 12068
		N60 / S20	≥ 25                    ≥ 3	≥ 15                    ≥ 2	
S20 / S20	≥ 25                    ≥ 3	≥ 2                     ≥ 2			
Indentation resistance - residual layer thickness for stamp load: 10 N / mm <sup>2</sup> (stamp-Ø 5.65 mm)	mm	+50 °C (+122 °F) ≥ 0.7 (class C)	> 0.6	EN 12068	
Impact resistance	J	≥ 15	> 15	EN 12068	
Cathodic disbondment resistance	mm	≤ 6	-	ASTM G8	
Lap shear strength	N / cm <sup>2</sup>	+23 °C (+73 °F)			
		on steel	≥ 15	≥ 5	EN 12068
on PE factory coating		≥ 15	≥ 5		

BUTYLEN tapes can be easily applied manually. The processing with the original DEKOMAT® wrapping devices is even

more efficient. For BUTYLEN tapes with widths of > 50 mm, we recommend the use of the DEKOMAT® wrapping device

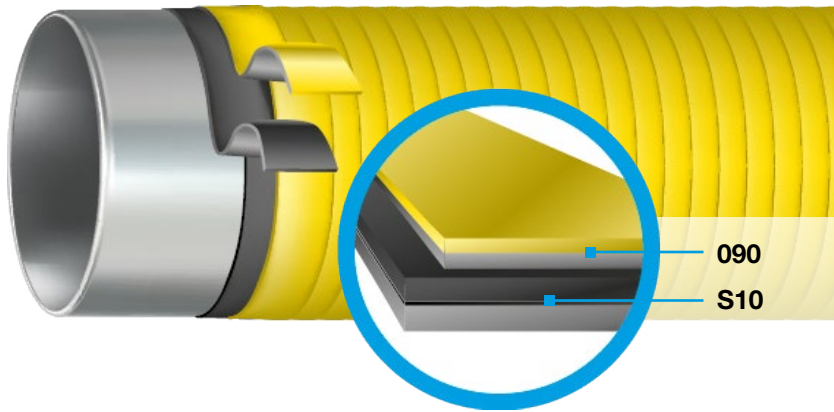
to guarantee an excellent processing quality.

## Ordering information and packaging

	Roll length (m)	Roll width (mm)	m <sup>2</sup> / roll	Rolls	Content per box		
					m <sup>2</sup>	lin. m	kg (app.)
BUTYLEN-N60 core Ø 41 mm	10	50	0.5	12	6	120	8
	10	100	1.0	6	6	60	8
	10	150	1.5	6	9	60	12
BUTYLEN-N60 core Ø 78 mm	40-50	100	4-5	3	12-15	120-150	18-23
	40	150	6	2	12	80	18
BUTYLEN-S20 core Ø 41 mm	24	50	1.2	12	14.4	288	9
	24	100	2.4	6	18	180	9
	24	150	3.6	6	27	180	13.5
BUTYLEN-S20 core Ø 78 mm	50-70	100	5-7	3	15-21	150-210	9-13
	50-70	150	7.5-10.5	2	15-21	100-140	9-13

Additional lengths and widths are available on request.





## Special advantages:

- Approval by GRTgaz (FR) for the stress class R and HR (RV02).
- For operating temperatures up to +50 °C (+122 °F).
- Compatible with factory coatings made of PE, PP, PUR, FBE and bitumen.
- Two-tape system for flanges, T-fittings and other fittings.

# BUTYLEN-S10/-090

Two-tape system for the field-joint coating of pipelines and pipeline components.

## Description

**BUTYLEN-S10/-090** is a tape system for the permanent corrosion prevention of pipelines and pipeline components.

The high flexibility and elasticity of **BUTYLEN-S10** and **BUTYLEN-090** permit a fast and safe application of the field-joint coating systems on the pipeline components, such as T-fittings and house connection valves.

Depending on the number of tape layers of the outside tape, the stress classes R or HR of GRTgaz are achieved. Based on the modular design, this **BUTYLEN** tape system can be used to establish the

technically and economically optimal system in accordance with the requirements of the construction project.

**BUTYLEN-S10/-090** has an approval by GRTgaz (France) for stress class R and HR in accordance with the specifications RV02 (certificate No. 70).



**BUTYLEN-S10** as an inside tape, fulfills essentially the corrosion prevention of the encasement system. **BUTYLEN-S10** features an especially adaptable carrier film and a symmetrical butyl rubber coating on both sides. The butyl rubber layers

grow completely together in the overlapping area and create a durable and hose-type coating.

**BUTYLEN-090** is used as the outside tape in the encasement system and provides the mechanical protection for the inside tape. **BUTYLEN-090** is a flexible two-layer tape with a polyethylene outside layer and an inside butyl rubber coating, which amalgamates with the outside layer of the inside tape.

Both **BUTYLEN** tapes can be processed efficiently with the **DEKOMAT®** wrapping devices.



## Typical product properties

Property	Unit	BUTYLEN-S10 Typical value	BUTYLEN-090 Typical value	Prüfmethode
Carrier film color	-	Black	Yellow	-
Butyl adhesive color inside	-	Gray	Gray	-
Butyl adhesive color outside	-	Black	-	-
Tape thickness		≥ 0.8	≥ 0.4	
Carrier film thickness app.	mm	≥ 0.14	≥ 0.26	ISO 4591
Inside adhesive layer thickness app.		≥ 0.38	≥ 0.14	ASTM D1000
Outside adhesive layer thickness app.		≥ 0.28	-	
Elongation at break	%	≥ 500	≥ 400	DIN 30672
Tape strength	N / cm	≥ 40	≥ 35	EN 12068

### BUTYLEN-S10/-090 with BUTYLEN-HT Primer

Property	Unit	Typical value		Required value		Test method
		R	HR	R	HR	
<b>Stress class</b>						RV 02
System design	Primer	BUTYLEN-HT		-	-	-
	Inner tape	BUTYLEN-S10 (2 layers)		-	-	-
	Outer tape	BUTYLEN-090		-	-	-
		1 layer	2 layers			
Total thickness	mm	≥ 2.0	2.4	-	-	-
Specific electrical insulation resistance	Ω · m <sup>2</sup>	≥ 10 <sup>10</sup>	≥ 10 <sup>10</sup>	≥ 10 <sup>6</sup>	≥ 10 <sup>8</sup>	EN 12068
Peel strength on steel	+23 °C (+73 °F)	≥ 20	≥ 20	≥ 15	≥ 15	EN 12068
	+50 °C (+122 °F)	≥ 3	≥ 3	≥ 2	≥ 2	EN 12068
Peel strength layer to layer	S10 / S10	≥ 25	≥ 25	-	-	
	S10 / 090	≥ 10	≥ 10	-	-	EN 12068
	090 / 090	≥ 2	≥ 2	-	-	
Indentation resistance (residual layer thickness)	+50 °C (+122 °F) mm	≥ 0.6 (1 MPa)	≥ 0.6 (10 MPa)	≥ 0.6 (1 MPa)	≥ 0.6 (10 MPa)	EN 12068
Impact resistance	J	≥ 10	≥ 15	≥ 10	≥ 15	EN 12068
Cathodic disbondment resistance	mm	≤ 8	≤ 8	≤ 15	≤ 15	EN 12068
Lap shear strength +23 °C (+73 °F)	on steel N / cm <sup>2</sup>	≥ 15	≥ 15	-	-	EN 12068

BUTYLEN tapes can be easily applied manually. The processing with the original DEKOMAT® wrapping devices is even

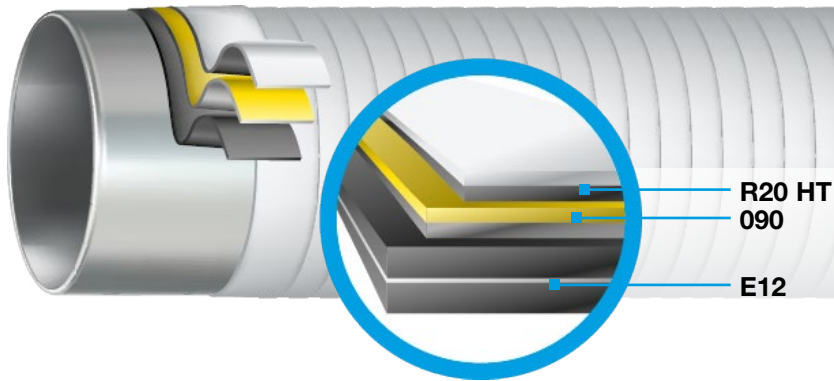
more efficient. For BUTYLEN tapes with widths of > 50 mm, we recommend the use of the DEKOMAT® wrapping device

to guarantee an excellent processing quality.

## Ordering information and packaging

	Core diameter (mm)	Width (mm)	Tape length (m)	Tape area per roll (m <sup>2</sup> )	Number of rolls	Content per box		App. Weight (kg)
						Total tape area (m <sup>2</sup> )	Total tape length (m)	
BUTYLEN-S10	41	30	15	0.45	18	8.1	270	9.7
		50	15	0.75	12	9	180	10.6
		100	15	1.5	6	9	90	10.5
BUTYLEN-090	41	30	30	0.9	18	16.2	540	9
		50	30	1.5	12	18	360	10
		100	30	3.0	6	18	180	10

Additional lengths and widths are available on request.



### Special advantages:

- For permanent operating temperatures up to +30 °C (+86 °F).
- Highly resistant due to 3 tape design.
- Fulfills stress class **C 30** in accordance with EN 12068 and ÖNORM B 5250.
- Easy processing even for manual wrapping.

## BUTYLEN System 1 BUTYLEN-E12/-090/-R20 HT

Robust field-joint coating system for the corrosion prevention of pipelines and pipeline components.

### Description

**BUTYLEN System 1** is a robust field-joint coating system for the permanent corrosion prevention of pipelines and pipeline components. **BUTYLEN System 1** is a highly stressable systems based on its design of three **BUTYLEN** tapes. The requirements for the stress class **C 30** in accordance with EN 12068 and ÖNORM B 5250 are exceeded.

Standard designation:

- EN 12068 – **C 30**
- ÖNORM B 5250 – **C 30**

**BUTYLEN System 1** consists of three **BUTYLEN** tapes that have been proven for a long time:

**BUTYLEN-E12** is a soft butyl rubber tape, which – as the inside tape – assumes the major corrosion prevention properties of the system. The thick butyl rubber layer of the system permits an outstanding molding of unevenly formed surfaces and an easy manual processing, e.g. on pipelines with small nominal pipe sizes, pipe bends and house connection valves. Due to its self-amalgamation effect in the overlapping area, **BUTYLEN-E12** creates an essentially gas and water tight as well as electrically high insulating encasement.

**BUTYLEN-090** is used as the prestressed tape in the encasement system. It is a flexible two-ply tape with a polyethylene outside layer and a butyl rubber coating positioned on the inside. The applied winding tension presses the inner tape solidly to the component surface and supports the self-amalgamation of the inner tape.

**BUTYLEN-R20 HT** is a robust two-ply tape. The solid polyethylene outside layer protects the encasement against mechanical stresses.

All three **BUTYLEN** tapes can be processed efficiently with the **DEKOMAT®** wrapping devices.





## Typical product properties

Property	Unit	BUTYLEN-E12 Typical value	BUTYLEN-090 Typical value	BUTYLEN-R20 HT Typical value	Test method
Carrier film color	-		Yellow	White, black or blue	-
Butyl adhesive color inside	-	Black	Gray	Black	-
Butyl adhesive color outside	-	Black	-	-	-
Tape thickness		≥ 1.2	≥ 0.4	≥ 0.5	
Carrier film thickness app.	mm	≥ 0.025	≥ 0.26	≥ 0.3	ISO 4591 ASTM D1000
Inside adhesive layer thickness app.		≥ 0.7	≥ 0.14	≥ 0.2	
Outside adhesive layer thickness app.		≥ 0.43	-	-	
Elongation at break	%	-	≥ 400	≥ 500	DIN 30672
Tape strength	+23 °C (+73 °F) N / cm	-	≥ 35	≥ 65	EN 12068
Dielectric strength	kV / mm	-	-	≥ 50	ASTM D149

Property	Unit	BUTYLEN System 1 Typical value	Required value	Test method
System design	Primer	BUTYLEN-HT25 Primer	-	-
	Inner tape	BUTYLEN-E12, 2 layers		
	Tensioning tape	BUTYLEN-090, 2 layers		
	Outer tape	BUTYLEN-R20 HT, 2 layers		
Total thickness	mm	4.2	-	-
Specific electrical insulation resistance	Ω · m <sup>2</sup>	≥ 10 <sup>10</sup>	≥ 10 <sup>8</sup>	EN 12068
Peel strength metal / primer / tape	N / cm	≥ 15	≥ 10	EN 12068 ASTM D1000
Peel strength layer to layer	E12 / E12	≥ 30	≥ 15	EN 12068
	E12 / 090	≥ 20	≥ 15	
	090 / 090	≥ 2	≥ 2	
	R20 HT / R20 HT	≥ 3	≥ 2	
Indentation resistance (residual layer thickness) (stamp load 10 N / mm <sup>2</sup> )	mm	> 0.8	≥ 0.6	EN 12068
Impact resistance	J	> 15	≥ 15	EN 12068
Cathodic disbondment (radius)	mm	< 8	< 20	EN 12068
Lap shear strength on steel	N / cm <sup>2</sup>	> 15	≥ 5	EN 12068

BUTYLEN tapes can be easily applied manually. The processing with the original DEKOMAT® wrapping devices is even

more efficient. For BUTYLEN tapes with width of > 50 mm, we recommend the use of DEKOMAT® wrapping

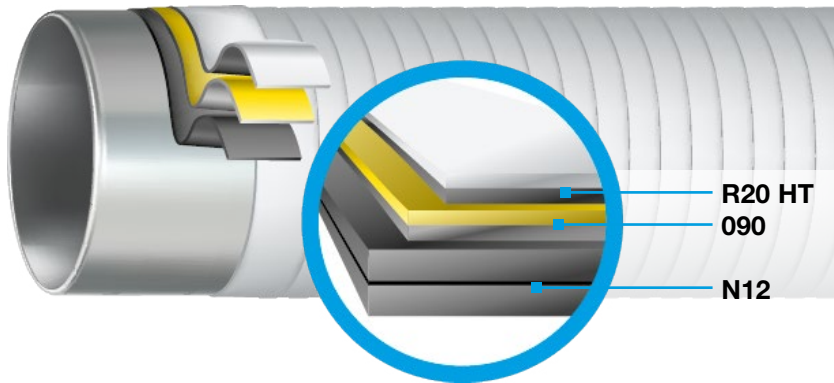
devices to guarantee an excellent processing quality.

## Ordering information and packaging

All rolls feature a 41 mm inside diameter of the roll core.

	Roll length (m)	Roll width (mm)	Number of rolls	Box content		Weight per box app. (kg)
				Total tape length (m)	Tape area (m <sup>2</sup> )	
BUTYLEN-E12	10	50	12	120	6.0	10
	10	75	12	120	9.0	15
	10	100	6	60	6.0	10
BUTYLEN-090	15	50	12	180	9.0	6.5
	15	75	12	180	13.5	10.0
	15	100	6	90	9.0	6.5
BUTYLEN-R20 HT	15	30	18	270	8.1	5.0
	15	50	12	180	9	5.5
	15	75	12	180	13.5	8.0
	15	100	6	90	9	5.5
	30	50	12	360	18	11.0
	30	75	12	360	27	17.0
	30	100	6	180	18	11.0
30	150	6	180	27	17.0	

Additional dimensions available on request.



### Special advantages:

- For permanent operating temperatures up to +50 °C (+122 °F).
- Highly resistant due to three-tape design.
- ÖVGW approval for stress class **C 50** in accordance with EN 12068 and ÖNORM B 5250.
- Proven for many years for many pipeline projects.

## BUTYLEN System 2 BUTYLEN-N12/-090/-R20 HT

Robust field coating system for the corrosion prevention of pipelines and pipeline components.

### Description

**BUTYLEN System 2** is a robust field coating system for the permanent corrosion prevention of pipelines and pipeline components. **BUTYLEN System 2** is a highly stressable system based on its design of three **BUTYLEN** tapes, which has proven itself outstandingly in many construction measures on transportation and distribution pipelines.

**BUTYLEN System 2** features an ÖVGW approval for the stress class **C 50** in accordance with EN 12068 and ÖNORM B 5250. The requirements for this standard are exceeded.

Standard designation:

- EN 12068 – **C 50**
- ÖNORM B 5250 – **C 50**



**BUTYLEN System 2** consists of three **BUTYLEN** tapes that have been proven for a long time:

**BUTYLEN-N12** as the inner tape, assumes the major corrosion prevention properties of the system. The thick butyl rubber layer of the tape equalizes unevenly formed surfaces and permits an easy processing on pipelines with small as well as large nominal pipe sizes. Due to its self-amalgamation effect in the overlapping area, **BUTYLEN-N12** creates an essentially gas and water tight as well as electrically high insulating encasement.

**BUTYLEN-090** is used as the middle layer in the encasement system. It is a flexible two-ply tape with a polyethylene outside layer and a butyl rubber coating positioned on the inside. The applied winding tension presses the inside tape solidly to the component surface and thus supports the self-amalgamation of the inside tape.

**BUTYLEN-R20 HT** is a robust two-ply tape. The solid polyethylene outside layer protects the coating against mechanical stresses.

All three **BUTYLEN** tapes can be processed efficiently with the **DEKOMAT®** wrapping devices.



## Typical product properties

Property	Unit	BUTYLEN-N12 Typical value	BUTYLEN-090 Typical value	BUTYLEN-R20 HT Typical value	Test method	
Carrier film color	-	-	yellow	white, black, or blue	-	
Butyl adhesive color inside	-	gray	gray	black	-	
Butyl adhesive color outside	-	gray	-	-	-	
Tape thickness		≥ 1.2	≥ 0.4	≥ 0.5		
Carrier film thickness app.	mm	≥ 0.07	≥ 0.26	≥ 0.3	ISO 4591 ASTM D1000	
Inside adhesive layer thickness app.		≥ 0.7	≥ 0.14	≥ 0.2		
Outside adhesive layer thickness app.		≥ 0.43	-	-		
Elongation at break	%	≥ 500	≥ 400	≥ 500	DIN 30672	
Tape strength	+23 °C (+73.4 °F)	N / cm	≥ 30	≥ 35	≥ 65	EN 12068
Dielectric strength	kV / mm	-	-	≥ 50	ASTM D149	

Property	Unit	BUTYLEN System 2 Typical value	Required value	Test method	
System design	Primer	BUTYLEN-HT25 Primer			
	Inner tape	BUTYLEN-N12, 2 layers	-	-	
	Tensioning tape	BUTYLEN-090, 2 layers			
	Outer tape	BUTYLEN-R20 HT, 2 layers			
Total thickness	mm	4.2	-	-	
Specific electrical insulation resistance	Ω · m <sup>2</sup>	≥ 10 <sup>10</sup>	≥ 10 <sup>9</sup>	EN 12068	
Peel strength to steel	+23 °C (+73 °F)	≥ 15	≥ 10	EN 12068	
	+50 °C (+122 °F)	≥ 5	≥ 1		
Peel strength layer to layer	N12 / N12	≥ 30	≥ 15	EN 12068	
	N12 / 090	≥ 25	≥ 15		
	090 / 090	≥ 2	≥ 2		
	R20 HT / R20 HT	≥ 3	≥ 2		
Indentation resistance (residual Layer thickness)	+23 °C (+73 °F) (10 MPa)	mm	> 0.6	≥ 0.6	EN 12068
Impact resistance	J	> 20	≥ 15	EN 12068	
Cathodic disbondment (radius)	mm	< 9	< 20	EN 12068	
Lap shear strength	on steel	N / cm <sup>2</sup>	> 15	≥ 5	EN 12068

BUTYLEN tapes can be easily applied manually. The processing with the original DEKOMAT® wrapping devices is even

more efficient. For BUTYLEN tapes with widths of > 50 mm, we recommend the use of the DEKOMAT® wrapping device

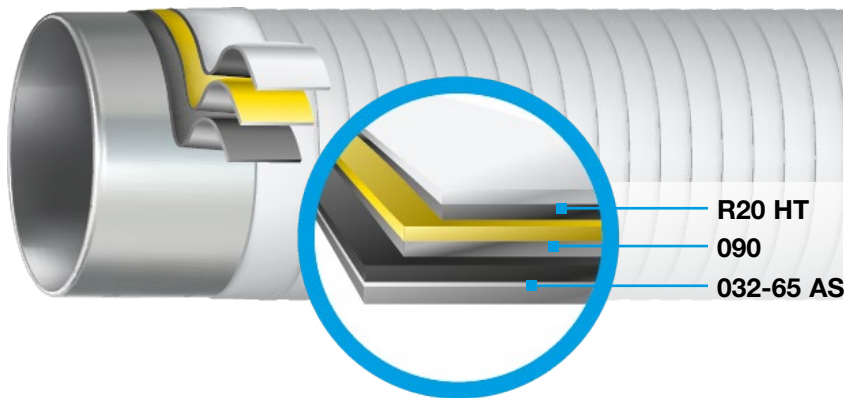
to guarantee an excellent processing quality.

## Ordering information and packaging

	Core diameter (mm)	Width (mm)	Tape length (m)	Tape area (m <sup>2</sup> )	Number of rolls	Box content		App. weight (kg)
						Total tape area (m <sup>2</sup> )	Total tape length (m)	
BUTYLEN-N12	41	50	10	0.5	12	6.0	120	10
		75	10	0.75	12	9.0	120	15
		100	10	1.0	6	6.0	60	10
BUTYLEN-090	41	50	15	0.75	12	9.0	180	6.5
		75	15	1.125	12	13.5	180	10.0
		100	15	1.5	6	9.0	90	6.5
BUTYLEN-R20 HT	41	30	15	0.45	18	8.1	270	5.0
		50	15	0.75	12	9.0	180	5.5
		75	15	1.125	12	13.5	180	8.0
		100	15	1.5	6	9.0	90	5.5
		50	30	1.5	12	18	360	11.0
		75	30	2.25	12	27	360	17.0
		100	30	3.0	6	18	180	11.0
150	30	4.5	6	27	180	17.0		

Additional lengths and widths are available on request.





### Special advantages:

- For permanent operating temperatures up to +50 °C (+122 °F).
- Highly resistant due to three-tape design.
- ÖVGW approval for stress class **C 50** in accordance with EN 12068 and ÖNORM B 5250.

## BUTYLEN System 3 BUTYLEN-032-65 AS/-090/-R20 HT

Robust field-joint coating system for the corrosion prevention of pipelines and pipeline components.

### Description

**BUTYLEN System 3** is a field-joint coating system for the permanent corrosion prevention of pipelines and pipeline components. **BUTYLEN System 3** is a highly stressable system based on its design of three **BUTYLEN** tapes. An essentially gas and watertight as well as electrically highly insulating encasement will be created due to the self-amalgamation effect of the inside tape **BUTYLEN-032-65 AS**.

**BUTYLEN System 3** features an ÖVGW approval for the stress class **C 50** in accordance with EN 12068 and ÖNORM B 5250. The requirements for this standard are significantly exceeded.

Standard designation:

- EN 12068 – **C 50**
- ÖNORM B 5250 – **C 50**



**BUTYLEN System 3** consists of three **BUTYLEN** tapes:

**BUTYLEN-032-65 AS** as the inner tape, assumes the major corrosion prevention properties of the system.

**BUTYLEN-032-65 AS** is a co-extruded 3-ply tape with an asymmetrical layer design. Even for a relative thin tape thickness of 0.65 mm with this design, a thick butyl rubber coating is placed on the pipe surface and it provides an outstanding adhesive connection even if the pipe surface is uneven. A self-amalgamation effect will be achieved in the overlapping area due to the thin butyl rubber layer at the upper side of the tape.

The low tape thickness results also in a good processability at pipe bends and fittings.

**BUTYLEN-090** is used as the tensioning tape in the encasement system. It is a flexible two-ply tape with a polyethylene outside layer and a butyl rubber coating positioned on the inside. The applied winding tension presses the inside tape solidly to the component surface and therefore supports the self-amalgamation of the inside tape.

**BUTYLEN-R20 HT** is a robust two-ply tape. The solid polyethylene outside layer protects the encasement against mechanical stresses.



