

CORROSION OF STEEL

PROTECTION
MATERIALS
& TECHNOLOGIES

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OUR OFFER – TABLE OF CONTENTS

CORROSION PROTECTION COATINGS

ANTICORWrap PE System.....	3
ANTICORWrap Bituminous System	3
Polyken PE System	3
APPLICATION OF ANTICORROSION COATINGS.....	4
ANTICOR Plast petrolatum-type system	6
Surface preparation technology for tape coating application	7
UV-resistant coatings – Alumino 374, aluminium laminate.....	9

HEAT SHRINK MATERIALS – ANTICORRAY®

ANTICORRay® WSS60 heat shrink system.....	10
ANTICORRay® MSS50H heat shrink system	10
ANTICORRay® REP insulation repair system	11

ANTICOR SYNTETIX CF & CC

ANTICOR Syntetix® Casing Filler technology	12
ANTICOR Casing Closure technology.....	13

POLYURETHANE SPRAY COATING – PUR

PROTEGOL® UR 32-55 coating – spray application.....	14
PROTEGOL® UR 32-60 coating – cartridge system	15

SEALING MATERIALS

ANTICOR Syntetix® Magnum compound	16
ANTICOR Syntetix® Magnum HT compound.....	16

TOOLS & ACCESSORIES

Bristle Blaster® bristle belt system	17
Spark flaw detectors.....	18
OWR hand wrapping machines	18
EUROSPACER distance plates	18

MARKING & WARNING TAPES

Warning tapes	19
Warning tapes with printing	19
Warning – locating tapes	19
Warning – locating tapes with printing.....	19
Warning tapes with perforation.....	19
Barrier warning tapes.....	19

CORROSION PROTECTION COATINGS

ANTICORWrap & Polyken Systems

PE tape coatings in B30, B50, C30 and C50 classes meet EN 12068 and are designed for anticorrosion coating of:

- steel pipes
- welded joints
- pipe fittings, etc.



PROPERTIES OF TAPES

Properties	Unit	ANTICORWrap 740-32	ANTICORWrap 750-20	ANTICORWrap 755-20	ANTICORWrap 762-60	POLYKEN 930-35	POLYKEN 942-30	POLYKEN 955-28
Total thickness	mm	0.80	0.50	0.54	1.60	0.89	0.76	0.71
PE film thickness	mm	0.31	0.20	0.30	0.10	0.17	0.17	0.36
Adhesive thickness	mm	0.49	0.30	0.24	1.50	0.72	0.59	0.35
Elongation	%	> 750	> 750	> 400	> 70	> 340	> 500	> 400
Roll width*	mm x m	50 x 15 100 x 15	50 x 30 100 x 30	50 x 30 100 x 30	50 x 10 100 x 10	51 x 15.25 102 x 15.25	50 x 15 100 x 30	50 x 15 100 x 30
Colour		●	● ●	● ●	●	●	●	●

*Other size on request.

COATING SYSTEMS

Coating thickness [mm]	Coating class	System type*	Primer	Filling mastic	Basic anticorrosion protection layer	Mechanical protection layer
2.16	B30	1T	ANTICORWrap Primer 727	Butylmastik	ANTICORWrap 755-20, 2x50%	
3.20	B30	1T	ANTICORWrap Primer 729	Butylmastik	ANTICORWrap 762-60, 1x50%	
2.67	B30	1T	POLYKEN 1027	Butylmastik	POLYKEN 930-35, 1x66%	
2.40	B50	1T	ANTICORWrap Primer 720	Butylmastik	ANTICORWrap 740-32, 1x66%	
6.40	C30	1T	ANTICORWrap Primer 729	Butylmastik	ANTICORWrap 762-60, 2x50%	
3.20	C50	1T	ANTICORWrap Primer 720	Butylmastik	ANTICORWrap 740-32, 2x50%	
2.60	C50	2T	ANTICORWrap Primer 720	Butylmastik	ANTICORWrap 740-32, 1x50%	ANTICORWrap 750-20, 1x50%
2.94	C50	2T	POLYKEN 1027	Butylmastik	POLYKEN 942-30, 1x50%	POLYKEN 955-28, 1x50%

*1T - a single-tape system ("monotape"), 2T - a double-tape system.
The coatings listed above meet the requirements of EN 12068.

Classification of coatings depending on the strength class according to EN 12068: A, B & C.

Class A – low mechanical strength (plastic insulations for application on fittings). **Class B** – medium mechanical strength (universal insulations intended for low and medium pressure gas pipelines). **Class C** – high mechanical strength (insulations of high resistance intended for high pressure transit gas pipelines).



CASING PIPES

- Filling the inter-pipe space with ANTICOR Syntetix® CF – pages 12-13
- ANTICOR Syntetix CF (Casing Filler) System – page 12
- ANTICOR CC (Casing Closure) System – page 13
- EUROSPACER spacers – page 18
- ANTICORRay MSS50H heat-shrinkable sleeve (45% shrinkage) – page 10

GROUND-AIR TRANSITIONS

- Aluminum laminate Aluminio 347 – page 9



- Aluminum laminate Aluminio 347 – page 9

GROUND-AIR TRANSITIONS

- ANTICOR Syntetix Magnum System – page 16

GROUND FLANGE CONNECTION

- Warning and location tapes – page 19

LOCATION AND MARKING OF PIPELINES

- OWR-2 Hand Wrapping Machines – p. 18
- Bristle Blaster® – p. 17
- MATCH – Flange Service Tools

TOOLS

- System ANTICOR Plast – A30-class, tape system – page 6
- PROTEGOL® spray coatings – page 14

FITTINGS, VALVES, FITTINGS, AND PIPES

APPLICATION OF ANTICORROSION COATING

MARINE AND COASTAL INSTALLATIONS

- RetroWrap STD2 System
- RetroWrap HD2 System

GROUND-AIR TRANSITIONS

- Aluminum laminate Aluminio 347 – page 9

TIGHT PASSAGES

- ANTICOR Seal 511

GROUND FLANGE CONNECTION

- ANTICOR Syntetix Magnum System – page 16

WELD INSULATION

- ANTICORRay® WSS60 heat shrink sleeve (25% shrinkage) – page 10

FACTORY INSULATION REPAIR

- ANTICORRay® REP – repair patch – page 11
- ANTICORRay® Melt Stick – repair stick – page 11
- ANTICORRay® Mastic Filler – gap filler – page 11

PIPE AND FITTING INSULATION

- ANTICORWrap – PE tape systems in classes: B30, B50, and C50 – page 3
- ANTICORWrap – bituminous tape systems in classes: B30 and C30 – page 3
- POLYKEN – PE tape systems in classes: B30 and C50 – page 3

ANTICOR Plast System - Corrosion protection - A30 class coating meets EN 12068 standard.

