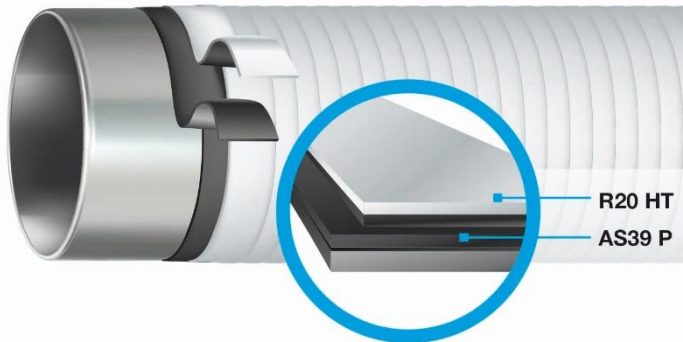


DENSOLEN®-AS39 P/-R20 HT



Product information

Special advantages:



For temperatures up to +85°C (+185°F).



Excellent mechanical protection and excellent corrosion prevention.



Proven success for more than 30 years on thousands of kilometres of pipeline.



C50
EN 12068

Fulfills the requirements of EN 12068-C50, DIN 30672-C50 and ISO 21809-3; Type 12A-1.



12A-1
ISO 21809-3

Real co-extruded three-ply tape as the inner layer and two-layer tape as the outer layer.



Compatible with factory coatings made of PE, PP, FBE, PU, CTE and bitumen.

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.

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

DENSOLEN®-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.

DENSOLEN®-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.

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

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

The system **DENSOLEN®-AS39 P/-R20 HT** consists of:

DENSOLEN®-HT Primer

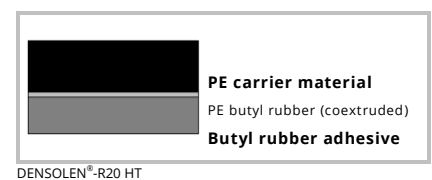
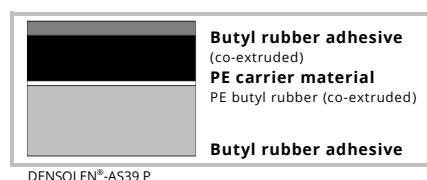
A solvent containing primer in accordance with EN 12068 and DIN 30672 for the corrosion prevention in combination with **DENSOLEN®** tapes. For the processing in hot environments,

DENSOLEN®-AS39 P

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

DENSOLEN®-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 DENSOLEN®-AS39 P.



Typical product properties

Property	Unit	DENSOLEN®-AS39 P Typical value	DENSOLEN®-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	mm	≥0.8	≥0.5	ISO 4591 ASTM D1000
Carrier film thickness app.	mm	≥0.28	≥0.3	
Inside adhesive layer thickness app.	mm	≥0.44	≥0.2	
Outside adhesive layer thickness app.	mm	≥0.08	-	
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
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

DENSOLEN®-AS39 P/-R20 HT with DENSOLEN®-HT Primer

Property	Unit	DENSOLEN®-AS39 P/-R20 HT Typical value		Required value		Test method
Electrical insulation resistance	Ohm m ²	≥10 ¹⁰		≥10 ⁸		EN 12068
Contact resistance	Ohm cm	≥10 ¹⁵		Not stated		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
		≥25	≥3	≥10	≥1	
Peel resistance layer to layer	N / cm	+23°C (+73°F)	+50°C (+122°F)	Not stated		ASTM D1000
		≥45	≥5			
AS39 P / AS39 P	N / cm	≥30	≥4	≥15	≥2	EN 12068
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 ² (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		EN 12068
Lap shear strength	N / cm ²	+23°C (+73°F)				EN 12068
		≥15		5		
on factory coating		≥15		5		

DENSOLEN® tapes can be easily applied manually. The processing with the original DENSO MAT® wrapping devices is even more efficient. For DENSOLEN® tapes with widths of > 50 mm, we recommend the use of the DENSO MAT® wrapping device to guarantee an excellent processing quality.

Ordering information and packaging

		Width [mm]	Length [m]	m ² / roll	Content per box			
					Rolls	m ²	Lfd.. m	kg (app.)
DENSOLEN®-AS39 P	Core Ø 41 mm	50	15	0.75	12	9	180	9.0
		100	15	1.5	6	9	90	10.2
		150	15	2.25	6	13.5	90	13.0
	Core Ø 78 mm	100	70	7	3	21	210	19.0
		150	70	10.5	2	21	140	19.0
DENSOLEN®-R20 HT	Core Ø 41 mm	50	30	1.5	12	18	360	11.0
		100	30	3.0	6	18	180	11.0
		150	30	4.5	6	27	180	17.0
	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.

Storage

When stored in its original, unopened packaging, DENSOLEN®-AS39 P/-R20 HT can be stored for at least 60 months after the manufacturing date.

Storage temperature: ≤ +50°C (+122°F)

Store in a dry location and do not rest anything against the front of the product.

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