## Typical product properties

Property	Unit	BUTYLEN-032-65 AS Typical value	BUTYLEN-090 Typical value	BUTYLEN-R20 HT Typical value	Test method
Carrier film color	-	Black	Yellow	White, black or blue	-
Butyl adhesive color inside	-	Gray	Gray	Black	-
Butyl adhesive color outside	-	Black	-	-	-
Tape thickness		≥ 0.65	≥ 0.4	≥ 0.5	
Carrier film thickness app.	mm	≥ 0.18	≥ 0.26	≥ 0.3	ISO 4591 ASTM D1000
Inside adhesive layer thickness app.		≥ 0.39	≥ 0.14	≥ 0.2	
Outside adhesive layer thickness app.		≥ 0.08	-	-	
Elongation at break	%	≥ 550	≥ 400	≥ 500	DIN 30672
Tape strength	+23 °C (+73 °F) N / cm	≥ 50	≥ 35	≥ 65	EN 12068
Dielectric strength	kV / mm	-	-	≥ 50	ASTM D149

Property	Unit	BUTYLEN System 3 Typical value	Required value	Test method
System design	Primer	BUTYLEN-HT25 Primer	-	-
	Inside tape	BUTYLEN-032-65 AS, 2 layers	-	-
	Tensioning tape	BUTYLEN-090, 2 layers	-	-
	Outside tape	BUTYLEN-R20 HT, 2 layers	-	-
Total thickness	mm	3.1	-	-
Specific electrical insulation resistance	Ω · m <sup>2</sup>	≥ 10 <sup>10</sup>	≥ 10 <sup>9</sup>	EN 12068
Peel strength on steel	+23 °C (+73 °F)	≥ 15	≥ 10	EN 12068
	+50 °C (+122 °F)	≥ 2	≥ 1	EN 12068
Peel strength on PE	+23 °C (+73 °F)	≥ 10	≥ 4	EN 12068
Peel strength layer to layer	032-65 AS / 032-65 AS	≥ 22	≥ 15	EN 12068
	032-65 AS / 090	≥ 22	≥ 15	
	090 / 090	≥ 2	≥ 2	
	R20 HT / R20 HT	≥ 3	≥ 2	
Indentation resistance (residual layer thickness)	+23 °C (+73 °F) (10 MPa) mm	> 0.8	≥ 0.6	EN 12068
Impact resistance	J	> 20	≥ 15	EN 12068
Cathodic disbondment resistance	mm	< 2	< 20	EN 12068
Lap shear strength on steel	N / cm <sup>2</sup>	≥ 8	≥ 5	EN 12068

**BUTYLEN** tapes can be easily applied manually. The processing with the original **DEKOMAT**<sup>®</sup> wrapping devices is even

more efficient. For **BUTYLEN** tapes with widths of > 50 mm, we recommend the use of **DEKOMAT**<sup>®</sup> wrapping devices to

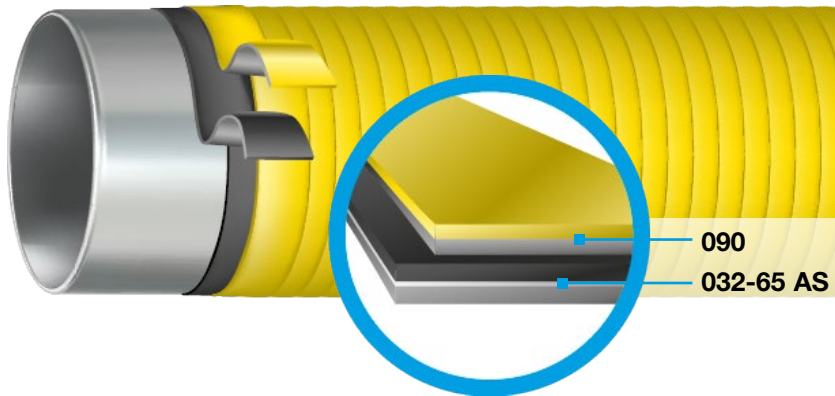
guarantee an excellent processing quality.

## Ordering information and packaging

All rolls feature a 41 mm inside diameter of the roll core.

	Roll width (mm)	Roll length (m)	Tape area (m <sup>2</sup> )	Box content			Weight per box app. (kg)
				Number of rolls	Total tape area (m <sup>2</sup> )	Total tape length (m)	
<b>BUTYLEN-032-65 AS</b>	30	15	0.45	18	8.1	270	6
	50		0.75	12	9.0	180	6.5
<b>BUTYLEN-090</b>	75	15	1.125	12	13.5	180	10.0
	100		1.5	6	9.0	90	6.5
<b>BUTYLEN-R20 HT</b>	50		0.75	12	9.0	180	5.5
	75	15	1.125	12	13.5	180	8.0
	100		1.5	6	9.0	90	5.5

Additional dimensions available on request.



## Special advantages:

- For permanent operating temperatures up to +50 °C (+122 °F).
- Optimal for the coating of fittings.
- ÖVGW approval for stress class **C 50** in accordance with EN 12068 and ÖNORM B 5250.

# BUTYLEN System 4

## BUTYLEN-032-65 AS/-090

Robust two-tape field coating system for the corrosion prevention of pipelines and pipeline components.

## Description

**BUTYLEN System 4** is a two-tape field coating system for the permanent corrosion prevention of pipelines and pipeline components. **BUTYLEN System 4** due to its design of two thin and well formable **BUTYLEN** tapes is optimally qualified for the encasement of pipeline components such as T-fittings, flanges, sleeves or pipe elbows with small nominal pipe size. Based on the multi-layer design, a coating system is created for high mechanical and corrosive stresses.

**BUTYLEN System 4** features an ÖVGW approval for stress class **C 50** in accordance with EN 12068 and ÖNORM B 5250.

Standard designation:

- EN 12068 – **C 50**
- ÖNORM B 5250 – **C 50**



**BUTYLEN System 4** consists of the following **BUTYLEN** tapes:

**BUTYLEN-032-65 AS** as the inside tape, assumes the major corrosion prevention properties of the system.

**BUTYLEN-032-65 AS** is a co-ex-truded 3-ply tape with an asymmetrical layer design. This design with a relative thin tape thickness of 0.65 mm provides nevertheless a thick butyl rubber coating on the pipe surface and therefore it provides an outstanding adhesive connection even if the pipe surface is uneven.

Due to the butyl rubber layer at the upper side of the tape, a self-amalgamation effect will be achieved in the overlapping area and an essentially gas and water-tight as well as electrically high insulating encasement will be created.

In the **BUTYLEN System 4**, **BUTYLEN-032-65 AS** is used as corrosion prevention tape (wrapping with  $\geq 50\%$  overlap) as well as a tensioning tape (wrapping with  $\geq 66\%$  overlap).

**BUTYLEN-090** is used as the outside tape in the encasement system. **BUTYLEN-090** is a flexible two-ply tape with a polyethylene outside layer and an inside butyl rubber adhesive, which welds together with the outside layer of the inner tape. **BUTYLEN-090** acts as mechanical protection layer for the corrosion prevention tape located on the inside.

Both **BUTYLEN** tapes can be processed efficiently with the **DEKOMAT®** wrapping devices.





## Typical product properties

Property	Unit	BUTYLEN-032-65 AS Typical value	BUTYLEN-090 Typical value	Test method
Carrier film color	-	black	yellow	-
Butyl adhesive color inside	-	gray	gray	-
Butyl adhesive color outside	-	black	-	-
Tape thickness		≥ 0.65	≥ 0.4	
Carrier film thickness app.	mm	≥ 0.18	≥ 0.26	ISO 4591
Inside adhesive layer thickness app.		≥ 0.39	≥ 0.14	ASTM D1000
Outside adhesive layer thickness app.		≥ 0.08	-	
Elongation at break	%	≥ 550	≥ 400	DIN 30672
Tape strength	+23 °C (+73 °F) N / cm	≥ 50	≥ 35	EN 12068
Dielectric strength	kV / mm	-	-	A STM D149

Property	Unit	BUTYLEN System 4 Typical value	Required value	Test method
System design	Primer	BUTYLEN-HT25 Primer	-	-
	Inside tape	BUTYLEN-032-65 AS, 2 layers	-	-
	Tensioning tape	BUTYLEN-032-65 AS, 3 layers	-	-
	Outside tape	BUTYLEN-090, 2 layers	-	-
Total thickness	mm	≥ 4.1	-	-
Specific electrical insulation resistance	Ω · m <sup>2</sup>	≥ 10 <sup>10</sup>	≥ 10 <sup>8</sup>	EN 12068
Peel strength on steel	+23 °C (+73 °F)	≥ 15	≥ 10	EN 12068
	+50 °C (+122 °F)	≥ 2	≥ 1	EN 12068
Peel strength on PE	+23 °C (+73 °F)	≥ 10	≥ 4	EN 12068
	032-65 AS / 032-65 AS	≥ 22	≥ 15	
Peel strength layer to layer	032-65 AS / 090	≥ 22	≥ 15	EN 12068
	090 / 090	≥ 2	≥ 2	
Indentation resistance (residual layer thickness)	+23 °C (+73 °F) (10 MPa)	mm > 0.8	≥ 0.6	EN 12068
Impact resistance	J	> 15	≥ 15	EN 12068
Cathodic disbondment resistance	mm	< 2	< 20	EN 12068
Lap shear strength	on steel N / cm <sup>2</sup>	≥ 8	≥ 5	EN 12068

BUTYLEN tapes can be easily applied manually. The processing with the original DEKOMAT® wrapping devices is even

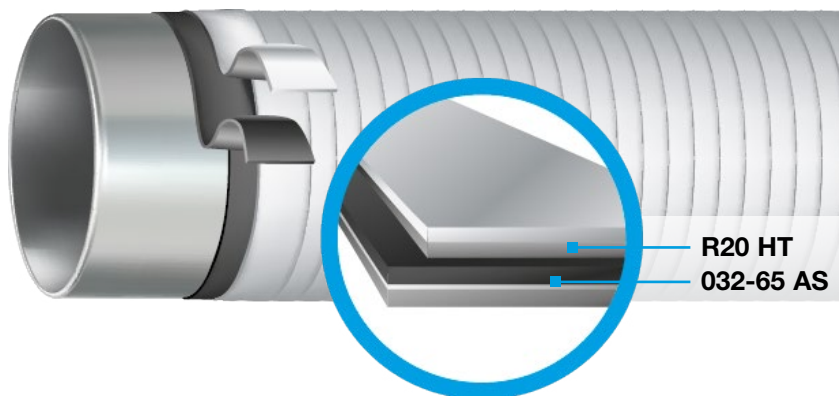
more efficient. For BUTYLEN tapes with widths of > 50 mm, we recommend the use of the DEKOMAT® wrapping device

to guarantee an excellent processing quality.

## Ordering information and packaging

	Core diameter (mm)	Width (mm)	Tape length (m)	Tape area per roll (m <sup>2</sup> )	Number of rolls	Content per box		
						Total tape area (m <sup>2</sup> )	Total tape length (m)	App. Weight (kg)
BUTYLEN-032-65 AS	41	15	30	0.45	18	8.1	270	6
		15	50	0.75	12	9.0	180	6.5
		15	75	1.125	12	13.5	180	10.0
		15	100	1.5	6	9.0	90	6.5
BUTYLEN-090	41	15	50	0.75	12	9.0	180	6.5
		15	75	1.125	12	13.5	180	10
		15	100	1.5	6	9.0	90	6.5

Additional lengths and widths are available on request.



## Special advantages:

- For permanent operating temperatures up to +50 °C (+122 °F).
- Modular systems: fulfill stress class **B 50** or **C 50** in accordance with EN 12068.
- High cost effectiveness.
- ÖVGW approval for stress class **C 50** in accordance with EN 12068 and ÖNORM B 5250.

# BUTYLEN System 5 & System 6 BUTYLEN-032-65 AS/-R20 HT

Robust two-tape field-joint coating system for the corrosion prevention of pipelines and pipeline components.

## Description

**BUTYLEN System 5** and **BUTYLEN System 6** are field-joint encasement systems for the permanent corrosion prevention of buried pipelines and pipeline components.

**BUTYLEN System 5** and **BUTYLEN System 6** consist modularly of the corrosion prevention tape **BUTYLEN-032-65 AS** and the mechanical protection tape **BUTYLEN-R20 HT**. Depending on the number of tape layers of the outside tape, the stress classes **B** or **C** of EN 12068 are achieved.

Based on this modular design, these identical **BUTYLEN** tapes can be used to establish the technically and economically optimal system in accordance with the requirements of the construction project.

**BUTYLEN System 6** features an ÖVGW approval for stress class **C 50** in accordance with EN 12068 and ÖNORM B 5250.

Standard designation:

- EN 12068 – **B 50** & **C 50**
- ÖNORM B 5250 – **B 50** & **C 50**



**BUTYLEN-032-65 AS** as the inner tape, assumes the major corrosion prevention properties of the system. **BUTYLEN-032-65 AS** is a co-extruded 3-ply tape with an asymmetrical layer design. This design with a relative thin tape thickness of 0.65 mm provides nevertheless a thick butyl rubber coating on the pipe surface and therefore it provides an outstanding adhesive connection even if the pipe surface is uneven.

Due to the butyl rubber layer at the upper side of the tape, a self-amalgamation effect will be achieved in the overlapping area and an essentially gas and water-tight as well as electrically high insulating encasement will be created. The low tape thickness results also in a good processability at pipe elbows and fittings.

**BUTYLEN-R20 HT** is a robust two-ply tape. The solid polyethylene outside layer protects the encasement against mechanical stresses.

Both **BUTYLEN** tapes can be processed efficiently with the **DEKOMAT®** wrapping devices.



## Typical product properties

Property	Unit	BUTYLEN-032-65 AS Typical value	BUTYLEN-R20 HT Typical value	Test method
Carrier film color	-	Black	White, black or blue	-
Butyl adhesive color inside	-	Gray	Black	-
Butyl adhesive color outside	-	Black	-	-
Tape thickness		≥ 0.65	≥ 0.5	
Carrier film thickness app.		≥ 0.18	≥ 0.3	ISO 4591
Inside adhesive layer thickness app.	mm	≥ 0.39	≥ 0.2	ASTM D1000
Outside adhesive layer thickness app.		≥ 0.08	-	
Elongation at break	%	≥ 550	≥ 500	DIN 30672
Tape strength	+23 °C (+73 °F) N / cm	≥ 50	≥ 65	EN 12068
Dielectric strength	kV/mm	-	≥ 50	ASTM D149

Property	Unit	BUTYLEN System 5 Typical value	BUTYLEN System 6 Typical value	Required value		Test method	
				Class B	Class C		
System design	Primer	BUTYLEN-HT25 Primer					
	Inner tape	BUTYLEN-032-65 AS 2 layers	2 layers	-	-	-	
	Outer tape	BUTYLEN-R20 HT					
		2 layers	3 layers	-	-	-	
Total thickness	mm	2.3	2.8	-	-	-	
Stress class		<b>B 50</b>	<b>C 50</b>	-	-	EN 12068	
Specific electrical insulation resistance	Ω · m <sup>2</sup>	≥ 10 <sup>10</sup>	≥ 10 <sup>10</sup>	≥ 10 <sup>9</sup>	≥ 10 <sup>8</sup>	EN 12068	
Peel strength on steel	+23 °C (+73 °F)	≥ 15	≥ 15	≥ 4	≥ 10	EN 12068	
	+50 °C (+122 °F)	≥ 2	≥ 2	≥ 0.4	≥ 1	EN 12068	
Peel strength on PE	+23 °C (+73 °F)	≥ 10	≥ 10	≥ 2	≥ 4	EN 12068	
Peel strength layer to layer	032-65 AS / 032-65 AS	≥ 22	≥ 22	≥ 8	≥ 15	EN 12068	
	R20 HT / R20 HT	≥ 3	≥ 3	≥ 2	≥ 2		
Indentation resistance (residual layer thickness)	+23 °C (+73 °F) (10 MPa)	mm	> 0.6	> 0.6	≥ 0.6 (1 MPa)	≥ 0.6 (10 MPa)	EN 12068
Impact resistance	J	> 10	> 15	≥ 8	≥ 15	EN 12068	
Cathodic disbondment resistance	mm	< 2	< 2	< 20	< 20	EN 12068	
Lap shear strength on steel	N / cm <sup>2</sup>	≥ 8	≥ 8	≥ 5	≥ 5	EN 12068	

BUTYLEN tapes can be easily applied manually. The processing with the original DEKOMAT® wrapping devices is even

more efficient. For BUTYLEN tapes with widths of > 50 mm, we recommend the use of DEKOMAT® wrapping devices to

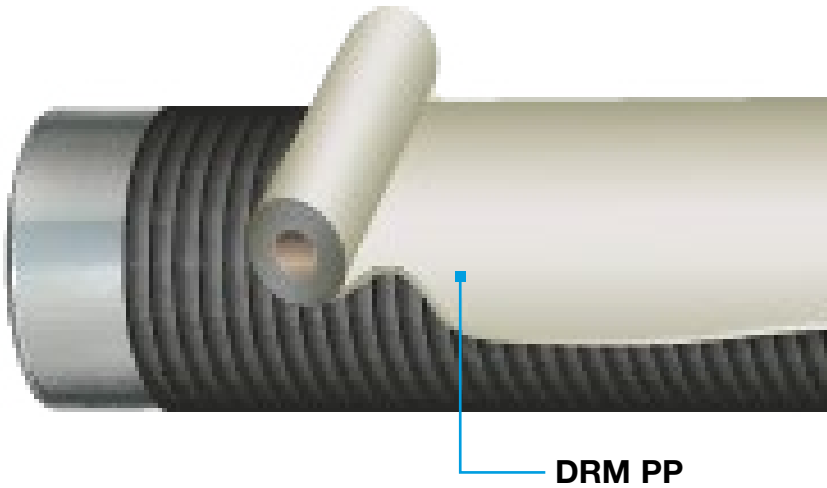
guarantee an excellent processing quality.

## Ordering information and packaging

	Core diameter (mm)	Width (mm)	Tape length (m)	Tape area per roll (m <sup>2</sup> )	Number of rolls	Content per box		
						Total tape area (m <sup>2</sup> )	Total tape length (m)	App. Weight (kg)
BUTYLEN-032-65 AS	41	30	15	0.45	18	8.1	270	6.0
		50	15	0.75	12	9.0	180	6.5
		75	15	1.125	12	13.5	180	10.0
		100	15	1.5	6	9.0	90	6.5
BUTYLEN-R20 HT	41	30	15	0.45	18	8.1	270	5.0
		50	15	0.75	12	9.0	180	5.5
		75	15	1.125	12	13.5	180	8.0
		100	15	1.5	6	9.0	90	5.5
		50	30	1.5	12	18	360	11.0
		75	30	2.25	12	27	360	17.0
		100	30	3.0	6	18	180	11.0
		150	30	4.5	6	27	180	17.0

Additional lengths and widths are available on request.





## Special advantages:

- Mechanically highly resistant.
- Easy processing.
- Rotting resistant even in aggressive soils.
- Water and current permeable.
- Heat resistant.
- DRM PP1500 Plus especially qualified for concrete riders.
- **DEPROTEC® Rockshield Hose** is already customized.

# DEPROTEC®-DRM PP DEPROTEC® Rockshield Hose

Nonwoven material made from chemical fiber for the additional mechanical protection of the corrosion prevention encasements especially of petrolatum tapes, e.g. PLASTELEN®-Plast of steel and cast iron pipelines, plastic pipes as well as plastic coat pipe connections in district heating systems.

## Description

The nonwoven material, which is based on polypropylene, features a high mechanical and thermal resilience. The good permeability for soil electrolytes guarantees an undisturbed cathodic corrosion protection.

**DEPROTEC® Rockshield Hoses** are especially designed for the additional mechanical protection of field-joint and factory coatings. In addition, they can be used for high thermal stresses > +50 °C (> +122 °F).

**DEPROTEC® Rockshield Hoses** permit – depending on the soil conditions – the partial or total omission of the sand back-filling.

For this purpose, adherence to the relevant regulations for the pipe embedding, trench backfilling and compression, especially DIN 1610, DIN 18300 as well as the DVGW worksheets G 462, G 463 and G 472, is required.

### Processing:

**DEPROTEC®-DRM PP** are placed loose around the object to be protected and will be joined in the overlapping area through a short activation with a flame. The overlapping area should have a width of app. 10 cm. Cutting widths of 500 mm, which cover the field-joint coating including the adjacent factory encasement are used for additional mechanical protection of welding seams.

Rolls with a length of up to 50 m and a width of 2 m can be used for the additional mechanical protection of entire pipe runs. The rockshield will be rolled on the pipe and can be welded in the longitudinal overlap.

### DEPROTEC® Pipe Protection Hose

will be placed in individual hose pieces, which must overlap, on to the pipeline. The **DEPROTEC® Rockshield Hoses** can be fused in the overlapping area by using a propane gas flame or they can be fixed by a **BUTYLEN** plastic tape.



## Typical product properties

Property	Unit	DEPROTEC®-DRM PP500 Plus Typical value	DEPROTEC®-DRM PP1000 Plus Typical value	DEPROTEC®-DRM PP1500 Plus Typical value
Weight	g / m <sup>2</sup>	500	1000	1500
Thickness (for an extra load of 2 kPa)	mm	4	7	7
Elongation at break (longitudinal/transverse)	%	60 / 55	70 / 40	70 / 70
Tensile strength (longitudinal/transverse)	N / cm	160 / 300	365 / 950	70 / 80
Puncture resistance	kN	> 4	10	13
Color	-	white	white	white
Permanent operating temperature	°C (°F)	-50 to +100 (-58 to +212)	-50 to +100 (-58 to +212)	-50 to +100 (-58 to +212)
Specific electrical insulation resistance	Ω · m <sup>2</sup>	< 1	< 1	7
resistant against	diluted acids, lyes, brines, hydrocarbons, soil bacteria. Usage duration of more than 25 years in a soil with a pH value between 4 and 9 and a soil temperature of < +25 °C (+77 °F)!			

Improving the mechanical resilience of **BUTYLEN** coatings\* by using **DRM PP1000 Plus**.

Property	Unit	DEPROTEC®-DRM PP1000 Plus Typical value
Indentation resistance residual layer thickness	mm	2
Indentation resistance improvement	%	> 200
Impact resistance	J	> 30
Impact resistance improvement	%	> 100

\* for **BUTYLEN** coating system, stress class **C 50**, relative to the requirements in accordance with DIN 30672 and EN 12068.

## Ordering information and packaging

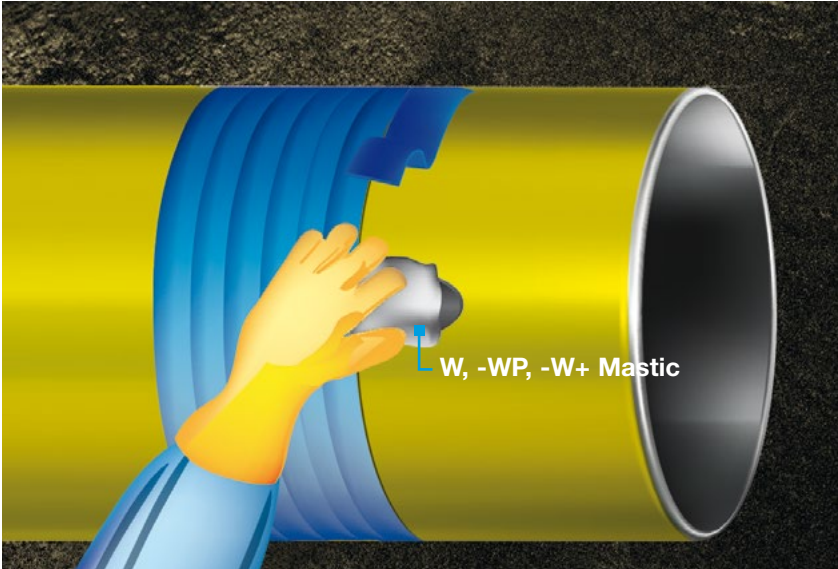
**DEPROTEC®-DRM PP500 Plus, PP1000 Plus and PP1500 Plus** are delivered in rolls.

**DEPROTEC®-DRM PP1000 Plus** is additionally available as a pre-customized and sewed pipe protection hose

**(DEPROTEC® Rockshield Hose)** for the especially easy and time saving processing.

Product	Available roll width	Available roll length
DEPROTEC®-DRM PP500 Plus	0.5 m; 1.0 m; 2.0 m	50 m
DEPROTEC®-DRM PP1000 Plus	0.5 m; 1.0 m; 2.0 m	25 m
DEPROTEC®-DRM PP1500 Plus	1.2 m	35 m
Product	Available diameters (DN)	Available hose length
DEPROTEC® Rockshield Hose (produced of DEPROTEC®-DRM PP1000 Plus)	40 - 400	6.25 m / 8.25 m / 12.25 m

Special width and cutting lengths as well as additional hose diameters and hose lengths are available on request.



## Special advantages:

- Seals cavities reliably.
- Easily adaptable to edges and chamfers
- Outstanding interaction with all **BUTYLEN** tapes.
- Permanent plastic.
- Available in many practical dimensions.

## BUTYLEN-W, -WP, -W+ Mastic

Butyl rubber mastic for the filling of cavities and the forming of transitions for corrosion prevention coatings with **BUTYLEN** tape systems.

### Description

**BUTYLEN-Mastic** is a permanent plastic butyl rubber filling mastic, which can be formed by hand, for the equalization of uneven surfaces before the application of **BUTYLEN** tapes.

**BUTYLEN-Mastic** is ideally qualified to equalize unevennesses such as high welding seams. **BUTYLEN-Mastic** connects itself through a self-amalgamation effect with the butyl rubber layer of the **BUTYLEN** tape and therefore provides a complete cover of the surface. Cavities or cracks will be closed reliably and a permanent corrosion prevention will be built up.