Application:

- used for fittings for pipelines, sockets, and flange connections
- underground metal installations (etc. connections for underground earth electrodes)

System components

- ANTICOR Plast 745 corrosion protection mastic
- ANTICOR Plast 701-40 corrosion protection plastic tape.
- ANTICOR Plast 732-08 mechanical and corrosion protection tape

Features & benefits:

- contains stress corrosion cracking and surface corrosion inhibitors
- easy and fast to apply, even in low temperatures
- do not change its properties throughout the period of use (does not harden)
- compatible with all types of insulation coatings
- high dielectric strength
- moisture-resistant, adapts perfectly to various surface shapes
- ensures minimal vapor permeability
- does not contain ingredients hazardous to health and the environment (Certified by the National Institute of Hygiene)

Insulating flange connections and steel pipes

The technology is based on anti-corrosive protection of flanges, fittings, connections and steel pipes with the ANTICOR Plast system in class A30.

Surface preparation

Remove dust and soil from the surface to be protected and degrease it with a non-grease solvent (e.g. gasoline). Steel surfaces should be cleaned with a hand brush to the St2 degree of cleanliness in accordance with EN ISO 8501.

Application of the ANTICOR Plast coating

ANTICOR Plast 701-40 tape should be applied with the thick layer of the plastic compound to the protected surface (Fig. 1).

Securing the flange connection

1. Apply ANTICOR Plast 745 corrosion protection mastic on the surface of the flange connection, covering with the appropriate additional material of the heads and nuts of the bolts so that no air pockets are created after the tape is wound up. Put the mass also into the space between the flanges. In the case of insulation of tees, smooth the angular transitions of the pipes and weld seams.
2. Wrap the ANTICOR Plast 701-40 tape with a slight pretension, apply the plastic mass (the thick layer) of the tape for the protected surface twice with an overlap of 50%, going approx. 50 mm over the existing insulation (Fig. 2).
3. Smooth the surface of the applied coating with the palm of your hand by applying pressure to adjust the coating to any unevenness of the secured element.
4. Apply the ANTICOR Plast 732-08 mechanical protection tape with a 50% overlap under tension to the entire surface of the previously created coating of ANTICOR Plast 701-40 tape. Tension of this tape should ensure that it adheres to the previously applied coating, without wrinkles and air pockets.

Protection of the steel pipe

1. Wrap the ANTICOR Plast 701-40 tape with a slight pretension, apply the plastic mass (thick layer) of the tape for the protected surface twice with an overlap of 50%, going approx. 50 mm over the existing insulation with the first wrap and approx. 100 mm with another.
2. Smooth the surface of the applied coating with the palm of your hand by applying pressure to adjust the coating to any unevenness of the secured element.
3. Apply the ANTICOR Plast 732-08 mechanical protection tape with a 50% overlap under tension to the entire surface of the previously created coating of ANTICOR Plast 701-40 tape. Tension of this tape should ensure that it adheres to the previously applied coating, without wrinkling the air pockets.

Acceptance of the ANTICOR Plast coating

Check the tightness of the coating with a spark flaw detector. Test voltage: 5 kV/mm of coating thickness, but not more than 15 kV - according to EN 12068.

Strictly follow the rules for spark flow detector operation

The tape must be applied with the thick layer to the surface. Wrap the tape putting the plastic mass of the tape for the protected surface

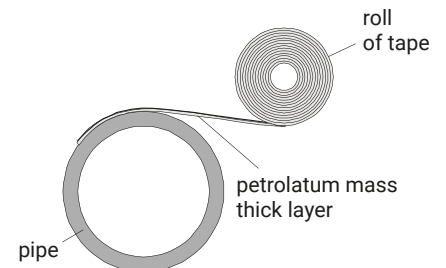


Fig. 1

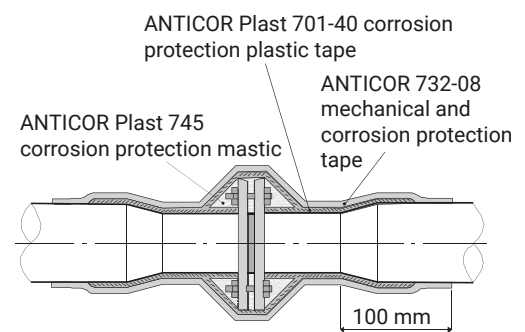


Fig. 2



The ANTICOR Plast system is DVGW certified and PZH approved.

NOTE: Before use, condition the insulating materials at a temperature of 10 to 25°C.

CORROSION PROTECTION COATINGS

Technology of surface preparation for the application of a tape coating

Preparation of the steel surface

Remove rust, welding contaminations, dust, oil, grease, moisture, and other contaminants from the pipe surface. Prepare the surface so as to achieve the Sa2½ standard of cleanliness according to ISO 8501. Remove remainders of abrasive materials and dust caused by abrasive blasting. Use a fat-free solvent to degrease the surface (isopropyl alcohol, acetone, denatured alcohol, gasoline, etc.). Note: these are flammable materials. To remove moisture, the surface may be slightly heated with a burner or blowpipe flame but the temperature of the pipe before the application of a primer may not exceed 40°C. In exceptional circumstances, surface may be prepared to the St 3 standard with the use of special powered rotating brushes with hard wire bristles arranged in strands.

Preparation of the surface of an existing factory-applied coating

Clean the existing protective coating, roughen the surface by gently applying a stream of abrasive material or with the use of abrasive cloth (grit 40) and degrease at a length of ca. 200 mm beyond its edges. Remove any remainders of abrasive materials. The edges of adjacent insulation should be prepared to 15° bevels or smooth the edges using BUTYLMASTIK after primer application.

Application of a primer

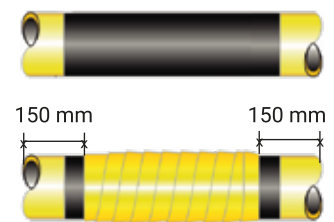
Apply a primer on the surface, including the cleaned areas of former insulation. The primer should be carefully mixed before application. The temperature of the surface should be by at least 3°C higher than the dew point. Leave the primer layer until it reaches the dust dryness condition (the layer is viscous but does not soil fingers when touched). The time needed depends on the temperature and ambient humidity values. Always use primers and tapes supplied by the same vendor.



The primer must not be diluted. The coating should be applied as soon as possible after removing dust from the primer. The applied coating should not be exposed to prolonged sunlight.

