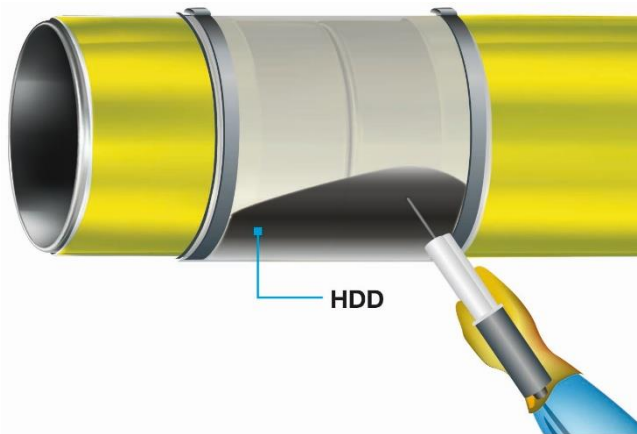


DENSOLID®-HDD

Product information



Special advantages:

- ✓ High abrasion resistance and peel resistances.
- ≤ 80°C Operating temperature from -20°C to +80°C (-4°F to +176°F).
- B Typ 3 EN 10290 Stress class B, type 3 in accordance with DIN EN 10290.
- ✓ Solvent-free.
- ✓ Compatible with factory coatings made of PE, PP, PUR, PA, EP, GRP.

Corrosion prevention system for the field joint coating of welding seams in pipelines installed using horizontal directional drilling (HDD) or the pipe-plough method.

For a century now, DENSO Group Germany has been representing experience, quality and reliability for corrosion prevention and sealing technology. The success of the internationally leading corporation is based on the development of the "DENSO-Tape", which was already patented in 1927 as the first product worldwide for the passive corrosion prevention of pipelines. Since then, the DENSO Group Germany has been establishing and guaranteeing the highest quality standards with technically trend-setting products. Research, development and production take place exclusively in Germany. Our employees continuously implement safe and individual solutions in a personal cooperation with the customer.

Description

DENSOLID®-HDD is a two-component polyurethane coating for a permanent corrosion prevention of field-joints at pipes for trenchless installation processes.

DENSOLID®-HDD features a high hardness and abrasion resistance as well as good stretchability and bending strengths. Therefore, **DENSOLID®-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. **DENSOLID®-HDD** is also suitable for protective coating in the weld seam area of plastic pipes.

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.

DENSOLID®-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 de-

signed for highly corrosive and highly mechanical stresses.

DENSOLID®-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	Typical value	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	>5	EN 10290
	-5 °C (+23 °F)	J/mm	>3	>3	EN 10290
Indentation resistance	+23 °C (+73 °F)	mm	<0.1	≤0.2	EN 10290
	+80 °C (+176 °F)	%	≤29	≤30	EN 10290
Flexibility	+23 °C (+73 °F)	-	fulfilled	fulfilled	EN 10290
	0 °C (+32 °F)	-	fulfilled	fulfilled	EN 10290
Elongation at break		%	≥18	≥10	EN 10290
Specific electrical insulation resistance	+23 °C (+73 °F). 100 d	Ω m ²	>1.5 10 ¹⁰	≥10 ⁷	EN 10290
	+80 °C (+176 °F). 30 d	Ω m ²	>1.0 10 ⁵	≥10 ⁴	EN 10290
Pull-off adhesion on steel	+23 °C (+73 °F)	MPa	>13	>7	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)	≤ 3 (Rating 3)	EN 10290
	+80 °C (+176 °F)	mm	≤ 3 (Rating 3)	≤ 5 (Rating 4)	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	Steel	N/cm ²	>400	-	EN 12068
	PE	N/cm ²	>50	-	EN 12068
Cathodic disbondment	+23 °C (+73 °F). 30 d	mm	<2.5	<8	EN 10290
	+60 °C (+140 °F). 2 d	mm	<2.5	<8	EN 10290
Hardness	+5 °C (+41 °F)	Shore D	75±3	-	ISO 868
	+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 ³	ca. 1.3	-	-

Ordering information and packaging

Component	Description	Packaging size	Number of packages per box
DENSOLID®-HDD	Coating material in 2-component cartridges	0.52 kg (400 ml)	12 cartridges per box
DENSOLID®-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	
DENSOLID®-tensioning strap	Tensioning strap for the fixation of the casing	5.0 m	2 pcs
DENSOMIX®-400 P	Pneumatic cartridge or dispenser for 2-component cartridges.	-	1 pcs per box

Storage conditions

When stored in its original, unopened packaging, **DENSOLID®-HDD** can be stored for at least 12 months after the manufacturing date.

Storage temperature: +15°C (+59°F) to +30°C (+86°F).

Short term (transport): +5°C (+41°F) to +50°C (+122°F).

The product must be stored in a location that is protected from frost.

DENSO GmbH

P.O. Box 150120 | 51344 Leverkusen | Germany
Phone: +49 214 2602-0
www.denso-group.com | info@denso-group.com

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