The filling of chamfers for T-fittings, the equalization of the transition of the steel surface to the factory coating or the closing of cable outlets from the field-joint coating are applications for which this product is often used, **BUTYLEN-Mastic** can also be used to fill defects in the factory or field-joint coating. The defect area is closed permanently and reliability after the subsequent encasement with a **BUTYLEN** tape system.

**BUTYLEN-Mastic** is available in different stability grades and practical customizations in bar and tape form.

The use of **BUTYLEN-HT Primer** is recommended for an optimal adhesion to the pipe surface.

To adapt longer transverse welding seams or spiral welding seams, the adaptation can be performed alternatively with a soft **BUTYLEN** tape, e.g. **BUTYLEN-N15**





## Typical product properties

Property	Unit	BUTYLEN-W Typical value	BUTYLEN-WP Typical value	BUTYLEN-W+ Typical value
Density	g / cm <sup>3</sup>	> 1.4	> 1.4	
Consistency		soft, easily formable	good form stability	high stability
Saponification number	mg (KOH) / g	< 10	< 10	< 10
Processing temperature	°C ( °F)	-10 to +50 (-14 to +122)	-10 to +50 (-14 to +122)	-10 to +50 (-14 to +122)

## Ordering information and packaging

Ready-made type	Description	Dimension	Packaging
Bar	BUTYLEN-W	Bar 1 kg each	10 units per box
	BUTYLEN-W	Bar 2.5 kg each	5 units per box
Tape	BUTYLEN-WP	30 mm x 8 mm x 3 m	5 rolls per box (total length 15 m)
	BUTYLEN-WP	40 mm x 4 mm x 2.5 m	8 rolls per box (total length 20 m)
	BUTYLEN-WP	40 mm x 5 mm x 2 m	8 rolls per box (total length 16 m)
	BUTYLEN-WP	80 mm x 5 mm x 5 m	4 rolls per box (total length 20 m)
Bucket	BUTYLEN-W+	Bucket 10 kg each	

# DEKOMAT® Wrapping Devices

## DEKOMAT®-mini

The **DEKOMAT®-mini** is a manual wrapping device which can be used to wrap the cold applied **BUTYLEN** tapes in spiral form around pipes and elbows. The device permits an even winding tension and the adherence to the specified overlapping width.

The **DEKOMAT®-mini** can be used on straight pipes and pipe bends as well as

welding connections of steel pipes of DN 40 or larger that are coated at the factory with PE or with other plastic materials. The **DEKOMAT®-mini** can be used to process all **BUTYLEN** tapes with width of up to 100 mm. The device can be used at a distance of at least 20 cm from the pipeline at the trench wall or the trench floor.



## DEKOMAT®-1

The **DEKOMAT®-1** is a manual wrapping device which can be used to wrap the cold applied **BUTYLEN** tapes in spiral form around pipes and pipe bends. The device permits an even winding tension and the adherence to the specified overlapping width. The **DEKOMAT®-mini** can

be used on straight pipes and pipe bends as well as welding connections of steel pipes of DN 80 or larger that are coated at the factory with PE or with other plastic materials. The **DEKOMAT®-1** can be used to process all **BUTYLEN** tapes with widths of up to 100 mm.



## DEKOMAT®-KGR Junior

The **DEKOMAT®-KGR Junior** is a manual wrapping device which can be used to wrap the cold applied **BUTYLEN** tapes in spiral form around pipes and pipe bends.

The device permits an even winding tension and the adherence to the specified overlapping width.

The **DEKOMAT®-KGR Junior** can be used on straight pipes, pipe bends, welding connections as well as steel pipes DN 200 or higher encased at the factory with PE or other plastic materials. We recommend the use of extension arms for pipe diameters > 500.



## DEKOMAT®-11

The **DEKOMAT®-11** is a new development in the series of **DEKOMAT®** wrapping devices. The **DEKOMAT®-11** was developed with the aspect of a flexible and fast processing of **BUTYLEN** tape

systems at welding connections and for the wrapping of entire pipe lengths and can be used especially in pipeline constructions.





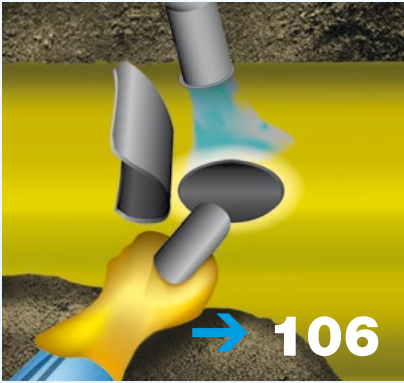




DEKOTEC®

# DEKOTEC®

Heat Shrinkable Sleeves



## DEKOTEC® Repair Materials

System solution for the user friendly repair of damages at anti-corrosion coatings. DEKOTEC® repair materials assume afterwards again completely the function of the factory coating at operating temperatures of up to +90 °C (+194 °F).

- DEKOTEC®-DRP P. 106
- DEKOTEC®-Meltstick P. 106



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## DEKOTEC®-HTS

The HTS product series provides high quality and robust sleeves for the protection of welding seams against corrosion as two and three-layer systems for normal and high operating temperatures. The high quality is represented by the many approvals of internationally recognized operating companies and certification bodies.

- DEKOTEC®-EP Primer P. 108
- DEKOTEC®-HTS70 P. 110
- DEKOTEC®-HTS90 P. 112



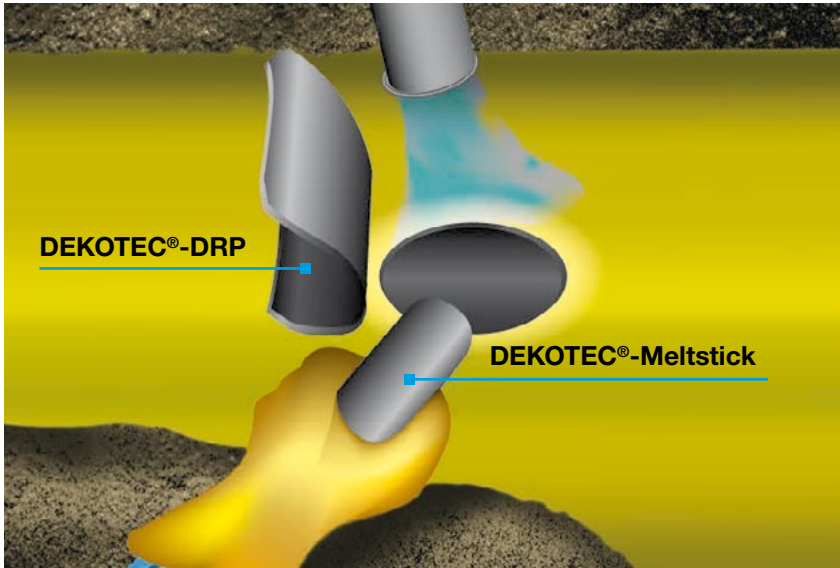
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## DEKOTEC®-MTS

The MTS product series is applied as a two-layer system directly on the steel surface (ST 2) without extensive preheating. The advantages are found in the easy and fast application, which provides a significantly more cost-effective application.

- DEKOTEC®-MTS30 P. 114
- DEKOTEC®-MTS55 P. 116
- DEKOTEC®-MTS55 DI P. 118





## Special advantages:

- For operating temperatures up to +90 °C (+194 °F).
- Compatible with factory coatings made of PE, PP, FBE, PU and bitumen.
- DIN-DVGW approved system: **C 60** (EN 12068, DIN 30672).
- Fulfills the high-temperature aging standard ASTM D 638 (168 h at +150 °C (+302 °F)).
- Outstanding lap shear strength and peel strength.
- Lower preheating temperature than comparable competitive products.

# DEKOTEC®-DRP and DEKOTEC®-Meltstick

Hot applied repair system for corrosion prevention coatings of pipes and pipelines.

## Description

**DEKOTEC®-DRP** and **DEKOTEC®-Meltstick** are repair products for damages in the corrosion prevention of pipes and pipelines.

**DEKOTEC®-DRP** and **DEKOTEC®-Meltstick** are part of a hot applied system, which is especially economical and which guarantees a high quality repair of factory coatings.

**DEKOTEC®-Meltstick** is a heat activated adhesive in bar form for the easy filling of holidays.

**DEKOTEC®-DRP** consists of an electron beam cross-linked polyethylene carrier film and a coating of heat activated adhesive made of copolymers.

The **DEKOTEC®-DRP** and **DEKOTEC®-Meltstick** systems can be applied quickly without special tools.

The applied system offers an optimal protection of the pipelines against moisture and corrosion and it is resistant against the operation and the peeling forces during the installation and the operation of pipes and pipelines.

The defect will be filled with **DEKOTEC®-Meltstick** and **DEKOTEC®-DRP** will be applied above the holiday.

**DEKOTEC®-DRP** and **DEKOTEC®-Meltstick** assume afterwards again the function of the factory coating.

**DEKOTEC®-DRP** has a DIN-DVGW (Reg.-No. NV-5180CL0216) approval.

Standard designation:

- EN 12068 – **C 60**
- DIN 30672 – **C 60**



Beyond the classification of DIN 30672 and EN 12068, **DEKOTEC®-DRP** can be used for permanent operating temperatures of up to +90 °C (194 °F). In this case, the mechanical properties at temperatures of +90 °C (+194 °F) are below the values of +60 °C (+140 °F).





## Typical product properties

	Property	Unit	Typical value	Required value	Test method	
Adhesive	Softening point	°C (°F)	≥ +110 (≥ +230)	-	ASTM E28	
	Lap shear strength	+23 °C (+73 °F)	≥ 350	≥ 5	EN 12068	
		+80 °C (+176 °F)	≥ 6	≥ 5	DIN 30672	
Backing	Elongation at break	%	≥ 500	-	ASTM D638	
	Tensile strength	N / mm	20	-	EN 12068	
		MPa (psi)	≥ 20 (2900)	-	ASTM D638	
	Dielectric strength	kV / mm	≥ 35	-	ASTM D149	
	Volume resistivity	Ω · cm	≥ 10 <sup>15</sup>	-	ASTM D257	
	Hardness	Shore D	≥ 55	-	ISO 868	
					ASTM D2240	
System	Specific electrical insulation resistance	Ω · m <sup>2</sup>	≥ 10 <sup>10</sup>	≥ 10 <sup>8</sup>	EN 12068	
	Indentation resistance	+23 °C (+73 °F)	mm	2.5	≥ 0.6	EN 12068
	Impact resistance*		J	≥ 25	> 15	EN 12068
	Peel strength on factory coating	+23 °C (+73 °F)	N / cm	≥ 60	≥ 4	EN 12068
	Low temperature flexibility			passed	passed	EN 12068 ASTM D2671 -20 °C (-4 °F)
	Cathodic disbondment resistance (radius)		mm	< 2	-	ASTM G8
	Water absorption		%	≤ 0.06	-	ASTM D570

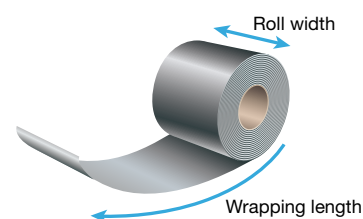
\* With 2 mm DEKOTEC®-Meltstick as filling.

## Ordering information and packaging

DEKOTEC®-DRP (delivered in roll form)

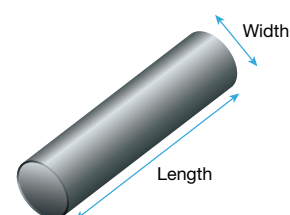
Roll width (mm)	Length (m)	Rolls per box
100	10	2
150	10	2
425	10	2

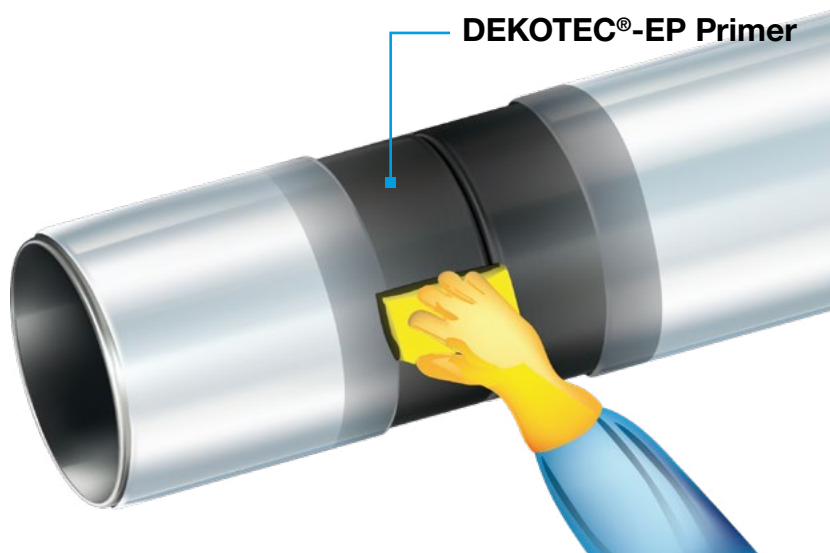
Additional lengths and widths are available on request!



DEKOTEC®-Meltstick

Roll width (mm)	Length (mm)	Rolls per box
25	280	25
25	280	80





## Special advantages:

- Outstanding resistance against cathodic disbondment.
- For steel and other metal surfaces.
- Dries fast and is easily processed.
- For manual and machine application.
- Compatible with factory coatings made of PE, PP, FBE and PU.

# DEKOTEC®-EP Primer

Two component epoxy resin primer for three-layer DEKOTEC®-HTS heat shrinkable sleeve systems.

## Description

**DEKOTEC®-EP Primer** is an epoxy resin primer for **DEKOTEC®** heat shrinkable sleeve systems. An outstanding three-layer corrosion prevention coating, which fulfills all requirements of the stress class C in accordance with EN 12068, is achieved in combination with **DEKOTEC®-HTS** heat shrinkable sleeve.

**DEKOTEC®-EP Primer** increases the safety and durability of the corrosion prevention coating. **DEKOTEC®-EP Primer** has a very high resistance against cathodic disbondment.

The pipe surface is prepared optimally for the application of the **DEKOTEC®-HTS** heat shrinkable sleeve by the heating

for the hardening of the **DEKOTEC®-EP Primer**.

**DEKOTEC®-EP Primer** is available in different package sizes, which means that a practical and economic size is available depending on the requirements of the project.

## Typical product properties

Property	Unit	Typical value
Type	-	Two components, solvent-free
Color	-	Black
Recommended minimum layer thickness	µm	30
Density (comp. A/comp. B/mixture)	g / cm <sup>3</sup>	1.32 / 1.00 / 1.21
Mixing ratio (according to weight/according to volume)	-	132:50 / 100:50
Pot life +23 °C (+73 °F)	min	app. 20
Preheating temperature of the steel surface	°C ( °F)	+50 (+122)
Maximum permissible operating temperature	°C ( °F)	+130 (+266)
Theoretical consumption for 100 µm DFT	kg / m <sup>2</sup>	0.121
Saponification number	mg (KOH) / g	< 2



## Typical consumption

Nominal pipe size		Theoretical consumption per welding seam					
(Inch)	DN (mm)	Volumen (ml)			Gewicht (g)		
		Comp. A	Comp. B	Mixture A+B	Comp. A	Comp. B	Mixture A+B
3"	75	32	16	48	42.2	16.0	58.2
4"	100	35	17.5	52.5	46.2	17.5	63.7
5"	125	38	19	57	50.2	19.0	69.2
6"	150	43	21.5	64.5	56.8	21.5	78.3
8"	200	50	25	75	66.0	25.0	91.0
10"	250	58	29	87	76.6	29.0	105.6
12"	300	65	32.5	97.5	85.8	32.5	118.3
14"	350	70	35	105	92.4	35.0	127.4
16"	400	76	38	114	100.3	38.0	138.3
18"	450	84	42	126	110.9	42.0	152.9
20"	500	91	45.5	136.5	120.1	45.5	165.6
22"	550	98	49	147	129.4	49.0	178.4
24"	600	105	52.5	157.5	138.6	52.5	191.1
26"	650	112	56	168	147.8	56.0	203.8
28"	700	120	60	180	158.4	60.0	218.4
30"	750	127	63.5	190.5	167.6	63.5	231.1
32"	800	134	67	201	176.9	67.0	243.9
34"	850	141	70.5	211.5	186.1	70.5	256.6
36"	900	149	74.5	223.5	196.7	74.5	271.2
40"	1000	163	81.5	244.5	215.2	81.5	296.7
48"	1200	192	96	288	253.4	96.0	349.4
56"	1400	220	110	330	290.4	110.0	400.4
64"	1600	248	124	372	327.4	124.0	451.4
72"	1800	277	138.5	415.5	365.6	138.5	504.1

The listed volumes represent non-binding information. The values are calculated on the consumption of 150 ml per m<sup>2</sup>

surface as well as an additional loss of volume per welding seam. The actual consumption of the volumes listed here

can deviate based on different processing types and due to the pot life.

## Ordering information and packaging

### DEKOTEC®-EP Primer small package

It consists of:

- Component A (1.3 kg)
- Component B (0.5 kg)
- 6 sponges
- 6 stirring staffs
- 6 pairs of gloves
- 6 mixing cups with ml-scale

### DEKOTEC®-EP Primer

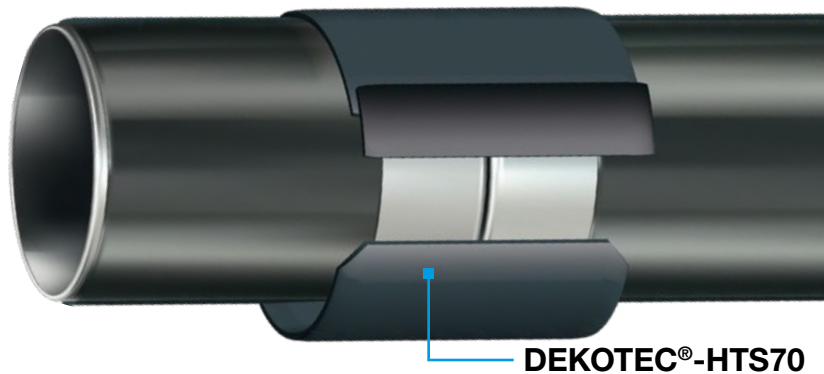
Bulk ware

- Component A: Hobbock 16 kg each
- Component B: Hobbock 12 kg each
- Dosage pumpe
- Application set: Application sponge, mixing, stirring staff, gloves

## Storage

Storage temperature: +5 °C to +30 °C (+41 °F to +86 °F) **DEKOTEC®-EP Primer** can be stored for at least 24 months after the production date in its original package and by adhering to the storage conditions.





## Special advantages:

- For operating temperatures up to +70 °C (+158 °F).
- Three-layer system equivalent to 3LPE.
- DIN-DVGW approved system: **C 60 UV** (EN 12068, DIN 30672).
- Lower preheating temperature than comparable competitive products.
- Outstanding peel strength and lap shear strength.
- Approval a.o. by Gaz de France (France), Enagás (Spain) and GOST R (Russia).
- Compatible with factory coatings made of PE, PP, FBE, PU and bitumen.

# DEKOTEC®-HTS70

Heat shrinkable sleeve for the permanent corrosion prevention of field joints at steel pipes.

## Description

**DEKOTEC®-HTS70** is a heat shrinkable sleeve made of an electron beam cross-linked polyethylene backing and a coating made from hot melt adhesive.

**DEKOTEC®-HTS70** provides a permanent corrosion prevention on welding seams at steel pipes and pipelines.

**DEKOTEC®-HTS70** can be used as two-layer or three-layer heat shrinkable sleeve system together with the **DEKOTEC®-EP Primer**. Both systems have DIN-DVGW certificates for stress class **C 60 UV** in accordance with DIN EN 12068 (Reg.-No.: NV-5180 BR0224).

The surface preparation with **DEKOTEC®-EP Primer** provides an increased safety against failed applications and an increased protection in case of damages to the encasement.

**DEKOTEC®-HTS70** is compatible with factory coatings made of PE, PP, FBE, PU and Bitumen.

The performance of **DEKOTEC®-HTS70** is shown internationally in many usages as well as the high number of certifications by DVGW (Germany), Gaz de France (France), Enagás (Spain), SVGW (Switzerland) and Synergrid (Belgium), as well as GOST R (Russia).



Standard designation:

- EN 12068 – **C 60 UV**

Beyond the standard classification, **DEKOTEC®-HTS70** can be used for permanent operating temperatures of up to +70 °C (+158 °F).

An additional high quality heat shrinkable sleeve is available with **DEKOTEC®-HTS90** +90 °C (+194 °F) for higher operating temperatures. **DEKOTEC®-MTS55** +60 °C (+140 °F) as well as **DEKOTEC®-MTS30** +30 °C (+86 °F) are cost effective alternatives for lower temperature requirements.

## Typical product properties

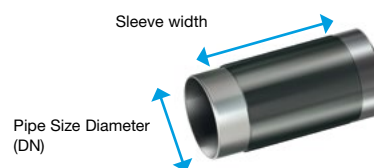
### DEKOTEC®-HTS70 with DEKOTEC®-EP Primer

	Property	Unit	Typical Value	Required Value	Test method	
Adhesive	Softening point	°C ( °F)	> +90 (>+194)	-	ASTM E28	
	Lap shear strength (+23 °C/ +73 °F)	N / cm <sup>2</sup>	≥ 275	≥ 5	EN 12068 / DIN 30672	
	Lap shear strength (+60 °C/ +140 °F)	N / cm <sup>2</sup>	≥ 15	≥ 5	EN 12068 / DIN 30672	
Backing	Elongation at break	%	> 500	-	EN 12068	
	Tensile strength	N / mm	> 20	-	EN 12068	
		MPa (psi)	> 20 (2900)	-	ASTM D638	
	Elongation at break after thermal aging (21 days at +150 °C (+302 °F))	%	> 500	-	ASTM D149	
	Lap shear strength after thermal aging (21 days at +150 °C (+302 °F))	MPa	> 20	-	ASTM D638	
	Dielectric strength	kV / mm	> 35	-	ASTM D149	
	Volume resistivity	Ω · cm	≥ 10 <sup>15</sup>	-	ASTM D257	
	Water absorption	%	< 0.1	-	ASTM D570	
	Hardness	Shore D	≥ 55	-	ISO 868 / ASTM D2240	
	Specific electrical insulation resistance	Ω · m <sup>2</sup>	≥ 10 <sup>10</sup>	≥ 10 <sup>8</sup>	EN 12068	
System	Indentation resistance*	+23 °C (+73 °F)	mm	> 2	≥ 0.6	EN 12068
		+60 °C (+140 °F)	mm	> 2	≥ 0.6	EN 12068
	Impact resistance*	J	≥ 17	> 15	EN 12068	
	Peel strength on pipe surface	+23 °C (+73 °F)	N / cm	≥ 100	≥ 5	EN 12068
		+60 °C (+140 °F)	N / cm	≥ 2.5	≥ 0.5	
	Peel strength on PE factory coating (+23 °C / +73 °F)	N / cm	≥ 100	≥ 4	EN 12068	
	Cathodic disbondment resistance (radius)	mm	< 2	-	ASTM G8	

\* The listed values are based on a sleeve thickness of 2.6 mm (type S).

## Ordering information and packaging

### DEKOTEC®-HTS70 – S – 450MM – DN600



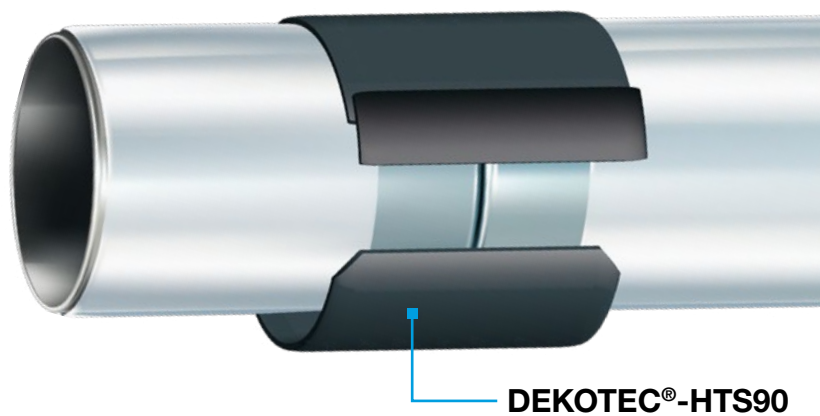
Nominal pipe diameter	Sleeves per box (pcs)
DN 100	25
DN 300	9
DN 600	6
DN 900	4

Additional information about package sizes can be obtained on request.

Pipe diameter (DN)					
DN 30 – DN 3000					
Sleeve width (mm)					
350, 450, 550, 650					
Type designation					
T	L	D	S	H	
1.0	1.0	1.0	1.0	1.0	Thickness PE film (mm)
0.8	1.2	1.4	1.6	1.8	Thickness coating (mm)
1.8	2.2	2.4	2.6	2.8	Total thickness (mm)
30	25	20	20	20	Length master roll (m)

The listed dimensions refer to the delivery condition. Additional dimensions available on request.

Customize sleeves include closure patches. **DEKOTEC®-CLP** closure patches are available for master rolls.