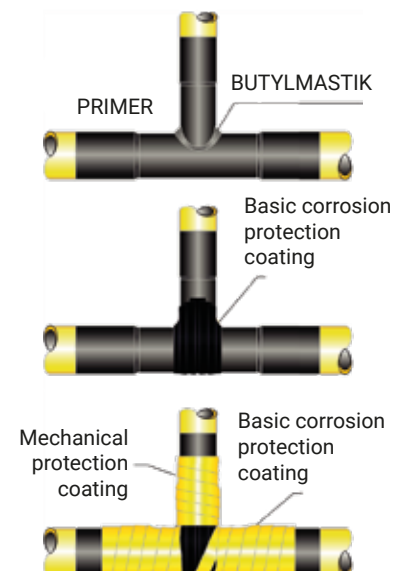
Insulating a pipeline or steel pipe

1. Prepare the surface for the application of the tape coating in accordance with the technology.
2. Apply a layer of basic anti-corrosion protection by winding the tape in a spiral, manually or with a hand wrapping machine, according to the requirements of a given insulation class (table: Coating systems [page 3](#)), with the overlap approx. 100 mm over existing insulation. The minimum overlap should not be less than 50%. In case of pipe insulation, leave the ends free from insulation for a length of approx. 200 mm. Apply the tape under tension preliminary. With the correct tension, the belt width is reduced by approximately 1 to 2%. Control the tape tension. Greater force is required to tension the tape at low temperatures.
3. Create a mechanical protection layer, extending approx. 150 mm over the existing pipe insulation. Overlaps should not overlap with the main protection layer. In case of insulation pipes, leave the ends free 150 mm long insulation.
4. Check the tightness of the coating with a spark flaw detector (in accordance with the instructions of the compact flaw detector). Test voltage: 5 kV/mm of coating thickness, but not more than 15 kV - according to EN 12068.



Insulating tees and angular connections

1. Prepare the surface for the application of the tape coating in accordance with the technology.
2. Soften the angular connection of the pipe and the weld face with BUTYLMASTIK.
3. Make subsidiary insulation in the area of the angular connection of the pipes with strips of tape with slight tension.
4. Apply a layer of basic anti-corrosion protection by winding the tape in a spiral, manually or with a hand wrapping machine, according to the requirements of a given insulation class (table: Coating systems [page 3](#)), with the overlap approx. 100 mm over existing insulation. The minimum overlap should not be less than 50%. Apply the tape under tension preliminary. With the correct tension, the belt width is reduced by approximately 1 to 2%. Control the tape tension. Greater force is required to tension the tape at low temperatures.
5. Create a mechanical protection layer, extending approx. 150 mm over the existing pipe insulation. Overlaps should not overlap with the main protection layer. In case of insulation pipes, leave the ends free 150 mm long insulation.
6. Check the tightness of the coating with a spark flaw detector (in accordance with the instructions of the compact flaw detector). Test voltage: 5 kV/mm of coating thickness, but not more than 15 kV – according to EN 12068.



Before use, condition the insulating materials at a temperature of 10 to 25°C.

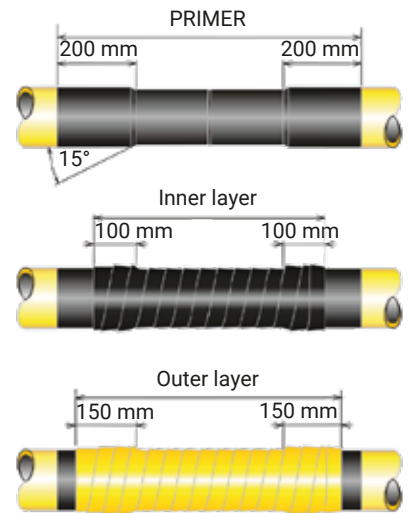


CORROSION PROTECTION COATINGS

Insulation the welded joint

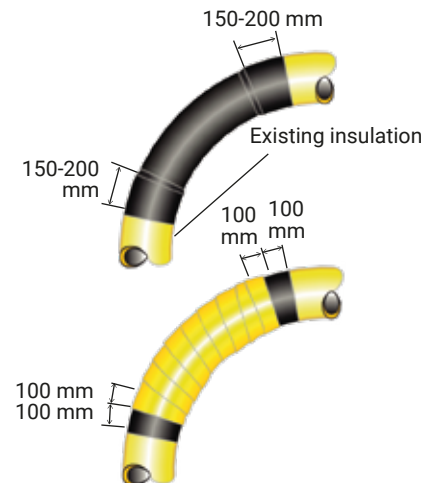
1. Prepare the surface for the application of the tape coating in accordance with the technology (page 7).
2. If the face of the joint is too convex, smooth the transition between the joint and the pipe with BUTYLMASTIK (after primer application).
3. Apply a layer of basic anti-corrosion protection by winding the tape in a spiral, manually or with a hand wrapping machine, according to the requirements of a given insulation class (table: Coating systems page 3), with the overlap approx. 100 mm over existing insulation. The minimum overlap should not be less than 50%. Apply the tape under tension preliminary. With the correct tension, the belt width is reduced by approximately 1 to 2%. Control the tape tension. Greater force is required to tension the tape at low temperatures.
4. Create a mechanical protection layer, extending approx. 150 mm over the existing pipe insulation. Overlaps should not overlap with the main protection layer.
5. Check the tightness of the coating with a spark flaw detector (in accordance with the instructions of the compact flaw detector). Test voltage: 5 kV/mm of coating thickness, but not more than 15 kV – according to EN 12068.

Roughen the insulation and chamfer the edges



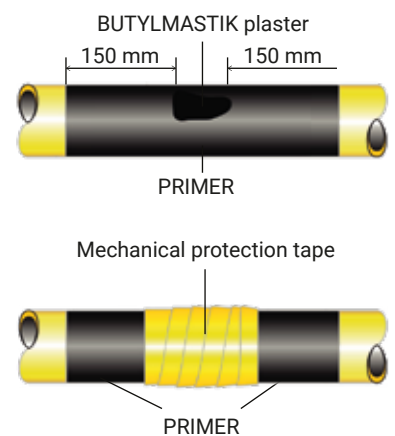
Insulation of bends and elbows

1. Prepare the surface for the application of the tape coating in accordance with the technology (page 7).
2. If the face of the joint is too convex, smooth the transition between the joint and the pipe with BUTYLMASTIK (after primer application).
3. Apply a layer of basic anti-corrosion protection by winding the tape in a spiral, manually or with a hand wrapping machine, according to the requirements of a given insulation class (table: Coating systems page 3), with the overlap approx. 100 mm over existing insulation. The minimum overlap should not be less than 50%. Apply the tape under tension preliminary. With the correct tension, the belt width is reduced by approximately 1 to 2%. Control the tape tension. Greater force is required to tension the tape at low temperatures.
4. Create a mechanical protection layer, extending approx. 150 mm over the existing pipe insulation. Overlaps should not overlap with the main protection layer.
5. Check the tightness of the coating with a spark flaw detector (in accordance with the instructions of the compact flaw detector). Test voltage: 5 kV/mm of coating thickness, but not more than 15 kV - according to EN 12068.