## Special advantages:

- For operating temperatures up to +90 °C (+194 °F).
- Three-layer system equivalent to 3LPE.
- DIN-DVGW approved system: **C 80 UV** (EN 12068).
- Lower preheating temperature than comparable competitive products.
- Outstanding peel strengths.
- Approvals in accordance with GOST R.
- Compatible with factory coatings made of PE, PP, FBE, PU and bitumen.

# DEKOTEC®-HTS90

Heat shrinkable sleeve for the permanent corrosion prevention of field joints at steel pipes and pipelines.

## Description

**DEKOTEC®-HTS90** is a heat shrinkable sleeve made of an electron beam cross-linked polyethylene backing and a coating made from hot melt adhesive.

**DEKOTEC®-HTS90** provides a permanent corrosion prevention on welding seams at steel pipes and pipelines.

**DEKOTEC®-HTS90** can be used as two-layer heat shrinkable sleeve system, or together with **DEKOTEC®-EP Primer**, as a three-layer heat shrinkable sleeve system. Both systems have DIN-DVGW certificates for the stress class **C 80 UV** in accordance with DIN EN 12068.

(Reg.- No.: 5180BS0064, NG-5180BS0065). In addition, **DEKOTEC®-HTS90** has an approval in accordance with GOST R 51164-98 (Russia).

The three-layer system consisting of **DEKOTEC®-EP Primer** and **DEKOTEC®-HTS90** provides an increased protection in case of damages to the encasement as well as an increased safety against failed applications based on the surface preparation with the **DEKOTEC®-EP Primer**.

**DEKOTEC®-HTS90** is compatible with factory coatings made of PE, PP, FBE, PU and Bitumen.

Normenbezeichnung:

- EN 12068 – C HT 80 UV



Beyond the standard classification, **DEKOTEC®-HTS90** can be used for permanent operating temperatures of up to +90 °C (+158 °F).

For lower temperature requirements, **DEKOTEC®-HTS70** +70 °C (+158 °F), **DEKOTEC®-MTS55** +60 °C (+140 °F) as **DEKOTEC®-MTS30** +30 °C (+86 °F) are available as high quality and cost effective alternatives





## Typical product properties

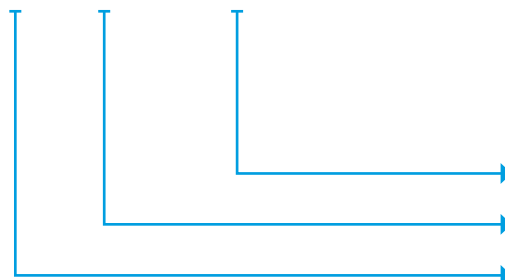
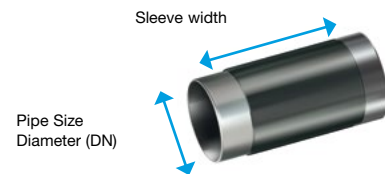
### DEKOTEC®-HTS90 with DEKOTEC®-EP Primer

Property	Einheit	Typischer Wert	Erforderlicher Wert	Prüfmethode		
Adhesive	Softening point	°C ( °F)	> +110 (> +230)	-	ASTM E28	
	Lap shear strength	+23 °C (+73 °F)	N / cm <sup>2</sup>	≥ 275	≥ 5	EN 12068 / DIN 30672
		+80 °C (+176 °F)	N / cm <sup>2</sup>	≥ 6	≥ 5	EN 12068 / DIN 30672
Backing	Elongation at break	%	> 500	-	EN 12068	
	Tensile strength	N / mm	> 20	-	EN 12068	
		MPa (psi)	≥ 20 (2900)	-	ASTM D638	
	Elongation at break after thermal aging (21 days at +150 °C / +302 °F)	%	> 500	-	ASTM D149	
	Lap shear strength after thermal aging (21 days at +150 °C / +302 °F)	MPa	> 20	-	ASTM D638	
	Dielectric strength	kV / mm	> 35	-	ASTM D149	
	Volume resistivity	Ω · cm	≥ 10 <sup>15</sup>	-	ASTM D257	
	Water absorption	%	< 0.1	-	ASTM D570	
	Hardness	Shore D	≥ 55	-	ISO 868 / ASTM D2240	
	Specific electrical insulation resistance	Ω · m <sup>2</sup>	≥ 10 <sup>10</sup>	≥ 10 <sup>8</sup>	EN 12068	
	Indentation resistance*	+23 °C (+73 °F)	mm	≥ 2	≥ 0.6	EN 12068
+80 °C (+176 °F)		mm	≥ 1	≥ 0.6	EN 12068	
Impact resistance*	J	≥ 20	> 15	EN 12068		
System	Peel strength on pipe surface	+23 °C (+73 °F)	N / cm	> 65	≥ 5	EN 12068
		+80 °C (+176 °F)	N / cm	≥ 2	≥ 0.5	EN 12068
	Peel strength on PE factory coating +23 °C (+73 °F)	N / cm	≥ 50	≥ 4	EN 12068	
	Cathodic disbondment resistance (radius)**	mm	< 8.5	20	EN 12068	

\* The listed values are based on a sleeve thickness of 2.6 mm (type S).

## Ordering information and packaging

### DEKOTEC®-HTS90 – S – 450MM – DN600



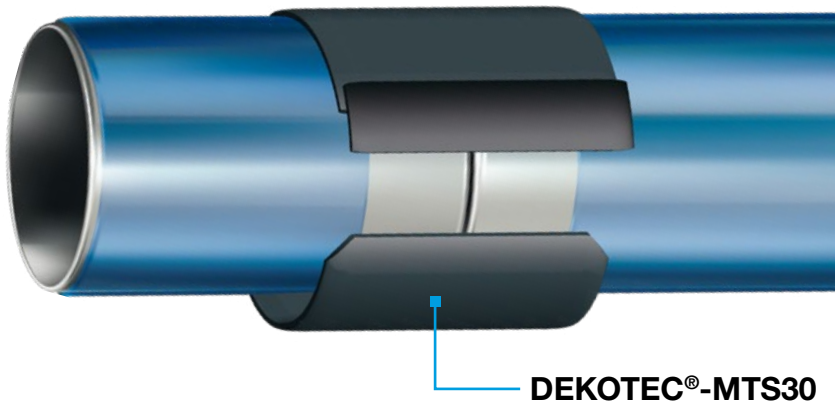
Nominal pipe diameter	Sleeves per box (pcs)
DN 100	25
DN 300	9
DN 600	6
DN 900	4

Additional information about package sizes can be obtained on request.

Pipe diameter (DN)					
DN 30 – DN 3000					
Sleeve width (mm)					
350, 450, 550, 650					
Type designation					
T	L	D	S	H	
1.0	1.0	1.0	1.0	1.0	Thickness PE film (mm)
0.8	1.2	1.4	1.6	1.8	Thickness coating (mm)
1.8	2.2	2.4	2.6	2.8	Total thickness (mm)
30	25	20	20	20	Length master roll (m)

The listed dimensions refer to the delivery condition. Additional dimensions available on request.

Customize sleeves include closure patches. DEKOTEC®-CLP closure patches are available for master rolls.



DEKOTEC®-MTS30

### Special advantages:

- No preheating of the steel surface required.
- Outstanding lap shear strength and peel strength.
- Surface cleanliness in accordance with ST 2, no sandblasting required.
- For design temperatures up to +40 °C (+104 °F).
- Compatible with factory coatings made of PE, PP, FBE, PU and bitumen.
- Two-layer system.

## DEKOTEC®-MTS30

Heat shrinkable sleeve for an outstanding corrosion prevention of field joints at steel pipes.

### Description

**DEKOTEC®-MTS30** is a heat shrinkable sleeve consisting of an electron beam cross-linked polyethylene carrier film and an adhesive on the basis of a polymer-modified bitumen for the corrosion prevention of the field joints at steel pipes.

**DEKOTEC®-MTS30** can be directly applied to cleaned surfaces ST 2 in accordance with ISO 8501-1. Sandblasting or a primer are not required.

The combination of a robust PE carrier film with a strongly adhesive adhesion

coating of the two-layer encasement system **DEKOTEC®-MTS30** provides an outstanding corrosion prevention and an easy and time-saving processing. Significant time and cost savings are archived and an increased safety against application mistakes is provided due to the elimination of extensive preheating process\*.

**DEKOTEC®-MTS30** can be used on pipes with factory coatings made of PE, PP, FBE, PU and Bitumen.

\* Drying of the surface with a flame is adequate. Surface temperature (>23 °C / >73 °F).

**DEKOTEC®-MTS30** fulfills the requirements of DIN 30672 and EN 12068 class **C 30**.

Standard designation:

- Coating EN 12068 – **C 30**
- Coating DIN 30672 – **C 30**

Additional heat shrinkable sleeve types are available for higher operating temperatures with **DEKOTEC®-MTS55** +60 °C (+140 °F) as well as **DEKOTEC®-HTS70** +70 °C (+158 °F) and **DEKOTEC®-HTS90** +90 °C (+194 °F).



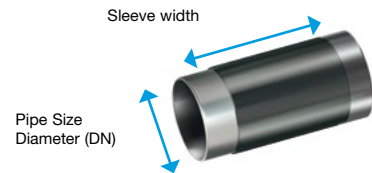
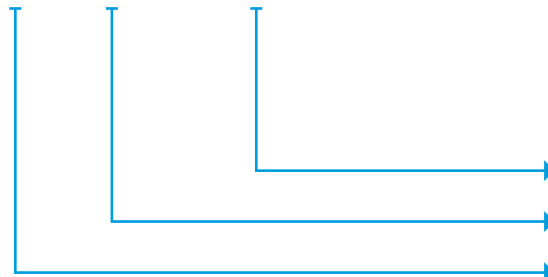
## Typical product properties

	Property	Unit	Typical value	Required value	Test method
Adhesive	Softening point	°C (°F)	> +75 (> +167)	-	ASTM E28
	Lap shear strength	N / cm <sup>2</sup>	> 70	≥ 5	EN 12068 DIN 30672
Backing	Elongation at break	%	> 500	-	EN 12068
	Tensile strength	N / mm	> 20	-	EN 12068
		MPa (psi)	≥ 20 (2900)	-	ASTM D638
	Dielectric strength	kV / mm	> 35	-	ASTM D149
	Volume resistivity	Ω · cm	≥ 10 <sup>15</sup>	-	ASTM D257
	Water absorption	%	0.06	-	ASTM D570
	Hardness	Shore D	≥ 55	-	ISO 868 ASTM D2240
System	Specific electrical insulation resistance	Ω · m <sup>2</sup>	≥ 10 <sup>10</sup>	≥ 10 <sup>9</sup>	EN 12068
	Indentation resistance *	mm	≥ 2	≥ 0.6	EN 12068
	Impact resistance*	J	≥ 15	> 15	EN 12068
	Peel strength on pipe surface	N / cm	≥ 12	≥ 5	EN 12068
	Peel strength on PE factory coating	N / cm	≥ 12	≥ 4	EN 12068
	Cathodic disbondment resistance (radius)	mm	< 3	< 20	EN 12068

\* Values for the sleeve thickness 2.6 mm (type S).

## Ordering information and packaging

DEKOTEC®-MTS30 – S – 450MM – DN600



Pipe diameter (DN)				
DN 30 – DN 3000				
Sleeve width (mm)				
350, 450, 550, 650				
Type designation				
T	L	D	S	
0.7	1.0	1.0	1.0	Thickness PE film (mm)
1.1	1.2	1.4	1.6	Thickness adhesive (mm)
<b>1.8</b>	<b>2.2</b>	<b>2.4</b>	<b>2.6</b>	<b>total thickness (mm)</b>
30	25	20	20	Length master roll (m)

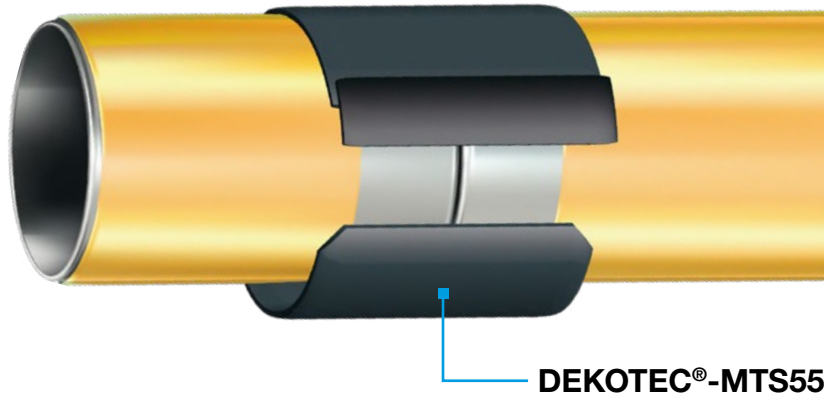
The listed dimensions refer to the delivery condition. Additional dimensions available on request.

Customize sleeves include closure patches. **DEKOTEC®-CLP** closure patches are available for master rolls.

Nominal pipe diameter	Sleeves per box (pcs)
DN 300	9
DN 600	6
DN 900	4

Additional information about package sizes can be obtained on request.





## Special advantages:

- For operating temperatures up to +60 °C (+140 °F).
- Compatible with factory coatings made of PE, PP, FBE, PU and bitumen.
- Two-layer system.
- No preheating of the steel surface required.
- Fulfills **C 55** in accordance with EN 12068.
- Outstanding lap shear strength and peel strength.
- Surface cleanliness in accordance with ST 2, no sandblasting required.

# DEKOTEC®-MTS55

Heat shrinkable sleeve for an outstanding corrosion prevention of field joints at steel pipes.

## Description

**DEKOTEC®-MTS55** is a heat shrinkable sleeve consisting of an electron beam cross-linked polyethylene backing and a coating on bitumen basis for the corrosion prevention of the field joints at steel pipes.

**DEKOTEC®-MTS55** will be applied directly on ST2-cleaned surfaces in accordance with ISO 8501-1. Sandblasting and a primer are not required.

Due to the combination of a robust PE carrier film and a strongly adhesive adhesion coating of the two-layer encasement system **DEKOTEC®-MTS55** provides outstanding corrosion prevention and an easy and time-saving processing.

Significant time and cost savings are archived and an increased safety against application mistakes is provided due to the elimination of the extensive pre-heating process\*.

**DEKOTEC®-MTS55** can be used on pipes with factory coatings made of PE, PP, FBE, PU and Bitumen.

**DEKOTEC®-MTS55** has a DIN-DVGW certificate (NV 5180CO0211) for class **C 50** in accordance with EN 12068. In addition, all requirements of EN 12068 and DIN 30672 of **class C** will be achieved at operating temperatures of +55 °C (+131 °F).

Standard designation:

- EN 12068 – **C 50**



\* Drying of the surface with a flame is adequate. Surface temperature > +23 °C (> +73 °F).

**DEKOTEC®-MTS55** represents a reliable corrosion prevention for operating temperatures +60 °C (+140 °F).

If required **DEKOTEC®-MTS55** can be used together with the **DEKOTEC®-EP Primer**, which means that a three-layer coating system is achieved.

Additional heat shrinkable sleeve types are available for higher operating temperatures by using **DEKOTEC®-HTS70** +70 °C (+158 °F) and **DEKOTEC®-HTS90** +90 °C (+194 °F). **DEKOTEC®-MTS30** is an economic alternative for lower temperature requirements.



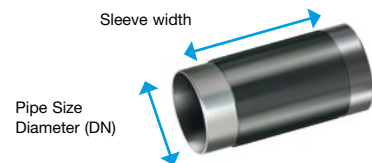
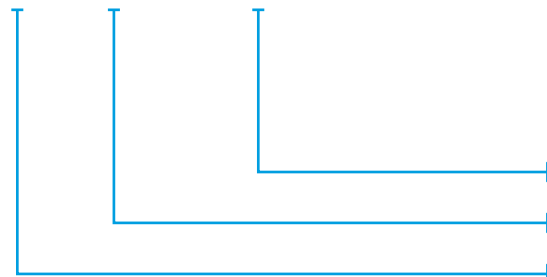
## Typical product properties

	Property	Unit	Typical value	Required value	Test method
Adhesive	Softening point ring and ball	°C (°F)	> +85 (> +185)	-	ASTM E28
	Lap shear strength	N / cm <sup>2</sup>	> 100	≥ 5	EN 12068
Backing		N / cm <sup>2</sup>	≥ 10	≥ 5	EN 12068
	Elongation at break	%	> 500	-	EN 12068
	Tensile strength	N / mm	> 20	-	EN 12068
		MPa (psi)	≥ 20 (2900)	-	ASTM D638
	Dielectric strength	kV / mm	> 35	-	ASTM D149
	Volume resistivity	Ω · cm	≥ 10 <sup>15</sup>	-	ASTM D257
	Hardness	Shore D	55	-	ISO 868 / ASTM D2240
	Specific electrical insulation resistance	Ω · m <sup>2</sup>	≥ 10 <sup>10</sup>	≥ 10 <sup>9</sup>	EN 12068
	Indentation resistance*	mm	> 2.1	≥ 0.6	EN 12068 (10 MPa)
		mm	> 1.5	≥ 0.6	EN 12068 (10 MPa)
System	Impact resistance*	J	> 15	> 15	EN 12068
		N / cm	> 28	≥ 10	EN 12068
	Peel strength on pipe surface	N / cm	≥ 2.5	≥ 1	EN 12068
		N / cm	> 2.2	≥ 1	EN 12068
	Peel strength after 100d thermal aging	N / cm	> 40	-	EN 12068
	Peel strength on PE factory coating	N / cm	> 28	≥ 4	EN 12068
		N / cm	> 2.8	≥ 0.4	EN 12068
		N / cm	≥ 20	≥ 15	EN 12068
	Peel strength layer to layer	N / cm	> 7	≥ 2	EN 12068
		N / cm	≥ 6	≥ 2	EN 12068
	Cathodic disbondment resistance (radius)	mm	< 7	< 20	EN 12068
	Water absorption	%	< 0.06	-	ASTM D570

\* Values for the sleeve thickness 2.6 mm (type S).

## Ordering information and packaging

DEKOTEC®-MTS55 – S – 450MM – DN600



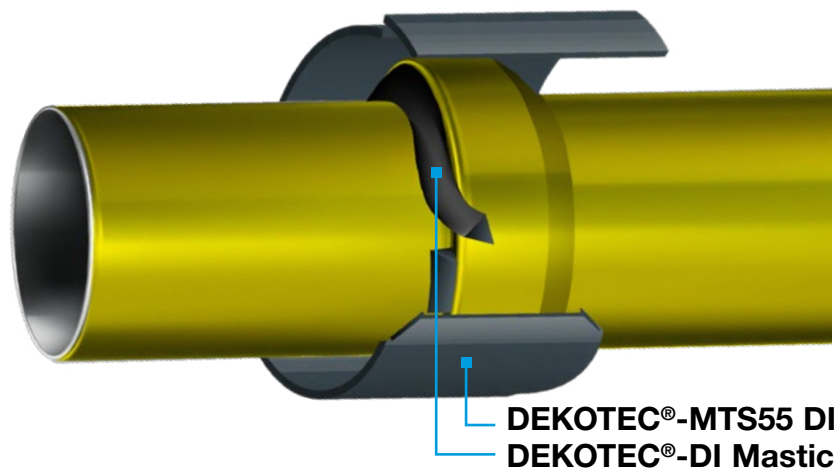
Pipe diameter (DN)				
DN 30 – DN 3000				
Sleeve width (mm)				
350, 450, 550, 650				
Type designation				
T	L	D	S	
0.7	1.0	1.0	1.0	Thickness PE film (mm)
1.1	1.2	1.4	1.6	Thickness coating (mm)
1.8	2.2	2.4	2.6	Total thickness (mm)
30	25	20	20	Length master roll (m)

Nominal pipe diameter	Sleeves per box (pcs)
DN 300	9
DN 600	6
DN 900	4

Additional information about package sizes can be obtained on request.

The listed dimensions refer to the delivery condition. Additional dimensions available on request.

Customize sleeves include closure patches. DEKOTEC®-CLP closure patches are available for master rolls.



## Special advantages:

- For operating temperatures up to +60 °C (+140 °F).
- Applicable to pipes made from cast iron, steel and stoneware.
- Preheating of the pipe is not required.
- Fulfills the requirements of a **stress class C** in accordance with EN 12068.
- Outstanding lap shear strength and peel strength.
- Reliable protection against corrosion and root penetration.

# DEKOTEC®-MTS55 DI /-DI Mastic

System solution for the protection of sleeve joints against corrosion and root penetration.

## Description

**DEKOTEC®-MTS55 DI** in combination with **DEKOTEC®-DI Mastic** is a sealing system solution, which provides an outstanding protection against corrosion and root penetration at sleeve joints without an extensive heating process.

**DEKOTEC®-MTS55 DI** is a heat shrinkable sleeve consisting of a robust electron beam cross-linked polyethylene carrier film and a coating based on bitumen.

**DEKOTEC®-DI Mastic** is an especially balanced self-adhesive material based on bitumen, which is simultaneously used

as a protection for existing sealings and to balance of the sleeve bell protrusion. A fast and simple processing is achieved through the self-adhesive properties and the dimensioning as a triangle profile in a strand shape.

**DEKOTEC®-MTS55 DI** can be applied to pipes made from steel, cast iron, concrete and stoneware as well as on plastic or bitumen coatings.

Significant time and cost savings are archived and an increased safety against application mistakes is provided due to the elimination of the extensive pre-heating process\*.

**DEKOTEC®-MTS55 DI** fulfills all requirements of EN 12068 and DIN 30672 of **class C** at operating temperatures of +55 °C (+131 °F) and can also be used for operating temperatures of up to +60 °C (+140 °F).

\* Drying of the surface with a flame is adequate.  
Surface temperature > +23 °C (> +73 °F).





## Typical product properties

	Property	Unit	Typical value	Required value	Test method	
Coating	Softening point ring and ball	°C (°F)	> +85 (> +185)	-	ASTM E28	
	Lap shear strength	+23 °C (+73 °F) N / cm <sup>2</sup>	> 100	≥ 5	EN 12068	
	Lap shear strength	+50 °C (+122 °F) N / cm <sup>2</sup>	≥ 10	≥ 5	EN 12068	
Backing	Elongation at break	%	> 500	-	EN 12068	
	Tensile strength	N / mm	≥ 20	-	EN 12068	
	Dielectric strength	kV / mm	≥ 35	-	ASTM D149	
	Volume resistivity	Ω · cm	≥ 10 <sup>15</sup>	-	ASTM D257	
	Hardness	Shore D	≥ 55	-	ISO 868 / ASTM D2240	
	Specific electrical insulation resistance	Ω · m <sup>2</sup>	≥ 10 <sup>10</sup>	≥ 10 <sup>8</sup>	EN 12068	
System	Indentation resistance	+23 °C (+73 °F) mm	> 2	≥ 0.6	EN 12068 (10MPa)	
		+50 °C (+122 °F) mm	> 1.8	≥ 0.6	EN 12068 (10MPa)	
	Impact resistance <sup>1)</sup>	J	> 17	> 15	EN 12068	
	Peel strength on pipe surface +23 °C (+73 °F)	Steel	N / cm	> 28	≥ 10	EN 12068
		Cast iron stoneware Concrete <sup>1)</sup>	N / cm	> 15	-	
	Peel strengths after 100 d thermal aging	N / cm	> 40	-	EN 12068	
	Peel strength on PE factory coating	+23 °C (+73 °F) N / cm	> 28	≥ 4	EN 12068	
	Cathodic disbondment resistance	mm	< 3	< 20	EN 12068	
	Water absorption	%	< 0.06	-	ASTM D570	

\* Values for the sleeve thickness of 2.5 mm (type N)

<sup>1)</sup> For closed concrete pores when using DEKOTEC®-EP Primer.

## Ordering information and packaging

### DEKOTEC®-MTS55 DI

#### Width:

300 mm, 450 mm

#### Thicknesses:

1.8 mm (type T)

2.5 mm (type N)

#### Lengths:

Master rolls 30 m (type T)

20 m (type N)

Additional dimensions available on request.

#### Closure patch

Length: 150 mm, 200 mm

50 units per box

### DEKOTEC®-DI Mastic

#### Edge length triangle profile

30 mm

Additional dimensions available on request.

3 rolls 4.67 m each, a total of 14 m per box



LIQUITOL®

# LIQUITOL®

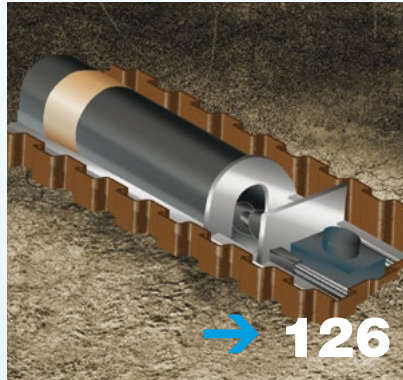
## Liquid Coatings



### LIQUITOL® Liquid Coatings

The portfolio of the LIQUITOL® product family includes high performance spread and spray coatings for buried pipes and components, which can be applied at the factory as well as at the construction site.