Repair of a damaged coating

1. Prepare the surface for the application of the tape coating in accordance with the technology (page 7).
2. Make a repair plaster/mat using BUTYLMASTIK of the size necessary to cover the damage area plus approx. 50 mm in each direction from the edges of the damage, keeping an allowance of up to 2 mm above the coating. The repair mat should be 2–3 mm thick. The plaster should be thicker than the damaged insulation. Apply the mat to the damaged area.
3. Apply a layer of basic anti-corrosion protection by winding the tape in a spiral, manually or with a hand wrapping machine, according to the requirements of a given insulation class (table: Coating systems page 3), with the overlap approx. 100 mm over existing insulation. The minimum overlap should not be less than 50%. Apply the tape under tension preliminary. With the correct tension, the belt width is reduced by approximately 1 to 2%. Control the tape tension. Greater force is required to tension the tape at low temperatures.
4. Check the tightness of the coating with a spark flaw detector (in accordance with the instructions of the compact flaw detector). Test voltage: 5 kV/mm of coating thickness, but not more than 15 kV – according to EN 12068.



Before use, condition the insulating materials at a temperature of 10 to 25°C.



CORROSION PROTECTION COATINGS

UV-resistant coatings – Aluminio 374 aluminum laminate

Application:

- as a protective coating for anti-corrosion coatings on steel pipelines
- as a protective sealing coating in heat and cold insulation used in external and internal air conditioning, ventilation, heating, refrigeration, and other installations
- an alternative to steel and aluminum sheet shields

Features & benefits:

- very high resistance to weathering, excellent UV, and ozone resistance
- high resistance to mechanical damage
- good mechanical resistance to punctures and tears
- ensures 100% vapor tightness
- lightweight and durable coating, quick and easy installation

Protective coating completion process

1. Complete corrosion protection coating according to the process (see 6-7)
2. Check the tightness of the completed coating. Test voltage of the spark flaw detector should be 5 kV/mm of coating thickness
3. Apply a protective coating made from aluminium laminate on the prepared anticorrosion coating

Use a laminate 600 mm wide to protect straight sections of a pipeline. Apply the laminate using “cigar” method with lateral and longitudinal overlaps 75 mm wide (Fig. 1).

Use a tape 50 or 100 mm wide to protect bends and elbows, apply the tape spirally with a 50% overlap.



Fig. 1
Insulation of straight pipe sections

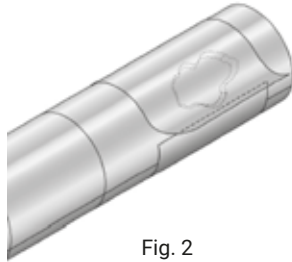


Fig. 2
Coating repair

Coating repairs

If any damage is detected, ensure that the surface is clean and apply a sheet of coating onto the damaged surface with an overlap of at least 75 mm beyond the damaged area (Fig. 2).

PROPERTIES OF ALUMINIUM LAMINATE COATING

Properties	Unit	Value
total thickness	mm	0.145
operating temperature	°C	-35 ÷ 120
tensile strength	N/cm	120
adhesion to steel	N/cm	8,0
elongation	%	25

The aluminum laminate coating should be applied to a dry, clean, degreased surface, and free from other contaminants.

Use tension and pressure during application.

We recommend using a squeegee to remove air pockets.



READ MORE

HEAT SHRINK MATERIALS – ANTICORRAY®

System ANTICORRay® WSS60

Application:

- corrosion protection for buried and above-ground steel pipelines

PROPERTIES OF SYSTEM ANTICORRAY®

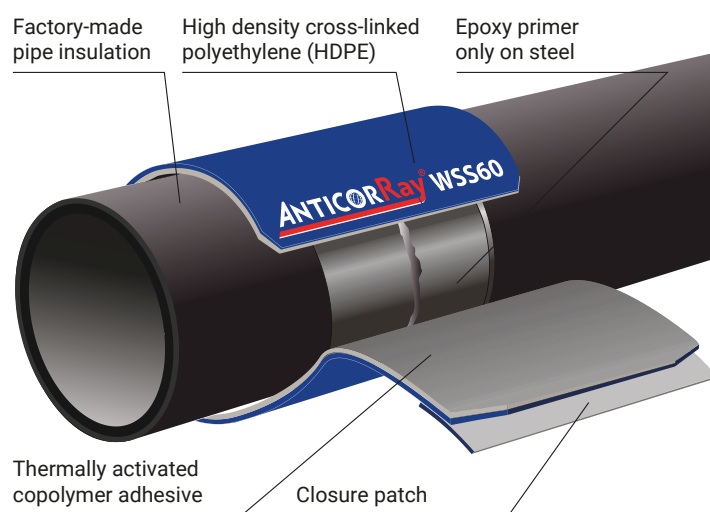
Properties	WSS60		MSS50H	
	Results			
Shrinkability	25%		45%	
Total thickness	min. 2.50 mm		min. 1.85 mm	
HDPE thickness	min. 1.10 mm (HDPE)		min. 0.85 mm (PE)	
Adhesive layer thickness	min. 1.40 mm		min. 1.00	
Maximum continuous working temperature*	60°C		50°C	
Pipe pre-heating temperature	70°C		60°C	
Relative elongation*	550%		850%	
Impact resistance*	> 15 J		> 16 J	
Cathodic disbondment*	23°C	5mm	50°C	10mm
	60°C	12 mm		
Hardness, Shore D**	≥ 45		≥ 50	
Water absorption	00.5%		00.8%	

*standard - EN 12068

**standard - ASTM D2240/DIN 53505/ISO868

Features & benefits:

- resistant to shear forces caused by soil and thermal changes
- high adhesion to steel
- hard and very durable, resistant to mechanical damage (e.g. during ditch back filling)
- applied onto wet epoxide; therefore, no extra heating and hardening is required
- creates the three-layer factory-made insulation
- very low vapor permeability
- high dielectric strength
- compatibility with PE, PP, FB coatings



System ANTICORRay® MSS50H

Application:

- for anti-corrosion protection with **increased shrinkage** for flange and socket connections installed underground and above ground
- for closing the ends of protective pipes



Features & Benefits:

- very high adhesion to the substrate/primer and steel
- high resistance to mechanical damage (impact, indentation, e.g., during pipeline backfilling) and shear forces in soil
- durable and burn-resistant PE carrier
- minimal moisture and oxygen absorption
- very good dielectric properties
- compatible with factory coatings on PE, PP, FBE, PU, bituminous, and ductile steel pipes



The ANTICORRay® WSS60 sleeve is applied over the wet epoxy.