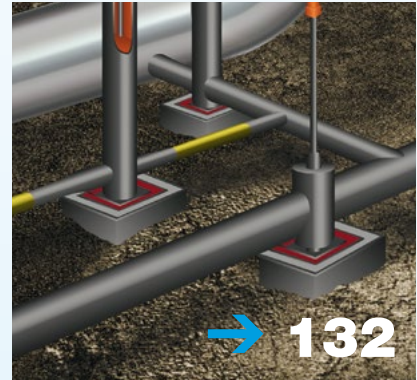
- LIQUITOL®-FK2 P. 122
- LIQUITOL®-FK2 C P. 124



### Trenchless Pipe Laying

The trenchless pipe installation places special requirements on the field-joint coating. The LIQUITOL® products deliver innovative special solutions on the basis of polyurethane with a revolutionary easy and safe processing.

- LIQUITOL®-HDD P. 126
- LIQUITOL®-HK7 C P. 128
- LIQUITOL®-TLC P. 130



### LIQUITOL® Insulation Plate

The LIQUITOL® product family is completed by the LIQUITOL®-Insulation Plate. It covers a wide application spectrum from plant and machine construction and electrics up to the use as root protection mat.

- LIQUITOL®-IPL P. 132

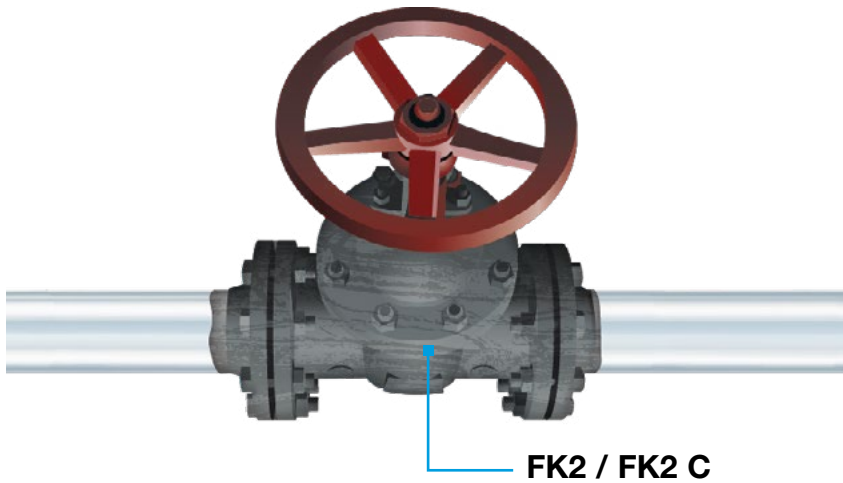


### DEKOMIX® Processing Equipment

DEKOMIX® cartridge dispenser for two-component polyurethane systems permit the application of LIQUITOL® products in cartridge packaging.

- DEKOMIX®-400 P P. 134
- DEKOMIX®-400 M P. 134
- DEKOMIX®-50 P. 134





## Special advantages:

- For operating temperatures up to +80 °C (+176 °F).
- Outstanding balance of flexibility and hardness.
- Fulfills EN 10290.
- Can be used as factory or construction side coating.
- Free of solvent.

# LIQUITOL®-FK2

Polyurethane coating for corrosion prevention of buried steel pipes, armatures and containers and for soil to air Interface Area.

## Description

**LIQUITOL®-FK2** is a two component polyurethane coating for the application by airless hot spray processes.

**LIQUITOL®-FK2** is outstandingly qualified for a permanent corrosion prevention of buried steel pipes, armatures and containers. **LIQUITOL®-FK2** is also qualified for the especially high requirements in the area of soil to air interface areas of pipelines.

**LIQUITOL®-FK2** can be used for factory coatings as well as for field coatings and

therefore it can be used in the rehabilitation area as well as for new constructions.

The high hardness in combination with good stretchability provides a high degree of resistance against mechanical damages.

Based on these properties, **LIQUITOL®-FK2** is, for example, used very successfully for the renewal of corrosion prevention coatings in gas compressor stations.

**LIQUITOL®-FK2** fulfills the requirements of DIN 30677-2 and DIN EN 10290 (class B, type 3) and it is therefore qualified for high mechanical stresses at operating temperatures up to +80 °C (+176 °F).

As the coating material for smaller areas as well as for holiday repairs, **LIQUITOL®-FK2 C** can be applied by a palette-knife and is available as a variant in practical two chamber cartridges.



## Typical product properties

Property		Component A	Component B
Color		Black	Brown transparent
Dyn. viscosity, (mPas)	+25 °C (+77 °F)	13.000	160
	+50 °C (+122 °F)	1.500	
	+70 °C (+158 °F)	300	
Density (g / cm <sup>3</sup> )		app. 1.39	app. 1.23
Mix ratio	Weight	100	36.36
	Volume	100	40.9

Property		Unit	LIQUITOL®-FK2 Typical value	LIQUITOL®-FK2 Required value	Test method
Impact resistance	+23 °C (+73 °F)	J / mm	> 7	> 5	EN 10290
	-5 °C (+23 °F)	J / mm	> 3	> 2	EN 10290
Indentation resistance	+23 °C (+73 °F)	mm	< 0.15	≤ 0.2	EN 10290
	+80 °C (+176 °F)	%	≤ 29	≤ 30	EN 10290
Hardness	+5 °C (+41 °F)	Shore D	77 ± 3	-	ISO 868
	+23 °C (+73 °F)	Shore D	74 ± 3	-	ISO 868
	+40 °C (+104 °F)	Shore D	66 ± 3	-	ISO 868
Cathodic disbondment	+60 °C (+140 °F), 2d	mm	< 6	≤ 8	EN 10290
Pull-off adhesion	+23 °C (+73 °F)	MPa	> 16	> 7	EN 10290
	+80 °C (+176 °F)	MPa	> 3	-	EN 10290
Pull-off adhesion after thermal aging (100 days +100 °C (+212 °F))		MPa	> 17	-	EN 10290
Adhesion (knife test)	+23 °C (+73 °F)	mm	< 1	< 3	EN 10290
	+80 °C (+176 °F)	mm	< 2	< 5	EN 10290
Tensile strength		%	> 15	> 10	EN 10290

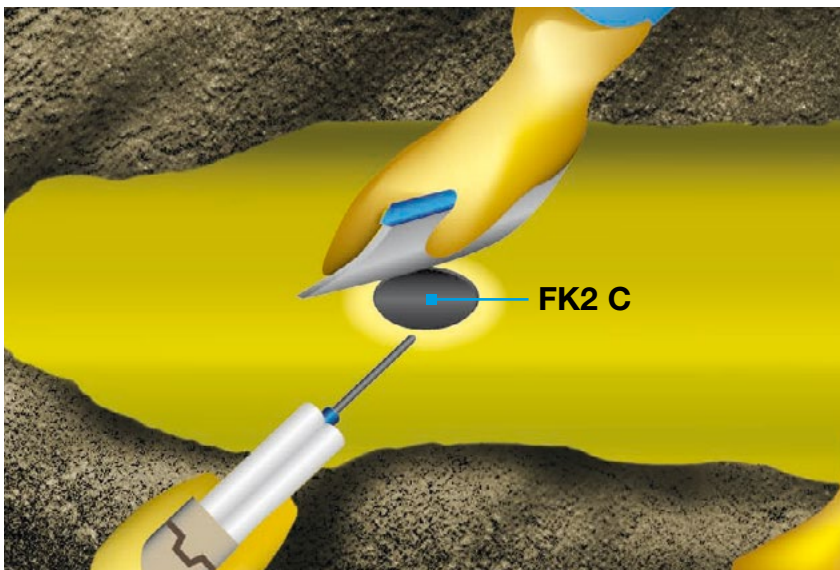
## Ordering information and packaging

	Packaging	Content	
		Weight (kg)	app. volume (l)
Component A	Hobbok	35	25.5
	Barrel	245	175
Component B	Bucket	12	9.7
	Hobbok	32	26
	Barrel	225	183

Additional packaging sizes available on request.

## Storage condition

Storage temperature: Component A: +5 °C to +30 °C (+41 °F to +86 °F) Component B: +15 °C to +30 °C (+59 °F to +86 °F). In its original packing and under adherence to the storage conditions, **LIQUITOL®-FK2** can be stored for at least 12 months after the production date.



## Special advantages:

- Corrosion prevention for increased requirements.
- Easy and fast processing.
- Can be applied by a palette-knife and without prime coat!
- Fulfills the requirements in accordance with EN 10290 (class B, type 3), and DIN 30677-2.
- Significantly faster in the application than traditional repair systems on the basis of melt sticks and repair patches.

# LIQUITOL®-FK2 C LIQUITOL®-FK2 C Repair Compound

Two component polyurethane spread coating for the corrosion protecting coating of the buried armatures and fittings as well as for the holiday repair of anti-corrosion coatings made from PE, PP, EP, PUR.

## Description

**LIQUITOL®-FK2 C** is a two component polyurethane corrosion prevention coating. Can be applied with a palette-knife or can be spread with a brush (only 400 ml cartridge). It is applied without primer on the metallic blank steel and the activated factory coating. **LIQUITOL®-FK2 C** allows for easy processing due to cartridge packaging. In accordance with the requirements of EN 10290 (class B, type 3), and DIN 30677-2. The 50 ml packages is adjusted thixotropic and can therefore easily be used in the 6 o'clock position. The curing time is adapted to the package size.

**Use of product:** Corrosion prevention of buried steel pipes, containers, armatures

and fittings as well as the repair of defects in corrosion prevention coatings made of PE, PP, PUR and Epoxy.

### Material consumption:

Range for 2 mm layer thickness:  
400 ml cartridge: app. 0.175 m<sup>2</sup>  
50 ml cartridge: app. 200 cm<sup>2</sup>

### Product processing:

Please adhere to the separately available processing recommendations **LIQUITOL®-FK2 C** and **LIQUITOL®-FK2 C Repair Compound** 50 ml.

### Product storage:

**LIQUITOL®-FK2 C** when stored in an unopened original packing, can be stored for at least 12 months after the manufacturing date. It is mandatory to store it

frost-protected. Permanent storage temperature: +15 °C (+59 °F) to +30 °C (+86 °F). Short term (transport) also: +5 °C (+41 °F) to +50 °C (+122 °F) possible.

### Cartridge dispensers:

#### DEKOMIX®-50

Cartridge dispenser for 50 ml cartridges including 4 plastic pallet knives.

#### DEKOMIX®-400 M

Manual cartridge dispenser for 400 ml cartridges.

#### DEKOMIX®-400 P

Pneumatic cartridge dispenser for 400 ml cartridges.





## Typical product properties

Property	Unit	Typical value	Test method	
Layer thickness	mm	≥ 1.5 mm (FK2 C) ≥ 2.5 mm (FK2 C Repair Compound)	ISO 2808	
Stress class	-	Class B, type 3	EN 10290	
Free of pores at	8 kV/mm, max 20 kV	Fulfilled	EN 10290	
Impact resistance	+23 °C (+73 °F)	≥ 5	EN 10290	
	-5 °C (+23 °F)	≥ 3		
Indentation resistance	dry, +23 °C (+73 °F)	mm	EN 10290	
	dry, +80 °C (+176 °F)	%		
Elongation at break	%	≥ 18	EN 10290	
Specific electrical insulation resistance	+23 °C (+73 °F)	Ω · m <sup>2</sup>	≥ 10 <sup>10</sup>	
	+80 °C (+176 °F)		≥ 10 <sup>4</sup>	
Adhesive strength	v-cut, +23 °C (+73 °F)	mm	EN 10290	
	v-cut, +80 °C (+176 °F)			
	Pull-off, +23 °C (+73 °F)	N / mm <sup>2</sup>		
	Pull-off, +80 °C (+176 °F)			
Adhesion after thermal aging	+100 °C (+212 °F), 100 days	N / mm <sup>2</sup>	≥ 17	EN 10290
Cathodic disbondment	+23 °C (+73 °F), 30 days	mm	< 3,0	EN 10290
	+60 °C (+140 °F), 2 days		< 2,5	
Hardness	+5 °C (+41 °F)	Shore D	77 +/- 5	ISO 868
	+23 °C (+73 °F)		74 +/- 5	
	+40 °C (+104 °F)		66 +/- 5	
	+70 °C (+158 °F)		45 +/- 5	
Density	g / cm <sup>3</sup>	app. 1.4	-	
Permanent operating temperature	°C (°F)	-20 to +80 (-4 to +176)		EN 10290

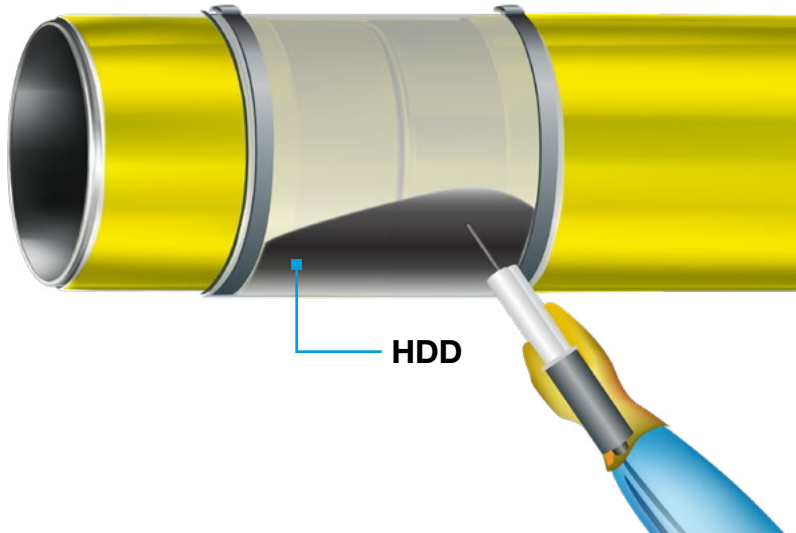
Hardening times		10 °C	20 °C	40 °C
50-ml-cartridge	Pot life	app. 75 sec	app. 60 sec	app. 50 sec
	tack-free	app. 40 min	app. 10 min	app. 5 min
	resilient	app. 4 h	app. 2 h	app. 1,5 h
400-ml-cartridge	Pot life	app. 5 min	app. 4 min	app. 3 min
	tack-free	app. 60 min	app. 30 min	app. 25 min
	resilient	app. 24 h	app. 8 h	app. 7 h
Processing temperature	Substrate	≥ +10 °C (≥ +50 °F); min. +3 °C (+5.4 °F) above dew point		
	Environment	+5 °C bis +50 °C (+41 °F bis +122 °F)		
	Material	+15 °C bis +30 °C (+59 °F bis +86 °F)		
Steel surface	Degree of cleanliness (ISO 8501-1)	min. Sa 2 ½		
	surface roughness (ISO 8503-1)	40 - 100 µm		
Relative humidity		≤ 80 %		

## Ordering information and packaging

### LIQUITOL®-FK2 C and LIQUITOL®-FK2 C Repair Compound

Cartridge sets including static mixers in box.

Color	(ml)	Content per cartridge		Kartuschen	Content per box	
		(g)			(g)	
Black	50	64		6	384	
Black	50	64		20	1280	
Black/gray	400	520		5	2.600	



## Special advantages:

- High abrasion resistance and peel resistances.
- For operating temperatures up to +80 °C (+176 °F).
- Fulfills DIN EN 10290.
- Free of solvent.
- Free of odor.
- Compatible with factory coatings made of PE, PP, PUR, PA, EP.

# LIQUITOL®-HDD

Corrosion prevention system for the field-joint coating of steel pipes for the pipe laying using the horizontal directional drilling (HDD) or the pipe-plow method.

## Description

**LIQUITOL®-HDD** is a two-component polyurethane coating for a permanent corrosion prevention of field-joints at pipes for trenchless installation processes.

**LIQUITOL®-HDD** features a high hardness and abrasion resistance as well as good stretchability and bending strengths. Therefore, **LIQUITOL®-HDD** is especially qualified for the coating of welding seams at pipes and pipelines that are installed using the horizontal directional drilling (HDD) or the (rocket) pipe-plow method.

The balanced property profile and the easy processing from a two-chamber cartridge have been proven outstandingly for decades in many construction projects worldwide.

The coating is provided from a two chamber cartridge in one work step in a special casing system. The casing system provides a high surface quality and also protects the material against weather impacts during hardening.

**LIQUITOL®-HDD** fulfills the requirements of DIN EN 10290 (class B, type 3) for operating temperatures of up to +80 °C (+176 °F) and therefore it is designed for highly corrosive and highly mechanical stresses.

**LIQUITOL®-TLC** is an additional fast hardening corrosion prevention coating on the basis of polyurethane for the field-joint coating for trenchless pipe installations in piling and pipe ramming processes.



## Typical product properties

Property	Unit	LIQUITOL®-HDD Typical value	LIQUITOL®-HDD Required value	Test method
Layer thickness	mm	> 1.5	> 1.5	EN 10290
Free of pores at 8 kV / mm (max. 20 kV)	-	fulfilled	-	EN 10290
Dielectric strength	kV / mm	> 5	-	-
Impact resistance	+23 °C (+73 °F)	J / mm	> 5	EN 10290
	-5 °C (+23 °F)	J / mm	> 3	EN 10290
Indentation resistance	+23 °C (+73 °F)	mm	< 0.1	EN 10290
	+80 °C (+176 °F)	%	≤ 29	EN 10290
Flexibility	+23 °C (+73 °F)	-	fulfilled	EN 10290
	0 °C (+32 °F)	-	fulfilled	EN 10290
Elongation at break	%	≥ 18	≥ 10	EN 10290
Specific electrical insulation resistance	+23 °C (+73 °F), 100 days	Ω m <sup>2</sup>	> 1.5 10 <sup>10</sup>	EN 10290
	+80 °C (+176 °F), 30 days	Ω m <sup>2</sup>	> 1.5 10 <sup>9</sup>	EN 10290
Pull-off adhesion on steel	+23 °C (+73 °F)	MPa	≥ 13	EN 10290
	+80 °C (+176 °F)	MPa	≥ 2	EN 10290
Pull-off adhesion on PE, PP	+23 °C (+73 °F)	MPa	> 4	ISO 4624
Adhesive strength (knife test) on steel	+23 °C (+73 °F)	mm	≤ 1 (Rating 1)	EN 10290
	+80 °C (+176 °F)	mm	≤ 3 (Rating 3)	EN 10290
Adhesive strength after water storage (+80 °C (+176 °F), 100 h)	+23 °C (+73 °F)	mm	≤ 1 (Rating 1)	EN 10290
			-	
Lap shear strength	Stahl	N / cm <sup>2</sup>	> 400	EN 10290
	PE	N / cm <sup>2</sup>	> 50	EN 10290
Cathodic disbondment	+23 °C (+73 °F), 30 days	mm	< 2.5	EN 10290
	+60 °C (+140 °F), 2 days	mm	< 2.5	EN 10290
	+5 °C (+41 °F)	Shore D	75 ± 3	ISO 868
Hardness	+20 °C (+68 °F)	Shore D	73 ± 3	ISO 868
	+40 °C (+104 °F)	Shore D	59 ± 3	ISO 868
	+70 °C (+158 °F)	Shore D	36 ± 3	ISO 868
Density	g / cm <sup>3</sup>	ca. 1.3	-	-

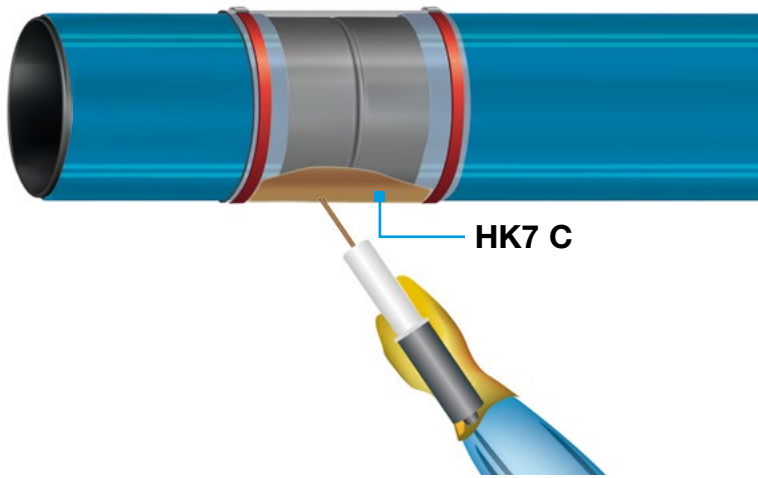
## Ordering information and packaging

Component	Description	Packaging size	Number of packages per box
LIQUITOL®-HDD	Coating material in 2-component cartridges	0.52 kg (400 ml)	12 cartridges per box
LIQUITOL®-HDD casing	PP casing film	1.9 mm x 500 mm x 10.5 m	1 roll
		1.9 mm x 700 mm x 10.5 m	
LIQUITOL®-HDD tensioning strap	Tensioning strap for the fixation of the casing	5.0 m	2 pcs
DEKOMIX-400 P	Pneumatic cartridge or dispenser for 2-component cartridges	-	1 pc per box

## Storage conditions

Storage temperature: +15 °C to +30 °C (+59 °F to +86 °F). In its original packing and by adhering to the storage conditions, LIQUITOL®-HDD can be stored for at least 12 months after the production date.





## Special Advantages:

- Outstanding protection of weld seams on plastic pipes.
- High mechanical stability and abrasion resistance.
- Simple, safe processing using two-component cartridges.
- Rapid curing.

# LIQUITOL®-HK7 C

Mechanical protective coating for the weld seam area on plastic pipes, especially for trenchless laying techniques.

## Description

**LIQUITOL®-HK7 C** is a rapidly-curing, mechanically hard-wearing coating based on polyurethane. **LIQUITOL®-HK7 C** is characterized by its high abrasion resistance and impact strength.

Thanks to these properties, **LIQUITOL®-HK7 C** is ideally suited to assume the function of a protective wrapping in the weld seam area for plastic pipes with protective wrappings.

Thanks to the use of a specialized casing system, the cut-back of the protective wrapping in the weld seam area is filled completely, flush to the edge, and a high finish quality is achieved with the coating. Due to the smooth surface, only a truly minimal resistance is presented to the ground for trenchless laying techniques such as are used in horizontal directional drilling, for example.

**LIQUITOL®-HK7 C** is processed out of practical 2-component cartridges, which guarantee a constant mixing ratio while ensuring that work can proceed cleanly and rapidly.

At low temperatures, the curing of **LIQUITOL®-HK7 C** can be accelerated with suitable heat sources.



## Typical product properties

Characteristic	Unit	Typical value	Required value	Test method
Color	-	yellow	-	-
Hardness	+23 °C (+73 °F) Shore D	70 ± 3	-	ISO 868
Density	g / cm <sup>3</sup>	1.3 (app.)	-	-
Pot life	+5 °C (+41 °F) min	10 (app.)	-	-
	+25 °C (+77 °F) min	3 (app.)	-	-
	+35 °C (+95 °F) min	2.5 (app.)	-	-
Hardening time	+5 °C (+41 °F) h	25	-	-
	+15 °C (+59 °F) h	15	-	-
	+60 °C (+140 °F) h	3	-	-

## Material consumption

The material consumption specified is based on a weld seam where the protective jacket has a cut-back of 40 mm on both sides.

D <sub>a</sub> (mm)	Number of seams per cartridge	D <sub>a</sub> (mm)	Number of cartridges per seam
<90	10 (app.)	355	1.1
110	7	400	1.7
125	5	450	2.0
140	4	500	2.6
160	3	560	2.9
180	2	630	3.3
200	2	710	3.7
225	1	800	4.2
250	1	900	4.7
280	1	1000	5.2
315	1	1200	6.2

## Ordering information and packaging

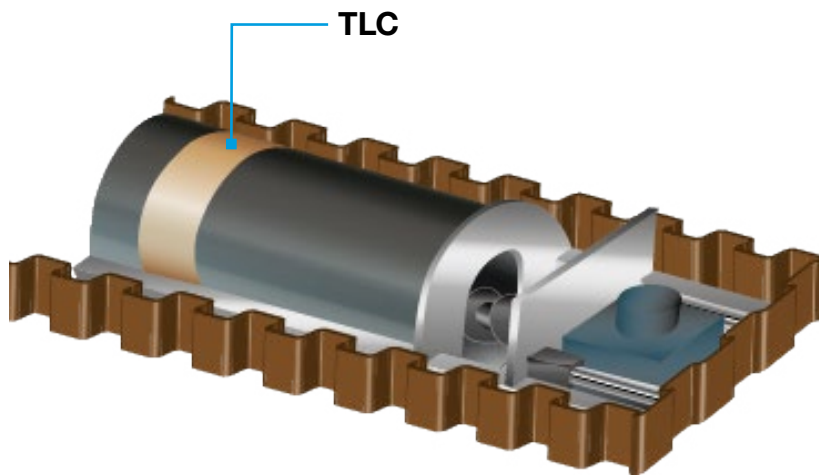
3 static mixers per cartridge

15 adhesive pads per box

Contents per cartridge		Contents per box	
(ml)	(g)	Cartridges	(kg)
400	520	5	2.6

## Storage conditions

Storage temperature: +15 °C to +30 °C (+59 °F to +86 °F). If storage conditions are observed, LIQUITOL®-HK7 C can be stored in its original packing for at least 12 months after the production date.