READ MORE



HEAT SHRINK MATERIALS – ANTICORRAY®

ANTICORRAY® REP Insulation Repair System

Application:

- for repairing defects and damage to factory-made 3LPE and 3LPP insulation on C50-class steel pipelines

PROPERTIES OF SYSTEM ANTICORRAY® REP

Properties	Standard	Results
Total thickness	—	1.25 mm
Backing thickness	—	0.80 mm
Adhesive thickness	—	0.45 mm
Tensile strength	—	28 N/mm
Elongation	EN 12068	600%
Lap shear to factory coating	EN 12068	23°C 1,0 N/mm 50°C 0,27 N/mm
Adhesive to factory coating	EN 12068	23°C 10,0 N/mm 50°C 1,5 N/mm
Impact resistance	EN 12068	> 16 J
Dent resistance, 50°C	EN 12068	1.47 mm
Cathode detachment (30 dni, 50°C)	EN 12068	10.80 mm



Damaged insulation



Reconstruction of damages by ANTICORRAY® REP

The ANTICORRAY REP® system has been tested for compliance with the EN 12068 standard and is DVGW certified.

Detailed coating repair technology for specific damage types is presented in the ANTICORRAY® REP materials repair technology for 3LPE and 3LPP insulation damage in accordance with the EN-ISO 21809 standard.

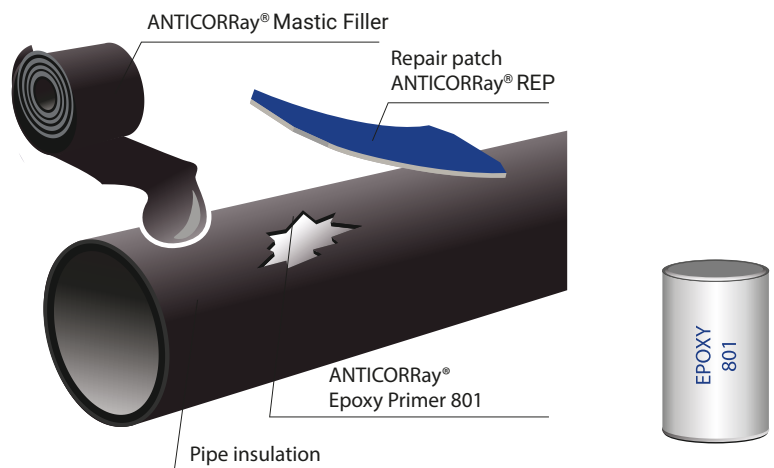


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Features & benefits:

- using the repair system, with the appropriate component combinations, you can fully rebuild the three-layer factory insulation
- ANTICORRAY® Epoxy Primer 801 combines with ANTICORRAY® Mastic Filler and ANTICORRAY® REP repair patch, creating an anti-corrosion coating with high mechanical strength
- The closing repair patch is made of cross-linked HDPE coated with a thermoactive adhesive. It is characterized by high adhesion to roughened PE and PP, resistance to shear forces in the ground, and mechanical damage.



Application:

The repair system ANTICORRAY® REP is used in a wide range of pipe diameters with coated PE and PP (continuous use temperature to 50°C).

Depending on the type of damage to the anti-corrosion coating, the following system variants should be used:

- To repair deep damage to the surface of a pipe (metal) less than 10 cm²:
 - ANTICORRAY® Epoxy Primer 801
 - ANTICORRAY® Mastic Filler
 - ANTICORRAY® REP Closure Patch
- To repair damage to the surface of a pipe (metal) higher than 10 cm²:
 - ANTICORRAY® WSS60 Heat Shrink Sleeve
- To repair surface damage, the so-called "scratch" - 3LPE insulation, with an area of less than 10 cm²:
 - ANTICORRAY® Melt Stick
- To repair damage to the deep non-penetrating surface of a pipe (metal) less than 10 cm²: ANTICORRAY® Epoxy Primer 801.
 - ANTICORRAY® Mastic Filler
 - ANTICORRAY® REP Closure Patch
- To repair damage to the deep non-penetrating surface of a pipe (metal) higher than 10 cm²:
 - ANTICORRAY® WSS60 Heat Shrink Sleeve

ANTICOR SYNTETIX CF & CC

ANTICOR Syntetix® CF (CASING FILLER) – technology for corrosion protection of line pipes installed in protective pipes

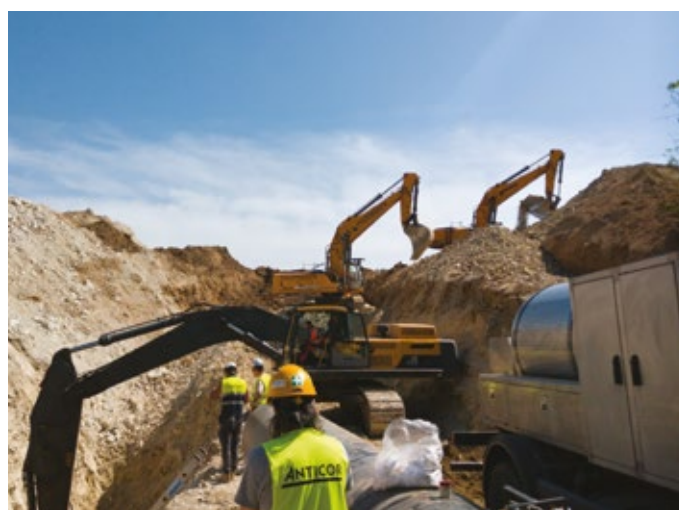
ANTICOR Syntetix® CF is a material with anti-corrosion properties. It protects against chemical and electrochemical corrosion. It contains stress corrosion cracking inhibitors (SCC) and antioxidants.

Features & benefits:

- the most effective and cost-efficient method for repairing an electrolytic short circuit in a protective pipe
- completely fills the space between pipes, eliminating trapped water, oxygen, and moisture
- excellent adhesion to steel, concrete, and plastic surfaces (including PE, PP, PUR, epoxy, and other coatings)
- provides outstanding protection against stray currents
- contains performance-enhancing additives such as corrosion inhibitors and antioxidants
- protects against internal corrosion within the protective pipe
- creates an effective barrier against the penetration of corrosive agents
- reduces costs associated with cathodic protection of pipelines
- ensures chemical stability during long-term operation
- free from substances hazardous to health and the environment

Application:

- By tightly filling the space between the pipes, ANTICOR Syntetix® CF eliminates the presence of water and oxygen once injected



PROPERTIES OF ANTICOR SYNTETIX® CF*

Properties	Unit	Value
Operating temperature	°C	-15 ÷ 40
Application temperature	°C	+50 ÷ +55
Density	kg/dm ³	0.82 ÷ 0.90
Water absorption	% _{mas}	≤ 0.1
Puncture resistance at a voltage of ≥ 10 kV/mm thickness of the tested mass	—	no breakthrough
Adhesion to steel and plastics	—	cohesive fracture (tearing in the layer 5 mm/min)
Flash point	°C	> 200
Odporność na starzenie	—	deviations of up to ±10% from the base density, water absorption, and puncture resistance values
Electrical contact resistance	Ωm	≥ 1 x 10 ⁸

*Based on testing at Oil and Gas Institute (INiG).

ANTICOR Syntetix Casing Filler technology holds both a **Technical Recommendation** and a **National Technical Assessment**, confirming its effectiveness as an anti-corrosion filling compound for the inter-pipe space in gas pipelines. It is suitable for use in high-, increased-, and medium-pressure ranges, up to the final pressure reduction station.



ANTICOR SYNTETIX CF & CC

ANTICOR CC (CASING CLOSURE) – technology for sealing the ends of protective pipes

Application:

- sealing the spaces at the ends of protective pipes (protective pipe – product pipe)

System components:

- ANTICOR Syntetix® Mastic - synthetic insulating and anti-corrosion material
- 2K PUR foam and XPS (Styrodur) extruded polystyrene board
- heat shrink sleeve (e.g., ANTICORRay® MSS50H)
- ANTICOR PE anti-corrosion tape

Features & benefits:

- synthetic compound with outstanding anti-corrosion performance
- excellent adhesion to steel and plastic surfaces
- simple and convenient application
- maintains its properties over time without hardening
- compatible with all types of anti-corrosion coatings for steel pipelines
- long-term stability, even after many years of use
- completely fills the inter-pipe space, preventing water and oxygen ingress into the protective casing
- free from substances hazardous to health and the environment

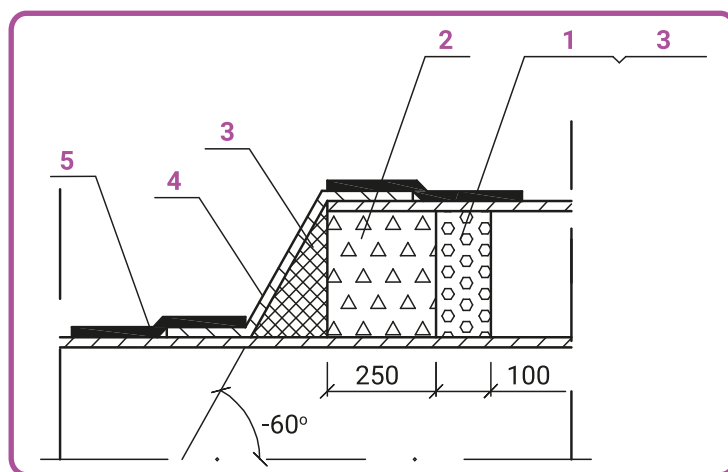
Technology of casing sealing ends closure

1. Make a ring around the carrier pipe with polyurethane foam spray and XPS plate inside space between the pipes
2. Put ANTICOR Syntetix® Mastic to fill tightly the space between pipes
3. Make the finishing ring with foam 2K PUR
4. After making (1, 2, 3) prepare the surface of the existing insulation (clean, degrease and tarnish) install the new heat shrinkable sleeve over the end of the casing pipe
5. In order to obtain additional tightness, the heat shrink sleeve should be secured with corrosion protection tapes

WŁAŚCIWOŚCI ANTICOR SYNTETIX® MASTIC *

Properties	Unit	Value
operating temperature	°C	-15 ÷ 35
density	kg/dm ³	1.35 ÷ 1.45
electrical contact resistance	Ωm	> 3.9 x 10 ⁸
cathodic disbondment in electrolytic media	mm	0
water absorption	% _{mas}	< 0.0665
salt test spray	—	positive
Adhesion to steel and plastics	—	Cohesive fracture (tearing in the layer)

Based on testing at Oil and Gas Institute (INiG).



**Schematic diagram of a sealing the casing pipe
ANTICOR CC (Casing Closure)**

1 „XPS” insulation board, 100 mm thick, 2 Viscoelastic putty ANTICOR Syntetix® Mastic, 3 2-component PUR foam, 4 Heat shrink sleeve, 5 Corrosion protection tape



Before application at low temperatures, condition the material at a temperature above 15°C and soften it by kneading.

Apply manually to a surface that is clean, dry, and free from dirt, dust, rust, and moisture.

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POLYURETHANE SPRAY COATING – PUR

PROTEGOL® UR-Coating 32-55 spray coating

ANTICOR has a many years of experience and skilled staff necessary to apply double-component polyurethane coatings. The coatings are applied using the airless spraying method. The coatings are made in accordance with the requirements of the following standards: EN 10290, DIN 30671 and DIN 30677. We provide spray polyurethane coatings at our own premises, at the customer's premises or directly on the construction site.

Application:

- anti-corrosion protection for external and internal surfaces of:
 - steel pipelines
 - steel or cast-iron sewage pipes
 - fittings
 - valves
 - tanks
- additional protective coating for pipes used in HDD (Horizontal Directional Drilling)

Features & benefits:

- excellent mechanical resistance (abrasion, impact, indentation)
- high chemical resistance
- compatible with a wide range of coating systems
- suitable for both factory and field application
- single-coat application
- solvent-free
- short curing time
- approved for use on equipment in continuous contact with drinking water
- compatible with cathodic protection; exhibits a small cathodic disbondment radius

PROPERTIES OF PROTEGOL® UR-COATING 32-55

Properties		Unit	Value
Density	component A	g/dm ³	1.7
	component B	g/dm ³	1.2
Mixing proportions of components A:B	by weight		82 : 18
	by volume		3.5 : 1
Max. thickness of a single layer on a vertical surface		mm	1.0
Application temperature	of the surface	°C	> 10
	of the mixture	°C	50 ÷ 80
Curing time at 20°C (condition)	dust dryness	min	10
	storage	h	8
	full strength	h	120
Continuous operation temperature	normal operation	°C	-30 ÷ 80
	short-time	°C	110
Hardness, Shore D			74 ± 3

Steel surfaces to be coated must be dry, clean, dust-free, and free from any release agents, including oil, grease, and remnants of old paint. To achieve the required surface condition, appropriate preparation methods should be applied – primarily abrasive blasting (e.g., sandblasting) to a cleanliness level of at least Sa 2.5, in accordance with DIN EN ISO 12944-4.

PUR spray coatings comply with the following standards: EN 10290, DIN 30671, and DIN 30677.

Thanks to their excellent mechanical properties – particularly resistance to indentation and abrasion – they are used as an additional protective coating for pipes intended for HDD (Horizontal Directional Drilling) applications.