### Special advantages:

- Especially qualified for trenchless pipe installations.
- Fast construction progress based on short hardening times and easy processing.
- High abrasion resistance and peel strength.
- Free of solvent.
- Free of odor.
- Compatible with factory coatings made of PE, PP, PUR, Epoxy.

## LIQUITOL®-TLC

Corrosion prevention for the field-joint coating of steel pipes for the installation using piling and pipe ramming processes.

### Description

**LIQUITOL®-TLC** is a two-component spreadable polyurethane coating for the permanent corrosion prevention of pipelines.

**LIQUITOL®-TLC** features a fast curing as well as a high abrasion and shear strength. Therefore, it is outstandingly qualified for the field-joint coating of welding seams for trenchless pipe installations using piling and pipe ramming processes.

**LIQUITOL®-TLC** has proven itself outstandingly for more than 15 years in this demanding application.

**LIQUITOL®-TLC** will be mixed from prepackaged packages and will be processed with a palette-knife. The coating is normally provided flush up to the level of the factory coating. A higher stability and a smoother surface can be achieved for larger layer thicknesses by applying the fabric tape **DEKOTEC®-ES**.

After application, **LIQUITOL®-TLC** can be heated with a burner flame to accelerate the hardening.

**LIQUITOL®-HDD** is a specialized corrosion prevention coating on polyurethane basis for the field-joint coating of welding seams during pipe installations using the horizontal directional drilling (HDD) or pipe-plow method.





## Typical product properties

Property	Component A	Component B
Color	white	brown
Consistency	paste-like	liquid
Density +23 °C (+73 °F) (g / cm <sup>3</sup> )	app. 1.06	app. 1.20

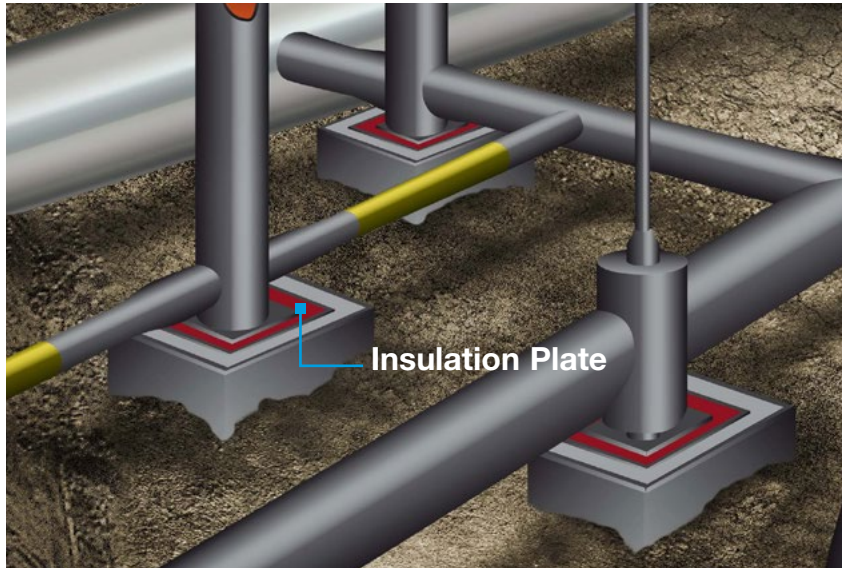
Property	Unit	LIQUITOL®-TLC Typical value	Test method	
Consumption per mm layer thickness	kg / m <sup>2</sup>	app. 1.3	-	
Hardness	+23 °C (+73 °F), 20h	Shore D	67 ± 5	ISO 868
	After 5 min flame hardening at +110 °C (+203 °F)	Shore D	71 ± 5	ISO 868
Indentation resistance (residual layer thickness)	+50 °C (+122 °F), 10 N / mm <sup>2</sup>	%	> 60	DIN 30672
Indentation resistance (depth of penetration)	48 h	%	≤ 27	DIN 30671
	Change 24 h / 48 h	%	≤ 2	DIN 30671
Impact resistance	+23 °C (+73 °F)	J	> 10	DIN 30671
Abrasion resistance		g	≤ 0.064	ASTM 4060
Pull-off adhesion	Steel	MPa	> 15	ISO 4624
	PE	MPa	> 4	ISO 4624
Lap shear strength	Steel	N / cm <sup>2</sup>	≥ 500	EN 12068
	PE	N / cm <sup>2</sup>	≥ 25	EN 12068
Specific electrical insulation resistance (2.5 mm layer thickness)	100 d, +23 °C (+73 °F)	Ω m <sup>2</sup>	> 10 <sup>9</sup>	DIN 30671
		Ω m <sup>2</sup>	> 10 <sup>7</sup>	DIN 30671
Dielectric strength		kV	> 25	DIN 30671
Salt spray test (1000 h)		-	No subsurface corrosion no blistering	ISO 9227
Subsurface corrosion (30d NaCl solution)		mm	≤ 2	-

## Ordering information and packaging

LIQUITOL®-TLC	Packaging	Number of packages per box
Standard packaging pair	Set each 1.63 kg (1.01 kg A; 0.62 kg B)	1
Small packaging pair	Set each 4 x 0.66 kg (0.4 kg A; 0.26 kg B)	4

## Storage condition

Storage temperature: +15 °C to +30 °C (+59 °F to +86 °F). LIQUITOL®-TLC can be stored for at least 12 months after the production date in its original package and by adhering to the storage conditions.



### Special advantages:

- High resilience and durability.
- High electrical resistance.
- Prevents prestressed funnel.
- Thermally and chemically durable.
- Qualified for armatures foundations, for the insulation of cable crossings and as root protection.

## LIQUITOL®-IPL

Polyurethane Insulation Plate for the electrical insulation of pipelines and armatures.

### Description

The **LIQUITOL®-IPL** with its high electrical insulation properties, guarantees a reliable electrical separation between cathodic protected pipelines and foundations made from concrete. Voltage drops are prevented by this insulation.

A high mechanical resilience as well as a low creep and therefore a high durability are provided based on the cross-linked molecule structure of the polyurethane. In addition, **LIQUITOL®-IPL** features a very good thermal and chemical durability.

Based on its flexibility, the insulation plate can be used for the insulation of valve foundations as well as for the insulation of pipelines at cable crossings as well as root protection mat.



## Processing

The insulation plate will be inserted between the concrete foundation and the valve as described for example in guideline GL 263-501 of the Open Grid Europe, RWE Thyssengas and Verbundgas.

A good adhesive connection of the **LIQUITOL®-IPL** to the steel surface is achieved with the polyurethane coating material **LIQUITOL®-FK2 C**.

For this purpose, the insulation plate should be slightly roughened and should be cleaned of all loose parts.

In addition, the casting of sliding feet foundations with **TOK®-Melt** has proven to be successful, this is a pouring compound made from polymer modified bitumen, which provides an additional protection and insulation of the foundation.

We recommend the pouring with the permanent plastic mastic **PLASTELEN®-KS** for the corrosion prevention of the valve rods.

## Typical product properties

Property	Unit	Typical value	Test method
Tensile strength	N / cm <sup>2</sup>	> 25	DIN EN ISO 527-3
Elongation at break	%	> 600	DIN EN ISO 527-3
Hardness	Shore D	40	DIN ISO 7619-1
Dielectric strength	kV	> 35	-
Volume resistivity	Ω · m	3 x 10 <sup>11</sup>	DIN IEC 93

## Ordering information and form of delivery

### LIQUITOL®-IPL

Dimensions: 1m x 1m x 5mm

Weight: 5 kg

Additional dimensions available on request.



# DEKOMIX® Processing Equipment

## DEKOMIX®-400 P

Pneumatic driven dispenser for 2 component cartridges.

For the processing of LIQUITOL®-FK2 C and LIQUITOL®-HDD.



## DEKOMIX®-400 M

Manual Dispenser for 2 component cartridges.

For the processing of LIQUITOL®-FK2 C and LIQUITOL®-HDD.



## DEKOMIX®-50

Manual Dispenser for 2 component cartridges.

For the processing of LIQUITOL®-FK2 C holiday repair coating in 50 ml cartridges.







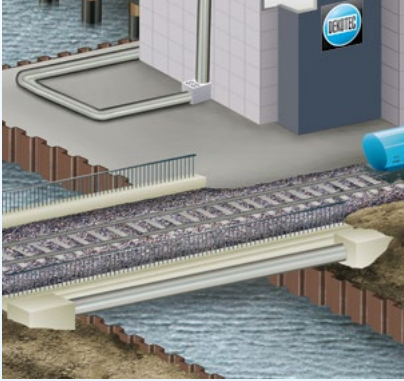


DEKOTEC®



# DEKOTEC®

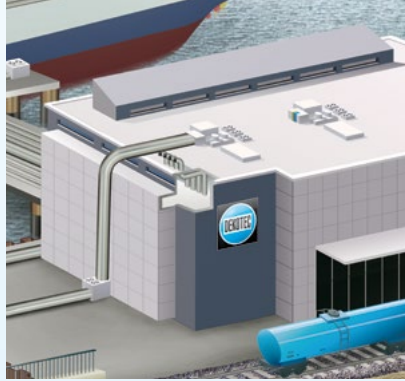
Insulation and Sealing Tapes



## DEKOTEC®-AL, -PB

DEKOTEC®-AL or -PB is used as permanent UV protection and insulation on above ground pipelines and pipe bridges and it provides them an attractive silver glossy (DEKOTEC®-AL) or matt gray (DEKOTEC®-PB) surface optic.

- DEKOTEC®-AL, -PB P. 138
- DEKOTEC®-AL6 P. 140



## DEKOTEC®-Insulating Tapes

DEKOTEC®-Alltape and DEKOTEC®-Anker are available in multiple colors and find their applications in industrial and commercial use for insulating, bundling, marking, sealing, and many more.

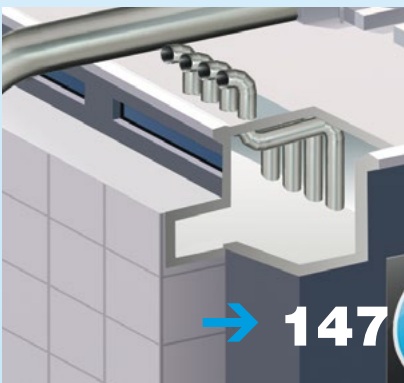
- DEKOTEC®-Alltape P. 141
- DEKOTEC®-Anker P. 142
- DEKOTEC®-PE100 P. 143



## DEKOTEC®-FK, -K, -RW120

Based on their sealing, vibration damping and insulation properties, DEKOTEC®-FK, -K and -RW120 have found a large variety of application options in metal-structure and industry insulation.

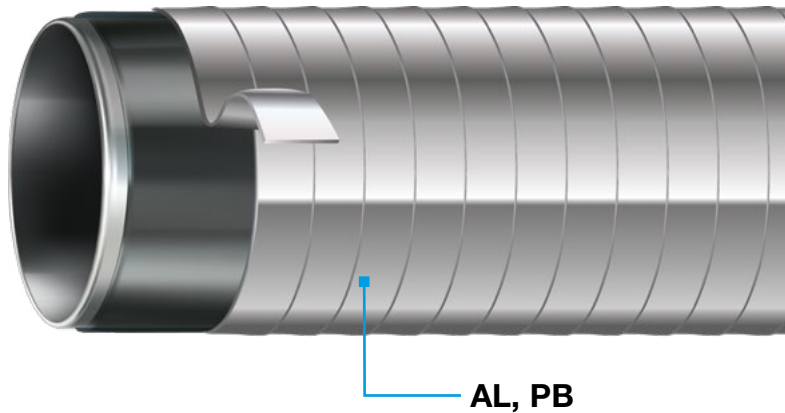
- DEKOTEC®-FK, -K, -RW120 P. 144



## PALIMEX® Sealing tapes

Due to their outstanding handling, adhesive strength and sealing properties PALIMEX® tapes set standards in the area of HVAC technology. They are ideally suited even for visible installations.

- PALIMEX®-170 P. 147
- PALIMEX®-2000 P. 148
- PALIMEX®-KTB500 P. 150



## Special advantages:

- UV resistant.
- Lowers the surface temperature by reflecting the sunlight.
- Cold processable.
- Highly tear resistant.
- Highly adhesive butyl rubber coating for optimal adhesion to different substrates.
- For temperatures up to +80 °C (+176 °F).

## DEKOTEC®-AL, -PB

Self-adhesive butyl rubber tapes with a laminated highly tear-resistant aluminum film for the sealing and insulation of above ground applications, e.g. on pipe bridges or for soil to air interface areas.

### Description

**DEKOTEC®-AL** and **DEKOTEC®-PB** are self-adhesive butyl rubber plastic tapes with laminated, polyester reinforced highly tear resistant aluminum film in silver gloss (**DEKOTEC®-AL**) of matt gray (**DEKOTEC®-PB**) design. The highly adhesive coating made from butyl rubber adheres very well to all common materials and surfaces. Therefore, the surfaces, edges, folds and other transitions will be completely covered and optimally sealed.

**DEKOTEC®-AL** and **DEKOTEC®-PB** are UV resistant and diffusion resistant against water vapor and oxygen.

Due to its metallic gloss, **DEKOTEC®-AL** and **DEKOTEC®-PB** reflect the solar radiation and therefore lower the surface temperature of the coating material. This means that the service life of the encase-

ment material of pipelines can be significantly increased especially in very warm countries with intensive sun radiation. Due to their metallic colors, **DEKOTEC®-AL** and **DEKOTEC®-PB** are also qualified for optically unobtrusive above grounds applications, e.g., on pipe bridges or soil to air interface areas.

**DEKOTEC®-AL** and **DEKOTEC®-PB** are compatible with factory coatings made of PE, PP, FBE, PU, CTE and Bitumen.

**DEKOTEC®-AL** and **DEKOTEC®-PB** can be used in combination with all **BUTYLEN** 3-ply tapes (e.g. **BUTYLEN-AS40 Plus**) as corrosion prevention layer.

In addition, petrolatum tapes (**PLASTELEN®-Plast**, **PLASTELEN®-Feu** and **PLASTELEN®-Cal**) can also be used as corrosion prevention layer.

In addition to the wrapping of corrosion prevention systems in pipeline construction, **DEKOTEC®-AL** and **DEKOTEC®-PB** can also be used for the corrosion prevention of pipe and cable brackets, for the antenna and chimney construction, for sheet metal paneling and sheet metal connections for roofs and buildings, in windows construction, for the installation and repair of gutters as well as for glass roofs, for green-houses and dome lights.

**DEKOTEC®-AL** and **DEKOTEC®-PB** must be applied with at least 25 mm tape overlap. A clean, dry and grease free surface must be provided before the application. Careful work is required in case of sharp edges or chamfers to prevent damages to the film.



## Typical product properties

Property	Einheit	Typischer Wert
Thickness	mm	≥ 0.6
Weight per unit area	g / m <sup>2</sup>	app. 1015
Tensile strength	N / cm	33
Peel strength on steel (90 °, 100 mm / min)	N / cm	≥ 4
Water vapor permeability	g / m <sup>2</sup> pro 24 h	< 1
Operating temperature		-30 (-22) to +80 (+176)
Processing temperature (Environment, tape, surface)	°C ( °F)	0 (+32) to +40 (+104)
Resistant against	-	Weather, frost, water, UV
Not permanently resistant against	-	Oil, benzene, organic solvents

DEKOTEC® tapes can be easily applied manually. The processing with the original DEKOMAT® wrapping equipment together with the DEKOTEC® adapter for the installation of the Ø 78mm

DEKOTEC® tape sleeve on the Ø 41mm DEKOMAT® is even more effective for DEKOTEC® tapes with width of > 50 mm, we recommend the use of the DEKOMAT® wrapping device

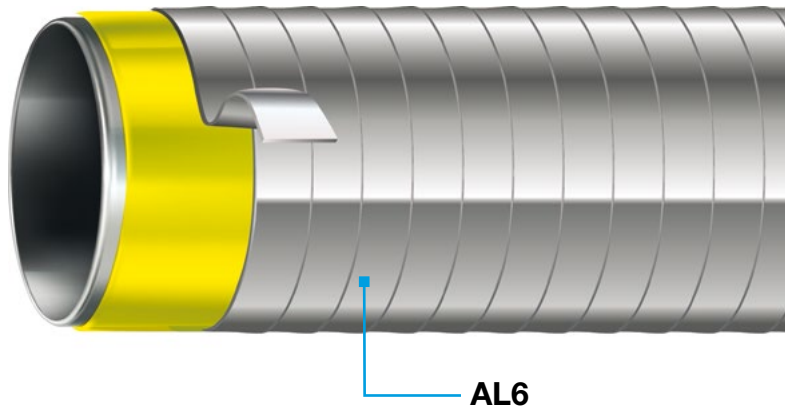
to guarantee an excellent processing quality, assumed that the application through the layer by layer process is not used.

## Ordering information and packaging

Core diameter (mm)	Width (mm)	Tape length (m)	Tape area per roll (m <sup>2</sup> )	Number of rolls	Content per box		
					Total tape area (m <sup>2</sup> )	Total tape length (m)	kg (app.)
DEKOTEC®-AL 78	50	10	0.5	12	6.0	120	6.5
	75	10	0.75	12	9.0	120	9.5
	100	10	1.0	6	6.0	60	6.5
	150	10	1.5	6	9.0	60	9.5
	225	10	2.25	4	9.0	40	9.5
Core diameter (mm)	Width (mm)	Tape length (m)	Tape area per roll (m <sup>2</sup> )	Number of rolls	Content per box		
					Total tape area (m <sup>2</sup> )	Total tape length (m)	kg (app.)
DEKOTEC®-PB 78	50	10	0.5	12	6.0	120	6.5
	75	10	0.75	12	9.0	120	9.5
	100	10	1.0	6	6.0	60	6.5
	150	10	1.5	6	9.0	60	9.5
	225	10	2.25	4	9.0	40	9.5

Additional dimensions available on request.





## Special Advantages:

- UV-resistant.
- Optimal adhesion on a range of substrates.
- Usable at temperatures as low as -20 °C (-4 °F).
- Reflects light and heat.
- Ideally suited to sealing work on thermal insulation and ventilation ducting.

# DEKOTEC®-AL6

Thin, universally-deployable aluminum sealing tape with high adhesion.

## Description

**DEKOTEC®-AL6** is a soft aluminum foil tape that is coated with an acrylic adhesive and contains a release film made from siliconized paper.

**DEKOTEC®-AL6** is impermeable to

water vapor and oxygen, and resistant to UV radiation.

One use for **DEKOTEC®-AL6** is as a UV protective tape for PE-coated pipes – an application specifically recommended

by Gaz de France (FR).

In addition, **DEKOTEC®-AL6** is also ideally suited for sealing aluminum-laminated insulation on ventilation ducting and pipelines.

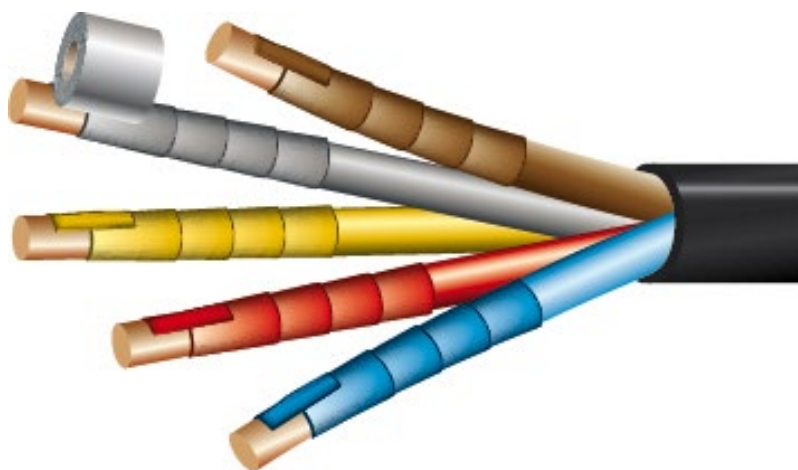
## Typical product properties

Characteristic	Unit	Typical value
Thickness	mm	0.06
Color	-	Aluminum
Traction resistance	N / cm	≥ 18
Elongation after fracture	%	≥ 5
Adhesion on steel	N / cm	≥ 5
Adhesion Layer/layer	N / cm	≥ 5
Operating temperature	°C ( °F)	-20 to +110 (-4 to +230)
Application temperature	°C ( °F)	0 to +50 (+32 to +122)

## Ordering information and packaging

Roll length: 50 m

Roll width: 50 mm, 100 mm



## Special Advantages:

- High dielectric strength.
- Usable at temperatures from -20 °C (-4 °F) to +85 °C (+185 °F).
- Flexible and adaptable.
- Excellent adhesion on many surfaces.
- Available in 11 colors.

# DEKOTEC®-Alltape

PVC insulation and multi-purpose universal tape for industrial and commercial use.

## Description

DEKOTEC®-Alltape is a universal insulation and multi-purpose tape consisting of a PVC carrier film with a rubber adhesive coating.

DEKOTEC®-Alltape is practical for many industrial and commercial applications,

such as electrical insulation and sealing of ventilation pipelines (spiral ducting).

DEKOTEC®-Alltape is easily worked with even at low temperatures and is characterized by its large application temperature range of -20 °C (-4 °F) to +85 °C (+185 °F).

DEKOTEC®-Alltape is naturally ideally suited for work involving insulation, bundling, bonding, marking and sealing, etc.

DEKOTEC®-Alltape is available in 11 colors and a wide variety of dimensions.

## Typical product properties

Characteristic	Unit	Typical value
Thickness	mm	0.2 (app.)
Color	-	blue, brown, yellow, green, gray, isogenopak gray, orange, red, black, violet, white
Tensile strength	N / cm	≥ 15
Elongation at break	%	≥ 100
Adhesive strength to steel	N / cm	≥ 0.5
Adhesive strength layer/layer	N / cm	≥ 1.0
Dielectric strength	KV / mm	≥ 25
Operating temperature	°C (°F)	-20 to +85 (-4 to +185)
Application temperature	°C (°F)	-15 to +50 (+5 to +122)

## Ordering information and packaging

Roll length: 10 m

Width (mm)	Rolls per box	Tape area (m <sup>2</sup> ) per box	Total tape length (m) per box
15	120	18	1200
30	60	18	600
50	48	24	480
100	24	24	240



## Special Advantages:

- Self-extinguishing carrier film.
- High dielectric strength.
- Usable at temperatures from 0 °C (+32 °F) to +90 °C (+194 °F).
- Available in 11 colors.
- Excellent adhesion on many surfaces.
- Flexible and adaptable.

# DEKOTEC®-Anker

PVC insulation and multi-purpose universal tape with self-extinguishing carrier film for industrial and commercial use.

## Description

DEKOTEC®-Anker is a universal insulation and multi-purpose tape consisting of a PVC carrier film with a rubber adhesive coating. DEKOTEC®-Anker has a tape thickness of just 0.15 mm, making it high-

ly flexible and adaptable. DEKOTEC®-Anker is the ideal choice for a great many industrial and commercial applications, including those that involve insulation, bundling, bonding, marking, sealing, etc.

DEKOTEC®-Anker remains thermally stable at temperatures as high as +90 °C (+194 °F). DEKOTEC®-Anker is available in 11 colors and a wide variety of dimensions.

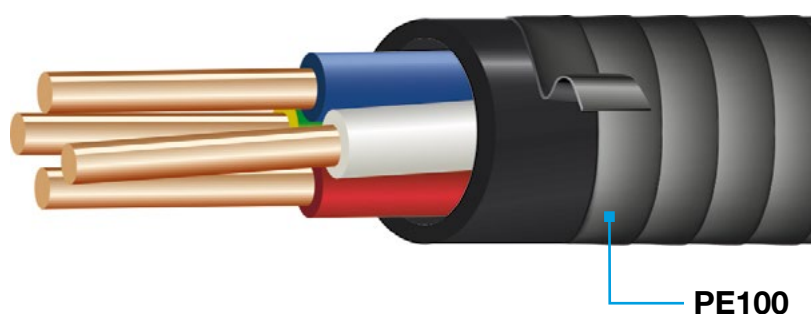
## Typical product properties

Characteristic	Unit	Typical value
Thickness	mm	0.15 (app.)
Color	-	blue, brown, yellow, green, gray, isogeno-gray, orange, red, black, white, yellow/green (earthing)
Traction resistance	N / cm	≥ 30
Elongation after fracture	%	≥ 170
Adhesion on steel	N / cm	≥ 1.8
Adhesion layer/layer	N / cm	≥ 1.8
Dielectric strength	KV / mm	≥ 40
Design temperature	°C (°F)	0 to +90 (+32 to +194)
Application temperature	°C (°F)	-5 to +70 (+23 to +158)

## Ordering information and packaging Roll length 10 m

Width (mm)	Rolls per box	Area (m <sup>2</sup> ) per box	Total tape length (m) per box
15	120	18	1200
30	60	18	600
50	48	24	480
100	24	24	240





## Special Advantages:

- Halogen-free.
- High electrical resistance and dielectric strength.
- High bond strength on many surfaces.
- UV-stabilized (black).

# DEKOTEC®-PE100

PE insulation and multi-purpose universal tape for industrial and commercial use.