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POLYURETHANE SPRAY COATING – PUR

PROTEGOL® UR 32-60 coatings – cartridge system

Application:

- as an outer protective coating: steel pipelines, elbows, fittings, welded joints, tanks, and containers

Available packaging

The product is supplied in a dual-cartridge system containing Component A and Component B (2 × 750 ml cartridges) equipped with a 180° static mixer.

Theoretical Consumption

Approx. 1.20 kg/m² for a 1500 µm DFT (Dry Film Thickness) layer, assuming no excessive material loss.

Set includes: Pneumatic spray gun, Shoulder strap, Cartridge fastening clips, Piston plate, Atomizing air hose, Connector plug for atomizing air hose, Operating manual.

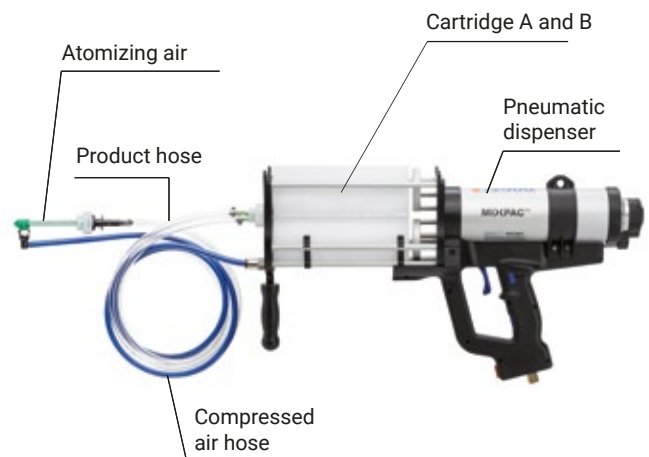
PROPERTIES OF PROTEGOL® UR-COATING 32-60

Properties		Unit	Value
Density	component A	g/dm ³	1.2
	component B	g/dm ³	1.2
Mixing proportions of components A:B	by weight		50 : 50
	by volume		1.0 : 1.0
Service temperature		°C	-20 ÷ 80
Hardness, Shore D			75
Recommended dry film thickness (DFT)		µm	1.500
Temperature min substrate	(min. +3°C above dew point)	°C	5
Temperature application min / max	component A	°C	25/45
	component B	°C	25/45
Max. relativ air humidity		%	80
Potlife at 35°C		s	25

Features & benefits:

- excellent corrosion protection
- very short reaction time and fast curing
- fast mechanical resistance
- solvent-free
- easy application
- Applied with an air gun (no rinsing with solvent necessary)

Overview of dispenser



PUR spray coatings meet the following standards: EN 10290, DIN 30671, and DIN 30677.

Due to their excellent mechanical properties (resistance to indentation and abrasion), polyurethane coatings are used as an additional coating for pipes used in HDD directional drilling.



SEALING MATERIALS

ANTICOR Syntetix Magnum i Magnum HT

Synthetic, permanently flexible materials with sealing and anti-corrosion properties.

Application:

- to seal free spaces in bolted flange connections



Features & benefits:

- synthetic product with anti-corrosion properties (contains stress corrosion cracking inhibitors - SCC)
- high adhesion to steel, plastics, and painted surfaces
- tightly fills insulated spaces, blocking the access of water, oxygen, and moisture to the pipe interior
- compatible to use with all types of anti-corrosion coatings on steel pipelines
- stable properties over many years of use
- easy to apply
- material can be reused
- free from substances hazardous to health and the environment
- applied using a 310 ml cartridge gun

Technology of sealing flange connections

1. Degrease and clean the flange surfaces using a suitable solvent and a cloth
2. Protect the side surfaces of the flange with masking tape 621
3. After securing the flange, apply ANTICOR Syntetix® Magnum into the space between the flange faces using the applicator
4. Remove surplus of the material from the flange surfaces
5. Remove the masking tape, then apply aluminum laminate - Aluminio 374 to provide mechanical and UV protection



Application with a dispensing gun, facilitating accurate delivery of the material into the spaces between flange gaps.

NOTE: At low ambient temperatures, the material must be conditioned right before application as follows:

- ANTICOR Syntetix® Magnum above 15°C
- ANTICOR Syntetix® Magnum HT above 35°C

For above-ground insulation of flange connections, apply aluminum laminate – Aluminio 374 – with a slight stretch to provide mechanical protection and UV protection. Properly implemented technology guarantees anti-corrosion protection of the surface inside the flange joints.

PROPERTIES OF SEALING COMPOUNDS

Properties	Unit	ANTICOR Syntetix® Magnum	ANTICOR Syntetix® Magnum HT
Operating temperature	°C	-25 ÷ 45	-25 ÷ 85
Application temperature	°C	10 ÷ 35	25 ÷ 55
Density	kg/dm ³	1.35 ÷ 1.45	1.35 ÷ 1.45
Resistivity	Ωm	> 3.9 x 10 ⁸	> 4.2 x 10 ⁸
Water absorption	% _{mas}	< 0.0663	< 0.0642
Brine test		positive	positive
Resistance of the material to cathodic disbondment in an electrolytic environment	mm	0	0
Adhesion to steel and plastics		cohesive to substrate (tearing test)	cohesive to substrate (tearing test)

TOOLS & ACCESSORIES

„Green“ surface preparation systems - Bristle Blaster®

Provides surface preparation comparable to abrasive blasting, achieving the required roughness (surface development) and cleanliness level of Sa 2½ ÷ Sa 3 (EN ISO 8501).



Application:

- used for metal surface treatment
- welding joints
- stainless steel
- industrial
- wind/renewable energy
- automotive
- marine
- bridges, rail, ports & highways

Features & benefits:

- restores the surface to near-white/white-metal visual standard (Sa 2½ ÷ Sa 3)
- generates compressive residual stress along the treated surface, improving crack-growth resistance, fatigue life, and corrosion resistance
- provides surface roughness in the range of 40–120 µm
- surfaces free of thermal damage/heat marking
- eco-friendly - "green" surface treatment, does not use/produce hazardous materials
- simple/Economical - eliminate the need for complex and costly abrasive blast equipment
- designed for local repairs and processing larger surfaces (when other technologies are not recommended)

How does Bristle Blaster® work?

The working elements (spring wires with hardened ends) rotate dynamically to the power tool. Before contact with the surface those wires are mechanically tighten by the accelerator bar, as a result they dynamically hit the corroded surface and immediately retract, causing micro-cavities as in grit blasting. The bristle tips are designed to strike the corroded surface with kinetic energy that is equivalent to grit blast media, thereby generating a texture and visual cleanliness that mimics the grit blasting process.

Bristle Blaster® blasting belts - Spring Wire Diameter 0.7 mm, specially hardened shaped, D: 115 mm, width: 11 mm, 23 mm.