## Description

**DEKOTEC®-PE100** is a universal insulation and multi-purpose tape consisting of a PE carrier film with a rubber adhesive coating.

With a tape thickness of 0.15 mm,

**DEKOTEC®-PE100** is highly flexible and tear-resistant.

**DEKOTEC®-PE100** is especially suited for sealing and electrical isolation work. In addition, **DEKOTEC®-PE100** is also cha-

racterized by its excellent adhesion both to metal and plastic surfaces.

**DEKOTEC®-PE100** can be used as an additional layer of protection for coatings using **PLASTELEN®** petrolatum tapes.

## Typical product properties

Characteristic	Unit	Typical value
Thickness	mm	0.15
Color	-	black, gray
Tear resistance	N / cm	≥ 18
Elongation after fracture	%	≥ 300
Adhesion on PE	N / cm	≥ 2.0
Adhesion on steel	N / cm	≥ 3.5
Volume resistivity	Ω · m	≥ 10 <sup>13</sup>
Dielectric strength	kV / mm	≥ 70
Thermal stability	°C (°F)	max. +70 (+158)
Application temperature	°C (°F)	+10 to +40 (+50 to +104)

## Ordering information and packaging

Roll length: 33m

Other dimensions available on request.

Roll width: 50 mm, 100 mm



## Special advantages:

- Electrically highly insulating.
- Galvanic isolation.
- Especially high adhesive force without pre-treatment of the surface or primer.
- Vibration damping.
- Highly tear resistant.
- Especially qualified for metal-structure and industrial insulation.
- Fulfills DB-TL 91863.
- Qualified for temperatures up to +80 °C (+176 °F).

# DEKOTEC®-FK, -K and -RW120

Self adhesive, plastic insulation and sealing tapes on butyl rubber basis. Also available as a red tape (DEKOTEC®-RW120), a variant especially for railway constructions (fulfills DB-TL 91863).

## Description

**DEKOTEC®-K** is a self-adhesive plastic insulation and sealing tape made from adaptable butyl rubber, single side installation adhesive and a release layer.

**DEKOTEC®-K** is adhesive on both sides and is therefore ideal for the use between metal parts.

**DEKOTEC®-FK** features a laminated thin polyethylene film on the opposite side. In contrast to **DEKOTEC®-K**, the **DEKOTEC®-FK** is only adhesive on one side and therefore ideal for the use on free surfaces.

**DEKOTEC®-K** and **-FK** tapes are used as intermediate layer between metal surfaces of the same or different type or construction parts made from other materials. Based on their high electrical resistance, they prevent the generation of galvanic elements between components made from different metals.

**DEKOTEC®-FK, -K** and **-RW120** are qualified for the

- Sealing of surfaces of metals of the same or different type in heating and cooling systems.
- Sealing of sheet metal ducts, riveted sheet metal packs as well as connections at corrugated spiral pipes in air conditioning and ventilation systems.
- Sealing of connections for prefabricated construction parts made from metal, plastic, glass and other materials.
- Sealing and corrosion prevention at chassis parts and other design elements in the automotive and mobile home construction.

- Sealing of components for the electrical separation of construction elements made from different materials, e.g. steel and aluminum or steel and copper or brass, e.g. in the shipbuilding and aircraft industry.

- Sealing of shed roofs and facades.

- Corrosion protecting and sealing intermediate layer in wagon and container construction.

**DEKOTEC®-RW120** is especially qualified for the sealing against moisture and for the corrosion prevention of components at railroad cars, which are connected force-fit through screw connections.



## Typical product properties

Property	Unit	Typical value	Test method
Processing temperature	Environment	-10 to +70 (+14 to +158)	
	Metal surface	0 to +50 (+32 to +122)	-
	Tape	0 to +50 (+32 to +122)	
Operating temperature	°C (°F)	-50 to +80 (-58 to +176)	-
Equivalent air layer thickness	m	2200	DIN 52615
Dielectric strength	kV/mm	≥35	DIN 53481
Specific electrical insulation resistance	Ω · m <sup>2</sup>	≥10 <sup>8</sup>	DIN 53482
Heat resistance at +120 °C (+248 °F)		Mastic does not drip	
Heat pressure test		Mastic swells less than 2 mm out, no excretion at lower edge	DB-TL 91863 (DEKOTEC®-RW120)
Low temperature resistance		Cracks do not occur	
Adhesive capability low temperature resistance		Intermediate layer adheres strongly	
Resistance against:			
- Diluted acids		resistant	
- Diluted lyes		resistant	
- Salt solutions, sea water		resistant	
- Fungus, soil bacteria		resistant	-
- Petroleum ether and other aliphatic and aromatic hydrocarbons		durable for short term contact, not durable in case of permanent storage.	

## Processing

The surfaces to be sealed must be dry, clean and free of oils, greases and paint residues. Wrap **DEKOTEC®** with overlapping and slight pull. When using it as an interim layer cut the required length

from the roll and place it on the cleaned substrate by pressing on it but not pulling at it. Required holes for the feedthrough of screws and rivets can be drilled.

**DEKOTEC®** tapes can be easily applied

manually. The processing on the pipe surfaces is even more efficient using the original **DEKOMAT®** wrapping equipment.

## Ordering information and packaging

DEKOTEC®-K, -FK, -RW120	Thickness (mm)	Roll length (m)
K10	1	8
K20	2	4
FK6	0.6	15
FK10	1	10
FK20	2	5
FK30	3	2.5
RW120 (red tape)	1.5	10

**DEKOTEC®-FK** and **DEKOTEC®-K**, as well as **DEKOTEC®-RW120** are delivered as rolls with standard width of 10, 15, 20, 25, 30, 40, 50, 60 and 100 mm. Additional

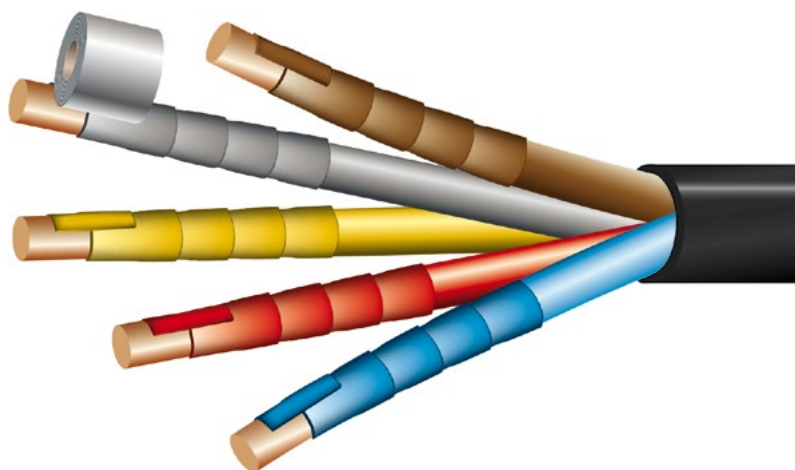
dimensions available on request. The number of delivered rolls per box depends on the roll width, for example, 4 units are in one box for rolls that are

100 mm wide while there are 40 units in the box for rolls that are 10 mm wide. Rolls less than 100 mm diameter are not packed individually.



# THINK QUALITY





## Special Advantages:

- High dielectric strength.
- Usable at temperatures from -20 °C (-4 °F) to +85 °C (+185 °F).
- Flexible and adaptable.
- Excellent adhesion on many surfaces.
- Available in 10 colors.

# PALIMEX®-170

PVC insulation and multi-purpose universal tape for industrial and commercial use.

## Description

PALIMEX®-170 is a universal insulation and multi-purpose tape consisting of a PVC carrier film with a rubber adhesive coating.

PALIMEX®-170 is practical for many industrial and commercial applications,

such as electrical insulation and sealing ventilation pipelines (spiral ducting).

PALIMEX®-170 is easily worked with even at low temperatures and is characterized by its large application temperature range of -20 °C (-4 °F) to +85 °C (+185 °F).

PALIMEX®-170 is naturally ideally suited for work involving insulation, bundling, bonding, marking and sealing, etc.

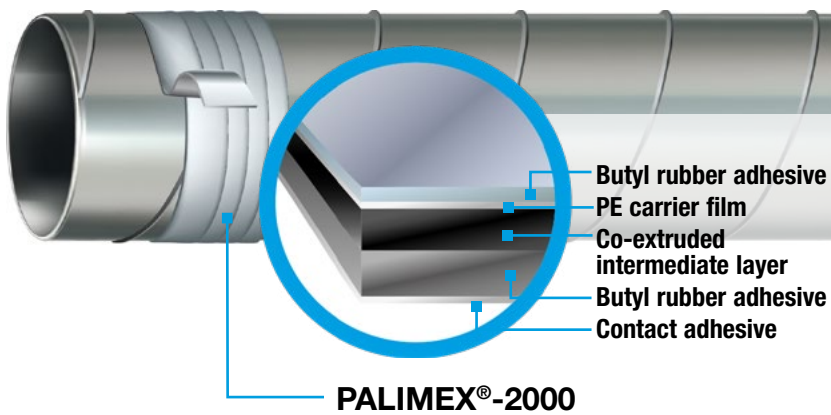
PALIMEX®-170 is available in 10 colors and a wide variety of dimensions.

## Typical product properties

Property	Unit	Typical value
Thickness	mm	0.2 (app.)
Color	-	blue, brown, yellow, green, gray, isogenopak gray, orange, red, black, white
Traction resistance	N / cm	≥ 15
Elongation after fracture	%	≥ 100
Bond strength on steel	N / cm	≥ 0.5
Layer/layer bond strength	N / cm	≥ 1.0
Dielectric strength	kV / mm	≥ 25
Application temperature	°C (°F)	-20 to +85 (-4 to +185)
Working temperature	°C (°F)	-15 to +50 (+5 to +122)

## Ordering information and packaging Roll length: 10 m

Width (mm)	Rolls per box	Tape area (m <sup>2</sup> ) per box	Total tape length (linear meters) per box
30	60	18	600
50	48	24	480
100	24	24	240



## Special Advantages:

- Reliable sealing at up to 5000 Pa overpressure.
- Very large design temperature range from -50 °C (-58 °F) to +75 °C (+167 °F).
- Suited to visible installation, due to appealing silver-gray appearance.
- Fire rating 2, non-drip.
- Silicone-free and solvent-free.
- UV-stabilized.
- Can be painted over.

# PALIMEX®-2000

Co-extruded, 3-ply butyl rubber tape (cold-shrink tape) for use in sealing ventilation pipes.

## Description

**PALIMEX®-2000** is a genuine co-extruded 3-ply sealing tape with a butyl rubber coating on both sides and an inner polyethylene carrier film. Thanks to its 3-ply design, **PALIMEX®-2000** fuses together in the overlapping area to form a leak-proof, hose-like wrap. As an installation aid, **PALIMEX®-2000** is equipped with a pressure-sensitive adhesive coating that ensures a quick and reliable bond to many substrates such as PVC, PE, steel and galvanized sheeting.

**PALIMEX®-2000** is also characterized by outstanding tape flexibility and a very large application temperature range. Thanks to its great strength and high elastic recovery, **PALIMEX®-2000** enables bonding between flexible aluminum pipes and spiral ducting (e.g.) without screw fasteners being required.

On account of these characteristics, **PALIMEX®-2000** is ideally suited for sealing work in HVAC applications, both

in new construction projects and for retroactive sealing work.

Due to its silver-gray appearance, **PALIMEX®-2000** is camouflaged in the metallic color of the ventilation pipes, which also makes it ideally suited for visible installations. Reducers, screw fittings and pipe junctions can also be wrapped without any folds. In applications where a metallic finish is not desirable, **PALIMEX®-2000** can be painted with many industry-standard paints.





## Product Application

When sealing butt joints, prepared tape lengths can be used as specified in the table. For visible installations, avoid locating the tape start directly in the field of

view. Pre-stretch **PALIMEX®-2000** by about 10% and apply to the dry pipe surface. For a single-layer wrap, give the tape at least a 10 cm overlap and

ensure it is unstressed before pressing into place.

Pipe diameter	Recommended tape width (mm)	Precut length (mm)
80	50	370
100	50	430
125	50	500
150	50	560
160	50	600
200	50	715
250	50	875
300	50	1025
315	50	1075
355	50	1200
400	50	1340
500	50	1655
560	75	1900
600	75	2050
630	75	2150
710	75	2350
800	75	2750
900	75	3050
1000	75	3350
1250	75	4150
1400	75	4650

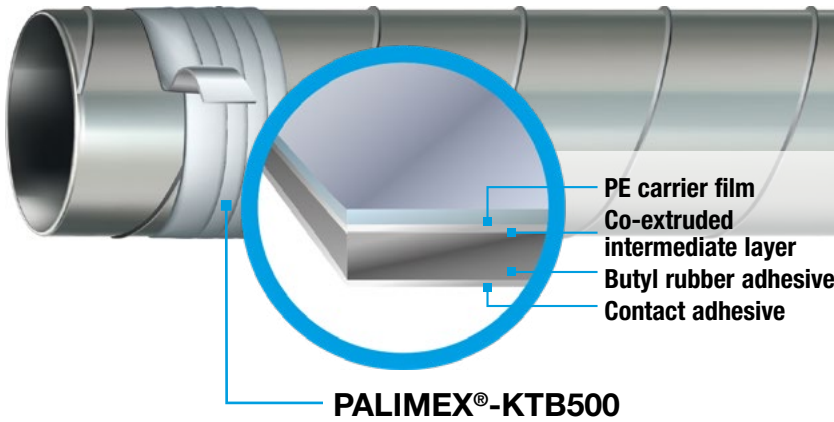
## Typical product properties

Properties	Unit	Typical value	Test method
Tape thickness	mm	≥ 0.63	–
Outer layer thickness	mm	≥ 0.03	–
Carrier film thickness	mm	≥ 0.08	–
Butyl rubber coating thickness	mm	≥ 0.46	–
Pressure-sensitive adhesive thickness	mm	≥ 0.06	–
Tensile strength	N/cm	≥ 10	DIN 30672
Elongation at break	%	≥ 500	DIN 30672
Building material class	–	B2 (normally inflammable)	DIN 4102-1
Fire rating	–	E (normally inflammable, non-drip)	EN ISO 11925-2
Working temperature	°C (°F)	-15 to +50 (+5 to +122)	–
Design temperature	°C (°F)	-50 to +75 (-58 to +167)	–

## Ordering information and packaging

	Diameter of inner core (mm)	Width (mm)	Length (m)	Area/roll (m²)	Number of rolls	Tape area (m²)	Content per box	
							Total tape length (linear meters)	Weight (kg) (app.)
PALIMEX®-2000	41	50	15	0.75	12	9.0	180	7.0
		100	15	1.5	6	9.0	90	7.0

Other dimensions available on request.



## Special Advantages:

- Reliable sealing at up to 3500 Pa overpressure.
- High-strength PE carrier film.
- Very large design temperature range from -50 °C (-58 °F) to +75 °C (+167 °F).
- Suited to visible installation, due to appealing silver-gray appearance.
- Fire rating 2, non-drip.
- Silicone-free and solvent-free.
- UV-stabilized.

# PALIMEX®-KTB500

Co-extruded, 2-ply butyl rubber tape (cold-shrink tape) for use in sealing ventilation pipes.

## Description

**PALIMEX®-KTB 500** is a genuine co-extruded 2-ply sealing tape with a butyl rubber coating on a polyethylene carrier layer.

As an installation aid, **PALIMEX®-KTB500** is equipped with a pressure-sensitive adhesive coating that ensures a quick and reliable bond to many substrates such as PVC, PE, steel and galvanized sheeting.

**PALIMEX®-KTB500** is also characterized by outstanding tape stability and a very large application temperature range.

On account of these characteristics, **PALIMEX®-KTB500** is ideally suited for sealing work in HVAC applications, both in new construction projects and for retroactive sealing work.

Unlike many standard adhesive tapes, **PALIMEX®-KTB500** is installed with a pre-stretch of about 10%.

The subsequent elastic recovery of the tape causes the tape to wrap itself tightly around the butt joint to be sealed, causing the formation of an airtight joint with no folds.

Due to its silver-gray appearance, **PALIMEX®-KTB500** is camouflaged in the metallic color of the ventilation pipes, which also makes it ideally suited for visible installations. Reducers, screw fittings and pipe junctions can also be wrapped without any folds.



## Product Application

When sealing butt joints, prepared tape lengths can be used as specified in the table. For visible installations, avoid locating the tape start directly

in the field of view. Pre-stretch **PALIMEX®-KTB500** by about 10% and apply to the dry pipe surface.

For a single-layer wrap, give the tape at least a 10 cm overlap and ensure it is unstressed before pressing into place.

Pipe diameter	Recommended tape width (mm)	Precut length (mm)
80	50	370
100	50	430
125	50	500
150	50	560
160	50	600
200	50	715
250	50	875
300	50	1025
315	50	1075
355	50	1200
400	50	1340
500	50	1655
560	75	1900
600	75	2050
630	75	2150
710	75	2350
800	75	2750
900	75	3050
1000	75	3350
1250	75	4150
1400	75	4650

## Typical product properties

Property	Unit	Typical value	Test method
Tape thickness	mm	≥ 0.45	–
Carrier film thickness	mm	≥ 0.10	–
Butyl rubber coating thickness	mm	≥ 0.30	–
Pressure-sensitive adhesive thickness	mm	≥ 0.05	–
Tear resistance	N / cm	≥ 20	DIN 30672
Elongation after fracture	%	≥ 150	DIN 30672
Building material class	–	B2 (normally inflammable)	DIN 4102-1
Fire rating	–	E (normally inflammable, non-drip)	EN ISO 11925-2
Working temperature	°C (°F)	-5 to +50 (+41 to +122)	–
Design temperature	°C (°F)	-50 to +75 (-58 to +167)	–

## Ordering information and packaging

	Diameter of inner core (mm)	Width (mm)	Length (m)	Area/roll (m <sup>2</sup> )	Number of rolls	Content per box		
						Tape area (m <sup>2</sup> )	Total tape length (linear meters)	Weight (kg) (app.)
PALIMEX®-KTB 500	41	50	15	0.75	27	20.25	405	12.5
		75	15	1.125	12	13.5	180	8.5

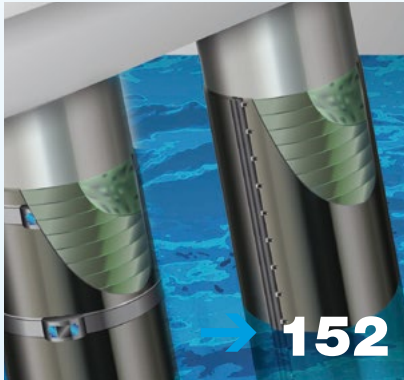
Other dimensions available on request.





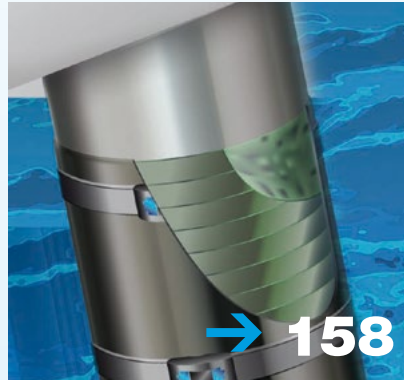
# MarineProtect™

## Jetty Pile Protection



### MarineProtect™

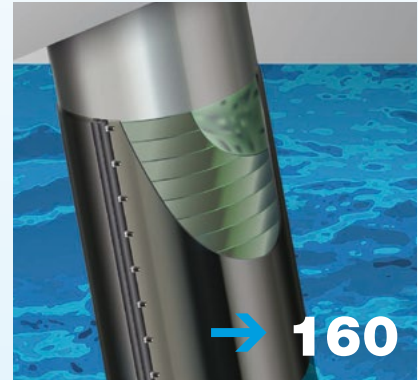
The **MarineProtect™** systems can be used in many applications and they can easily be applied to piles made from metal, concrete or wood. A special advantage of **MarineProtect™** is the easy application above as well as under water. This is also possible for the later protection of already existing systems.



### MarineProtect™-100

For the **MarineProtect™-100** system, the **MarineProtect™-Jacket** is fastened through an easily executed and reliable tension belt system.

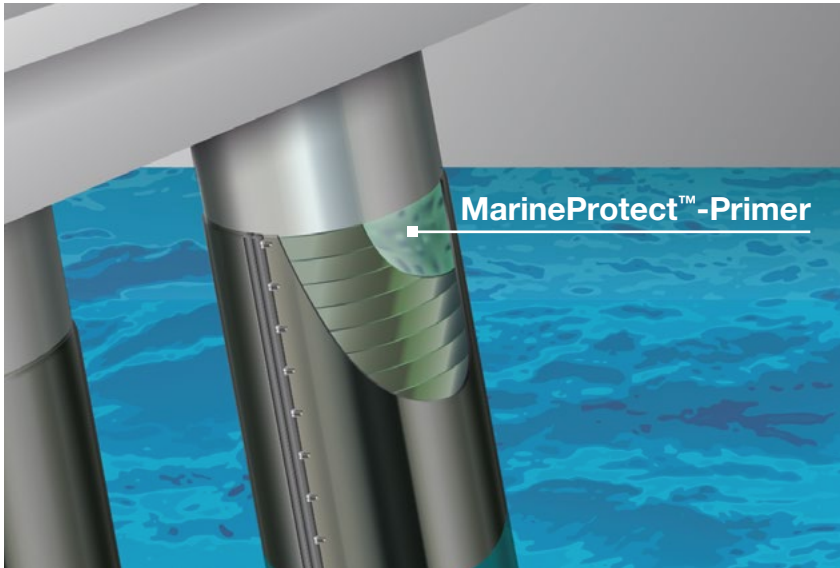
**MarineProtect™** is very flexibly applicable and permits the protection of adjacent piles with different diameters without large adaptations.



### MarineProtect™-2000 FD

The **MarineProtect™-Jacket** in the system **MarineProtect™-2000 FD** features a weld connected lock bar, which guarantees an easy and reliable installation due to its high quality screw connection. Therefore, **MarineProtect™-2000 FD** offers a very good prevention against corrosion as well as against wind, tide and breakwater.

- MarineProtect™-Primer P. 154
- MarineProtect™-Tape P. 156



### Special advantages:

- Easy application even under water.
- No drying time.
- Easy and fast processing.

## MarineProtect™-Primer

Primer mastic for the corrosion prevention of jetty piles made from steel, wood and concrete.

### Description

**MarineProtect™-Primer** represents the basic corrosion prevention in the systems **MarineProtect™-100** and **MarineProtect™-2000 FD** for the corrosion and weather prevention of jetty piles in water and in the splash water area.

The **MarineProtect™-Primer** is based on a natural wax and permits a good moistening of the steel surface even under the water surface.

By spreading the primer, the water is displaced from the steel surface and a moisture barrier is created, which prevents a continuation of the steel corrosion.

**MarineProtect™-Primer** only needs little surface preparation and therefore permits a fast and economic coating. After the application of **MarineProtect™-Primer**, the surface is prepared for the wrapping

with **MarineProtect™-Tape**. Indentations and irregularities can be filled and closed with the **MarineProtect™-Primer**.

The **MarineProtect™-Primer** is outstandingly qualified for the coating of new as well as for the rehabilitation of existing constructions.



## Processing

Before the application of **MarineProtect™-Primer**, the surface of the pile must be cleaned of rust and all loose attachments and non-adhesive residues of previous paintings and coatings as well as from organic vegetation.

We recommend the use of water blasting or sandblasting to achieve the best possible coating quality.

After the cleaning of the surface, the coating with **MarineProtect™-Primer** should be started immediately to prevent a renewed generation of rust or organic vegetation.

**MarineProtect™-Primer** can be processed manually or by using a palette-knife or a similar tool. The entire surface of the pile should be covered with a thin layer. The area consumption of **MarineProtect™-Primer** is approximately 350 g/m<sup>2</sup>.

After coating with **MarineProtect™-Primer**, the surface is no longer in direct contact with water and it is prepared for the additional coating with **MarineProtect™-Tape** and **MarineProtect™-Jacket**.

**MarineProtect™-Primer**, **-Tape** and **-Jacket** together create a permanent and durable corrosion prevention system even under severe conditions of waves, strong winds and UV light.

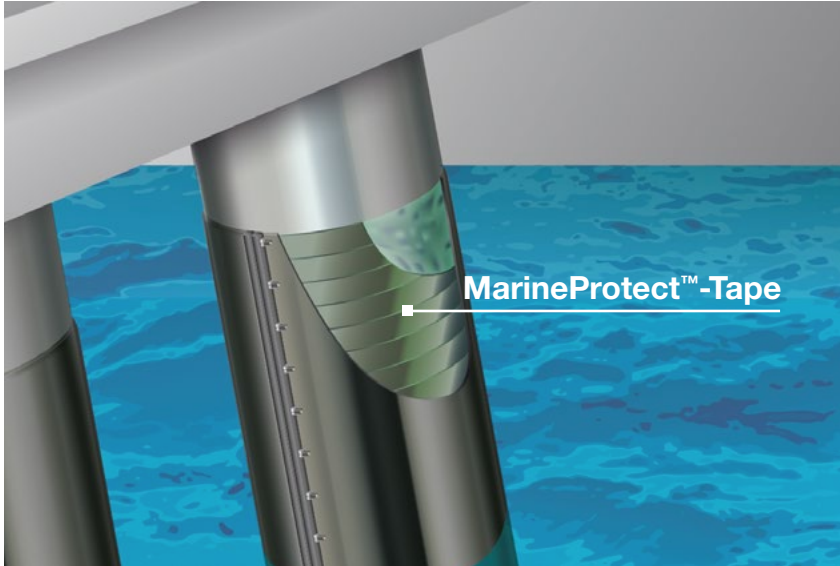
Additional information is included in the processing recommendations of **MarineProtect™-100** and **MarineProtect™-2000 FD**, available under [www.dekotec.de](http://www.dekotec.de).