Adaptor system - Aluminum mold, width: 11 mm, 23 mm.

Quick add - width: 11 mm, 23 mm.

Bristle Blaster® sets

- 1. Bristle Blaster® Cordless Set** – Bristle Blaster® Cordless, battery drive, incl. Dead man's switch, protection cover, vibration absorbing handle, safety hook, extra internal thread for alternative handle position, Accelerator bar, steel, for 23mm-belts, 1 MONTI Adaptor System, 5 Bristle Blaster® belts, steel, 23mm, packed in a solid PE tool case, without Battery and Charger or Bristle Blaster® Cordless Set with 1 Battery LiHD 18 V, 5.5 Ah, 1 Battery Fast Charger, 12 – 36 V, air-cooled.
- 2. Bristle Blaster® Electric Set** – Bristle Blaster® Drive Unit Electric; Adaptor System 23mm; Accelerator Bar, Steel, 23mm; 10 Bristle Blaster® Belts 23mm; packed in a blow mould storage case.
- 3. Bristle Blaster® Pneumatic Set** – Bristle Blaster® Drive Unit incl. Air Cooling System and Noise Reduction; Adaptor Systems 23 and 11mm; Accelerator Bars Steel, 23 and 11mm; 5 Bristle Blaster® Belts, Steel, 23mm; 5 Bristle Blaster® Belts, Steel, 11mm; Air Pressure Regulators 23mm (silver) and 11mm (blue); Dust Exhaust Attachment, packed in a blow mould storage case.



Bristle Blaster® Industrial Pneumatic is ATEX approved for use in Zone 1 (potentially explosive) atmospheres in accordance with Ex II 2G c IIA T4 X.



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TOOLS & ACCESSORIES

Spark flaw detectors



Application:

- for testing the tightness of insulating coatings applied to conductive substrates, including concrete
- for testing the tightness of tank coatings, pipelines, fittings, etc

Device types:

DC15 up to 15 kV, DC30 up to 30 kV and DC60 up to 60 kV.

Features & benefits:

- high-precision detection of insulation defects (e.g., pores, microcracks)
- non-destructive method – the test does not damage the coating or the substrate
- fast and efficient – suitable for rapid inspection (e.g., tanks, pipelines, bridge structures)
- safety method for the structure - does not require downtime or process interruption
- clear defect indication during leak detection and localization (e.g., sound signal, light signal, or spark flashover)

1. Universal set:

Detector with clip-on power pack, Mini-Crest Meter, 10hr Charger, Probe handle with neon and 2m lead, 60mm Connector for flat brushes, 7m Earth lead with clamp, Fan Brush, 250mm Flat brass wire brush, 450mm Probe extension, Air-operated earphones, Shoulder & Waist Harness, Kit Case, Operating instructions with conformance certificate.

2. Pipeline set:

Detector with clip-on power pack, Mini-Crest Meter, Spare clip-on battery pack, 10hr Charger, Probe handle with neon and 2m lead, 7m Earth lead with clamp, Fan brush, Coil joiner with 450mm connector, Air-operated earphones, Shoulder & Waist Harness, Kit Case, Operating instructions with conformance certificate.

Be extremely careful, the device operates under high voltage.



Hand wrapping machines OWR – devices for the application of corrosion protection coatings



Application:

- insulation of welded joints
- repairing the damages of existing insulation
- insulation of pipelines sections

Features & benefits:

- quick tape change, suitable for insulating pipes with diameters from 50 mm to 2000 mm
- the wrapping machine is equipped with a roller for applying the tape spacer
- once set, the tape overlap does not require re-adjustment when changing tape rolls
- can be used on vertical pipes
- accelerates the process of anti-corrosion insulation
- ensures proper tape tension
- easy and safe operation
- suitable for both right- and left-handed operators

Using a hand wrapping machine increases pipe insulation efficiency by up to 40% compared manual tape application. It ensures correct tension and overlap, completely eliminating the risk of errors during the insulation process.



EUROSPACER



Application:

- positioning of carrier pipes installed in protective (casing) pipes
- protects of insulation coatings – enables safe insertion of the pipe without the risk of damaging its surface
- Suitable for use in water, gas, sewage, heating, oil, and industrial networks (recommended wherever there is a crossing under railways, highways, or rivers)

Features & benefits:

- highly resistant to abrasion and mechanical damage during installation and operation
- manufactured from high-quality HDPE (high-density polyethylene)
- non-corrosive - contains no metal elements, preventing galvanic short circuits
- resistant to UV radiation, temperature variations, and weather conditions typical during installation
- dampens vibrations caused by dynamic operational loads
- quick and easy installation – requires no specialized tools; a simple hammer is sufficient

READ MORE



MARKING, WARNING, LOCATION AND BARRIER TAPES

Marking, warning, location, and barrier tapes in various colours, with thicknesses from 0.08 – 0.50 mm and widths from 200 to 500 mm.

printing	✓	no	✓
perforation	✓	no	✓
insert	✓	no	✓



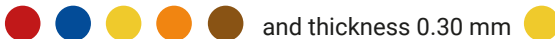
251

Warning tapes, width 200 mm, thickness from 0.08 mm to 0.50 mm



252

Warning tapes with printing, width 200 mm, thickness 0.08 mm



253

Warning and location tapes with stainless steel insert, width 200 mm, thickness 0.08 mm



254

Warning and location tapes with printing & with stainless steel insert, width 200 mm, thickness 0.08 mm



Application:

- for marking underground infrastructure in the gas, water, sewage, telecommunications, and thermal energy sectors

Features & benefits:

- the intense, highly visible color indicates the type of medium
- printing with information about the medium, network type, and safety guidelines is available
- a version with a stainless-steel insert for PE pipelines is available, helping prevent accidental damage during excavation work
- perforation allows free air circulation and prevents gas accumulation (e.g., in the event of a leak)

255

Warning and barrier tapes, thickness 0.04 mm



Application:

- to secure and cordon off dangerous areas

Features & benefits:

- bright, highly visible colors clearly indicate hazards and can be seen from a distance
- ideal for blocking off areas not intended for traffic or where access is restricted
- weather-resistant
- light and flexible – facilitate work in hazardous areas
- custom printing available (e.g., Fire Department, Police, etc.)

Yellow tapes are manufactured in accordance with the ZN-G-3002:2001 standard and the updated ST-IGG-1002:2011 specification.

Orange tapes have been approved by the Warsaw District Data Protection Office (ZDBŁ).

Tapes with a thickness ≥ 0.3 mm have been approved for compliance with the SEP-E-04 standard.

Warning and location tapes should be installed at least 30 cm above the buried cable or pipeline.



READ MORE

**Developed with precision.
Designed for reliability.**



Contact us

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