## Typical product properties

Property	Unit	Typical value	Test method
Density	g / cm <sup>3</sup>	app. 0.93	ISO 2811
Dripping point	°C (°F)	>+100 (>+212)	DIN 51801
Area consumption	kg / m <sup>2</sup>	app. 0.35	
Processing temperature	°C (°F)	-10 to +40 (+14 to +104)	
Operating temperature	°C (°F)	-60 to +70 (-76 to +158)	
Storage temperature	°C (°F)	<+40 (<+104)	

## Ordering information and packaging

**MarineProtect™-Primer**: 10 kg bucket



## Special advantages:

- Proven and durable corrosion prevention through a petrolatum tape – an invention by DEKOTEC.
- No drying time required.
- High flexibility.
- Easy and fast processing.

# MarineProtect™-Tape

Corrosion prevention tape based on petrolatum for piles in the water and splash zones.

## Description

**MarineProtect™-Tape** represent the essential corrosion prevention in the systems **MarineProtect™-100** and **MarineProtect™-2000 FD**, coating systems for a durable corrosion and weather protection of piles in the water and the splash zone.

**MarineProtect™-Tape** will be applied to surfaces that were coated beforehand with **MarineProtect™-Primer**.

**MarineProtect™-Primer** permits the application of the **MarineProtect™**

system also on pile constructions in and under water.

The development of the **MarineProtect™-Tape** is based on more than 90 years of experience with petrolatum tapes. **MarineProtect™-Tape** consists of a robust polypropylene nonwoven, which is soaked in a petrolatum mastic. A thin plastic film on the outside provides an additional stability of the tape and hinders the washing out of the petrolatum.

The **MarineProtect™-Tape** is very flexible and can therefore be applied easily on all surface forms. Matching different pile diameters, **MarineProtect™-Tape** is available in several roll widths.

The **MarineProtect™-Tape** is impermeable for corrosive media such as oxygen and water and resistant against salt water.





## Processing

Before the application of **MarineProtect™-Tape**, the surface must be coated with a thin film made of **MarineProtect™-Primer**.

**MarineProtect™-Tape** will be wrapped spiraled with 50% overlapping on the prepared surface. The thin plastic film of the tape must be placed on the outside.

If the space for wrapping is not adequate, then the **MarineProtect™-Tape** can be processed in layers (layer by layer).

The **MarineProtect™-Jacket** will be applied as the mechanical protection above the corrosion prevention coating after the coating with **MarineProtect™-Tape**.

**MarineProtect™-Primer, -Tape and -Jacket** together, create a durable corrosion prevention system that withstands the severe conditions of waves, strong winds and UV light.

Additional information is included in the processing recommendations of **MarineProtect™-100** and **MarineProtect™-2000 FD**, available under [www.dekotec.de](http://www.dekotec.de).

## Typical product properties

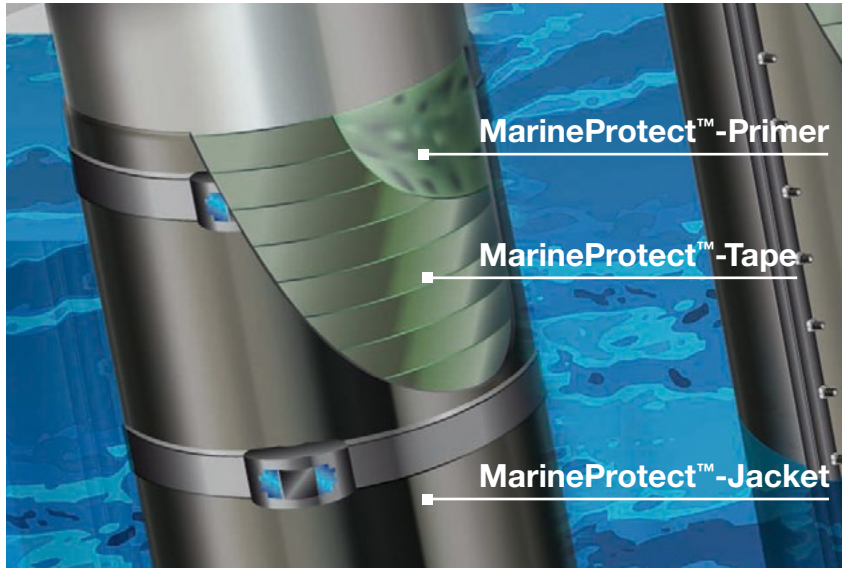
Property	Unit	Typical value	Test method
Total thickness	mm	1.5	
Thickness of the laminate film	µm	100	
Saponification number	mg / KOH / g	< 10	EN 12068
Overlapping	%	50	
Processing temperature	°C (°F)	-10 to +40 (+14 to +104)	
Operating temperature	°C (°F)	-60 to +50 (-76 to +122)	
Storage temperature	°C (°F)	<+40 (<+104)	

## Ordering information and packaging

Roll length: 10 m

Width (mm)	Rolls per box (pcs)	Area (m <sup>2</sup> ) per box	Total tape length (m) per box
50	12	6	120
100	6	6	60
200	4	8	40

Additional dimensions available on request.



## Special advantages:

- Special advantages
- Proven durable corrosion prevention due to the petrolatum bandage invented by DEKOTEC.
- Can also be installed under water.
- No drying time required.
- Easy and fast application.
- Outstanding weathering protection and environmentally compatible.

# MarineProtect™-100

Corrosion and weathering prevention for piles made of metal, concrete or wood.

## Description

**MarineProtect™-100** is a System solution for the corrosion prevention and weathering protection of piles or pipes, which are partly submerged in water. It is especially qualified for use in strongly corrosive environments in which the common paint systems and coatings fail.

The **MarineProtect™-100** can be used in many ways and can be applied

without problems on piles made from metal, concrete or wood and can be adapted to round or hexagonal piles.

A special advantage of **MarineProtect™-100** is the easy application above as well as under water. This is also possible for the later protection of already existing systems. The removal of existing paint covers is not required.

**MarineProtect™-100** significantly extends the service life of pile constructions and reduces the expenditure for their restorations.



## Material

**MarineProtect™-100** offers a proven corrosion prevention through a petrolatum tape. The moisture will be reliably kept away from the steel surface and the corrosion process will be stopped.

The outer protective encasement provides an outstanding resistance against mechanical stresses and weathering influences.

The **MarineProtect™-Primer** on the basis of a natural wax, provides an outstanding moistening of steel surfaces even under water. The water will be displaced when spreading the product on

the surface. Irregularities and cavities can be equalized and filled with the primer. The covered steel surface is reliably protected against corrosion.

The **MarineProtect™-Tape** is a corrosion prevention tape on petrolatum basis, which benefits from the experience since its invention in 1927. The tape includes a resistant PP nonwoven as well as a PP laminate film. **MarineProtect™-Tape** will be wrapped spiraled over the **MarineProtect™-Primer**. The water will be displaced by an appropriate winding tension and a dense and reliable corrosion prevention will be achieved.

The applied corrosion prevention will be enveloped using the **MarineProtect™-Jacket**, a protective encasement of highly resilient and UV resistant polyethylene with a high density (HDPE). It keeps the outside stresses away from the corrosion prevention coating, which means that the corrosion prevention is guaranteed for long time periods even under the impact of breakwater, strong winds and UV light. The **MarineProtect™-100** system provides an easily implemented and reliable fastening of the **MarineProtect™-Jacket** with the **Smart®** tape tensioning belt system.

## Typical product properties

	Property	Unit	MarineProtect™ Typical value	Test method
Primer	Density	g / cm <sup>3</sup>	app. 0.93	ISO 2811
	Dripping point	°C (°F)	> +100 (> +212)	DIN 51801
Tape	Thickness	mm	1.5	-
	Thick cover film	µm	100	-
	Saponification number	mg KOH / g	< 10	DIN EN 12068
Jacket	Thickness	mm	2	-
	Elongation at break	%	> 700	ASTM D 638
	Tensile strength	N / mm <sup>2</sup>	21	ASTM D 638
System	Impact resistance	J	> 15	DIN EN 12068

## Ordering information and packaging

**MarineProtect™-Primer:** 10 kg bucket

**MarineProtect™-Tape:** Roll length: 10 m

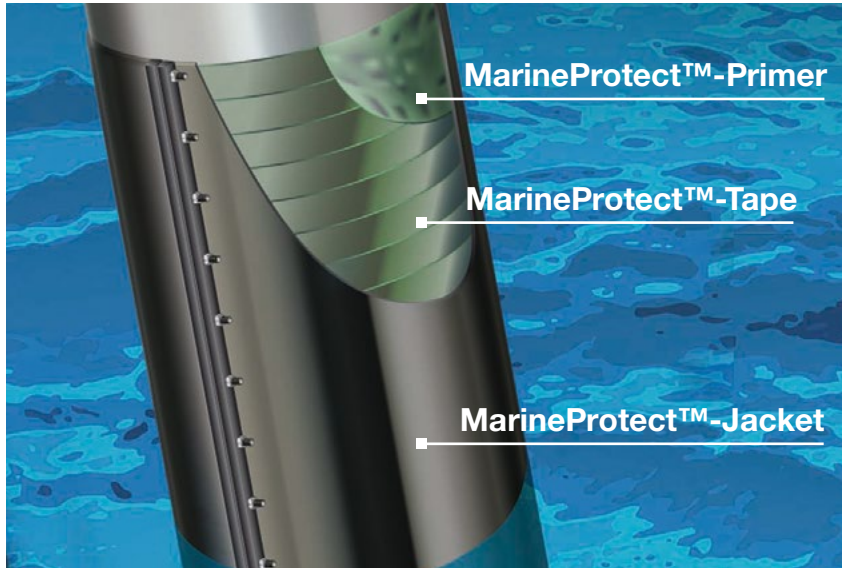
Width (mm)	Rolls per box (pcs)	Area (m <sup>2</sup> ) per box	Total tape length (running m) per box
50	12	6	120
100	6	6	60
200	4	8	40

Additional dimensions available on request.

**MarineProtect™-Jacket** incl. Smart® Band

**Dimensions:** 1.87 m x 2 mm

**Length:** on customer request



## Special Advantages:

- Well-proven long-life corrosion protection by Petrolatum tape – invented by DEKOTEC.
- Application under water possible.
- No drying time.
- Simple and fast application.
- Outstanding weathering protection.
- Environmentally safe.

# MarineProtect™-2000 FD

Corrosion and weathering prevention for piles made of metal, concrete or wood.

## Description

**MarineProtect™-2000 FD** is a protection system for corrosion and weathering protection of piles or pipes in splash zones. It can be used in very corrosive environment where conventional paints and coatings fail.

**MarineProtect™-2000 FD** is a versatile system that can easily be applied to piles made from metal, concrete, and wood.

It fits to several shapes e.g. cylindrical or hexagonal-shaped piles.

A special advantage of **MarineProtect™-2000 FD** is the applicability above and under water. Hence, **MarineProtect™-2000 FD** enables the revision of the corrosion protection of existing construction in a comparably simple manner.

It requires minimal surface preparation. A complete removal of remaining former paints is often not necessary.

**MarineProtect™-2000 FD** extends the life-span of piles and moles significantly and reduces the costs and efforts for revision and reconstruction.





## Material

**MarineProtect™-2000 FD** stops corrosion by using a petrolatum-based tape, well-known since more than 90 years for its outstanding corrosion protection properties. The water is displaced from the steel surface and a moisture resistance barrier is formed. The tough outer cover surrounds the petrolatum layer offering a very good resistance against mechanical and weathering influences.

**MarineProtect™-Primer** is based on a natural wax and enables a good wetting of the primer on the steel surface even under water. The spreading of the primer displaces the water and prepares the

surface for the application of the corrosion protection tape. Irregular shapes and depressions may be filled and sealed with **MarineProtect™-Primer**.

**MarineProtect™-Tape** is a corrosion protection tape based on petrolatum, comprehending the experiences since its invention in 1927. The tape contains a robust PP-non-woven and a PP-laminate film. **MarineProtect™-Tape** is wrapped helically around the pile prepared with **MarineProtect™-Primer**. By applying the proper wrapping tension the water is removed and a dense and reliable corrosion protection coating is build.

**MarineProtect™-Jacket** embraces the petrolatum tape as a mechanical protection layer. It consists of a tough and UV-resistant high density polyethylene (HDPE), which is resistant against outer loads and weather conditions. Hence, the corrosion protection system is long-lasting even under severe conditions of waves, strong winds and UV-light. **MarineProtect™-Jacket** is secured with stainless steel bolts through a simple closure system.

## Typical Product Properties

	Property	Unit	Typical Value	Test method
Primer	Density	g / cm <sup>3</sup>	ca. 0.93	ISO 2811
	Dropping Point	°C (°F)	> 100 (> 210)	DIN 51801
Tape	Thickness	mm	1.5	-
	Thickness laminate film	µm	100	-
	Saponification number	mg KOH / g	< 10	DIN EN 12068
Jacket	Thickness	mm	2	-
	Strain at break	%	> 700	ASTM D 638
	Tensile strength	N / mm <sup>2</sup>	21	ASTM D 638
System	Impact resistance	J	> 15	DIN EN 12068

## Ordering Information and Packaging

**MarineProtect™-Primer:** 10 kg bucket

**MarineProtect™-Tape:** Length of tape 10 m

Width (mm)	Rolls per box	Area (m <sup>2</sup> ) per box	Complete length of tape (m) per box
50	12	6	120
100	6	6	60
200	4	8	40

Additional dimensions are available upon request.

**MarineProtect™-Jacket**

**Dimensionen:** 1.87 m x 2 mm

**Length:** upon customer demand

# ADVANCED IN SEALING.



## History

### A story of success

Over the past century the mother company of DEKOTEC GmbH has built a reputation founded on experience, quality and reliability in corrosion prevention and innovative sealing technology. Just a few years after the company was founded in 1922 in Berlin, the company revolutionised corrosion prevention across the world

#### Redefining corrosion prevention

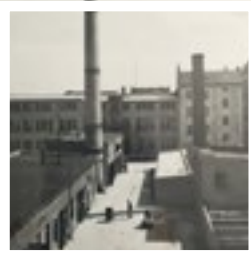
**14.07.1927:** "Schade's plastic protective tape" is patented and goes down in history as the fledgling company's first invention. The Petrolatum tape is the world's first passive corrosion prevention solution for pipes and pipelines and over the coming decades, the name of the product becomes a generic synonym for all types of protective pipe tape.

#### From the Spree to the Rhine

**1946:** After the destruction of the company's original premises during the Second World War, the company reforms in Leverkusen.

The proximity of the new site to BAYER AG and the Rhine river provides the inspiration for new inventions – and an efficient transport route.

1922



#### Rising in the midst of collapse

**14/11/1922:** The company is founded in Berlin under the name Chemieprodukte GmbH. Against the backdrop of a post-war 1920s Germany that is suffering famine, hyperinflation and unemployment, the company lays the foundations for its future "Made in Germany" story of success.

1927



#### A name for success

**1927:** The brand name is registered. The name comes from the Latin word "densus", which means "to seal".

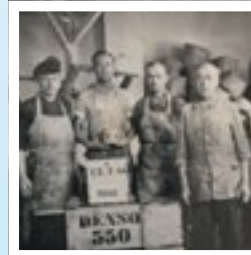
1929



#### Customer satisfaction as a catalyst for success

**1929:** The company wins Berlin's municipal gas authority, or Berliner Städtische Gaswerke AG (GASAG), as its first customer. Many national and increasing numbers of international municipal authorities and pipeline operators follow suit: Stadtwerke München (the Munich municipal authority), Ruhrgas AG Essen and the Blackstone Gas Company in the USA are all impressed by the new technology.

1946



1952



#### TOK®-Band: A flexible and stable channel solution

**1952:** TOK®-Band – a ready-made malleable tape solution for channel sealing – is invented. Up until this point, the only sealing methods available used hot casting or filler. However, these solutions produced a seal that was too rigid, leading to the seal breaking whenever the pipe moved in the ground.



with the Petrolatum tape, its very first invention. When the company premises were destroyed during the Second World War, the firm relocated its headquarters to a new site on the banks of the Rhine river. The company did not let this setback damage its inventive and entrepreneurial spirit, as testified by the countless

corrosion prevention and sealing technology innovations it rolled out over the following years. Today, it comprises a global group of companies that, in spite of its international reach, still strives to deliver sustainable custom solutions and provide personal service to its customers.

**BUTYLEN:**

**Preserving value with three-ply tape**

**1973:** The company invents the world's first co-extruded three-ply tape for welding connections on pipes and pipelines. A brand new cold-application technology is used to fuse the layers of the tape together, creating a hose-type permanent seal.

1973



**DEKOTEC®:**

**Rapid application – permanent seal**

**2006:** DEKOTEC® heat shrinkable sleeves featuring innovative hot-melt and mastic technology are launched. The product line is known for its outstanding quality and simple, fast application.

2006

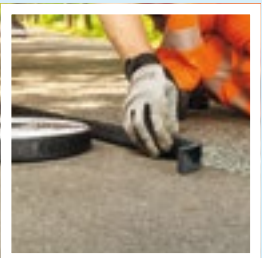


**TOK®-Band:**

**Improve the proven – Develop new ones**

**2017:** For the very first time no priming is necessary before applying TOK®-Band. The activatable TOK®-Band A can be processed within seconds.

2017



1977



**TOK®-Band: Taking quality to the roads**

**1977:** The world's first bitumen joint tape for joints and seams in asphalt road construction is invented. The TOK®-Band name quickly becomes a synonym for all bitumen joint tapes.

2014



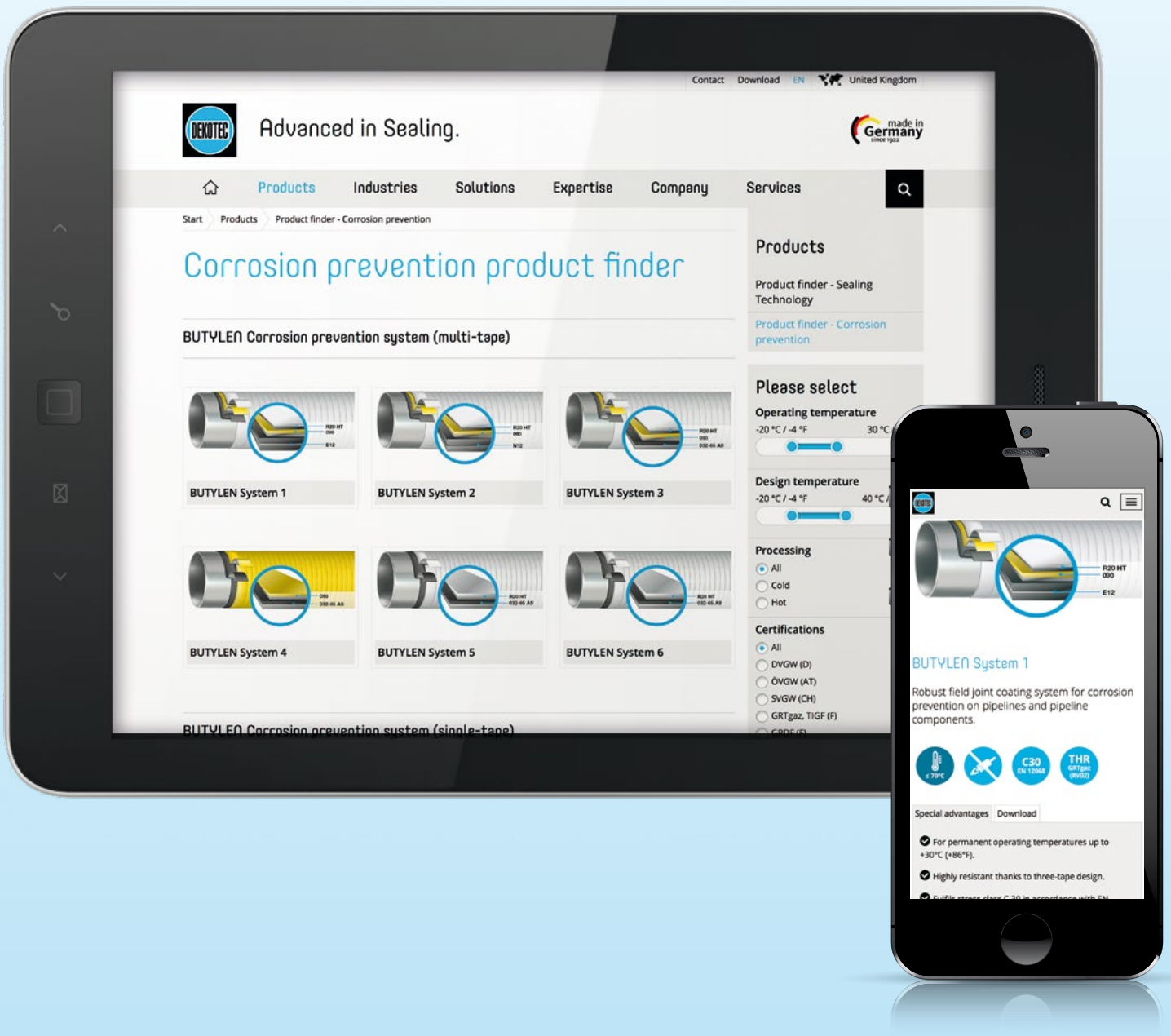
**TOK®-Sil Resist:**

**A new product for new partners**

**2014:** The world's first joint sealant for biogas plants and liquid manure, slurry and silage effluent plants provides an effective, permanent seal at the critical point – the intersection between horizontal and vertical joints. The invention of TOK®-Sil Resist is of particular interest to operators of biogas plants.

# DEKOTEC ONLINE

Please find further information about our products and the innovative product finder on our homepage [www.dekotec.de](http://www.dekotec.de)





# SEALING TECHNOLOGY

another part of our expertise



The overall brochure Sealing Technology can be downloaded under [www.dekotec.de](http://www.dekotec.de)



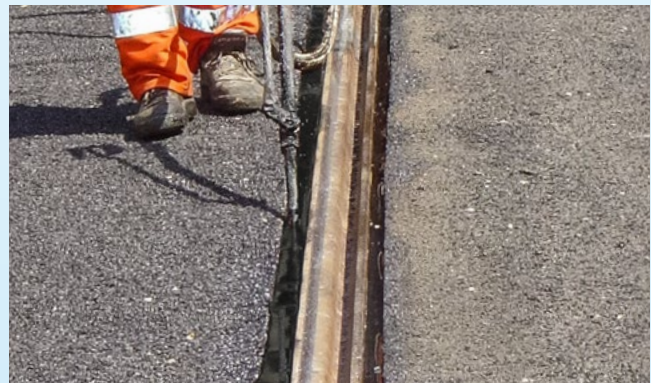
■ **TOK®**  
Bitumen based products



■ **TOKOMAT®**  
Bitumen joint tape extrusion



■ **LIQUITOL®**  
Two Component Cold Pouring Compounds



■ **REINAU®**  
Hot Pouring Compounds



■ **FERMADUR®**  
Compression seals



■ **PLASTOMAT®**  
Application system



# Corrosion Prevention and Sealing Technology



Personal service – whenever and wherever you need it



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Fax +49 214 2602-217  
www.dekotec.de  
info@dekotec.de

## From a family company to a company family

**From its roots as a one-family enterprise, the company has developed into an international group of companies, with branches in seven European countries and sales partners in more than 100 countries across the world.**

The group's expansion has been highly dynamic, with consistent revenue growth. The company offers high-quality sealing technology and corrosion prevention solutions for applications including road construction, railways, plants and pipelines. The company has led the key central European market for almost a century and is now working to intensify its expansion into the growth regions of Eastern Europe, Asia, South America and Africa.

The products are already used all over the world – from Australia to Chile, Canada to Russia and South Africa to Norway. There are many factors behind the success of the products, including their exceptional quality, the „Made in Germany“ quality guarantee and – last but not least – the company's personal contact and close relationships with its customers all over the world, via a team of around 200 employees across seven European countries.

### Tailor-made solutions for our customers

DEKOTEC has always been faithful to one clear concept: High product quality and a consistent commitment to service are at the heart of our business. Our quality and service values

are evident in everything we do – from our material selection processes, where only the very best makes its way into our products, to our outstanding production flows, our specialist staff and the reliable solutions we offer for our customers' applications. As well as providing individual, on-site advice, we believe that personal service and flexibility are the cornerstones of exceptional service in our quest to find the right solution for each customer. Sometimes, our customers even inspire us to develop brand new products.

## DEKOTEC GmbH

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