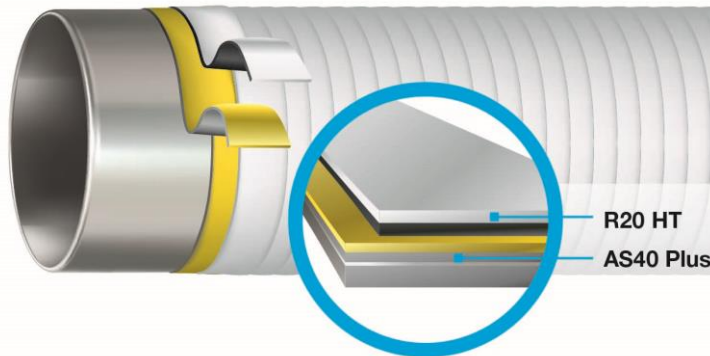


DENSOLEN®-AS40 Plus/-R20 HT



Product information



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)

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

For a century now, DENSO Group Germany represents 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 establishes and guarantees 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®-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 **DENSOLEN®-AS40 Plus**, a robust and UV resistant surface of the encasement is achieved with the outside tape **DENSOLEN®-R20 HT**.

The **DENSOLEN®-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**



DENSOLEN®-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.

DENSOLEN®-AS40 Plus/-R20 HT is basically impermeable for water vapor and oxygen and it is resistant against soil bacteria and electrolytes. **DENSOLEN®-AS40 Plus/-R20 HT** is compatible with factory coatings made of PE, PP, FBE, PU, CTE and Bitumen.

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

DENSOLEN®-HT Primer

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

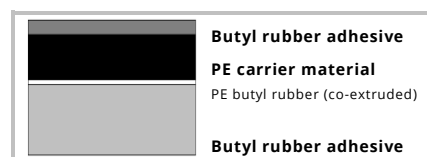
DENSOLEN®-AS40 Plus

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

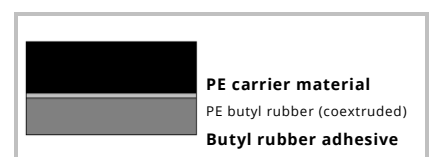
DENSOLEN®-R20 HT

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 **DENSOLEN®-AS40 Plus**.



DENSOLEN®-AS40 Plus



DENSOLEN®-R20 HT

Typical product properties

Property	Unit	DENSOLEN®-AS40 Plus Typical value	DENSOLEN®-R20 HT Typical value	Test method
Carrier film color	-	Black, yellow or blue	White, black or blue	-
Butyl adhesive color inside	-	Grey	Black	-
Butyl adhesive color outside	-	Black	-	-
Tape thickness	mm	≥0.8	≥0.5	ISO 4591 ASTM D1000
Carrier film thickness app.	mm	≥0.2	≥0.3	
Inside adhesive layer thickness app.	mm	≥0.5	≥0.2	
Outside adhesive layer thickness	mm	≥0.1	-	
Elongation at break	%	≥600	≥500	DIN 30672
Tape strength	+23°C (+73,4°F) N / cm	≥100	≥65	EN 12068
Dielectric strength	kV / mm	≥35	≥35	DIN 53481
Water absorption	+23°C (+73,4°F) 1 day / 30 days %	≤0.1 / ≤0.4	≤ 0.1 / ≤0.4	DIN 53495 ASTM D570
Water vapor permeability	g / m ² 24h	≤ 2 * 10 ⁻¹	≤ 5 * 10 ⁻²	DIN 53122

DENSOLEN®-AS40 Plus/-R20 HT with DENSOLEN®-HT Primer

Property	Unit	DENSOLEN®-AS40 Plus/R20 HT Typical value	Required value	Test method
Specific electrical insulation resistance	Ohm m ²	≥10 ¹⁰	≥10 ⁸	EN 12068
Volume resistivity	Ohm cm	≥10 ¹⁵	Not stated	DIN 53482 ASTM D257
Peel resistance metal/primer/tape	N / cm	+23°C (+73.4°F) +50°C (+122°F)	+23°C(+73.4°F) +50°C(+122°F)	EN 12068 ASTM D1000
		≥25 ≥3 ≥45 ≥5	≥10 ≥1	
Peel strength layer to layer	N / cm	+23°C (+73.4°F) +50°C (+122°F)	≥10 ≥2 ≥2 ≥2	EN 12068
AS40 PLUS / AS40 PLUS		≥30 ≥4		
AS40 PLUS / R20 HT		≥30 ≥3		
R20 HT / R20 HT		≥3 ≥3		
Indentation resistance - residual layer thickness at stamp load 10 N/mm ² (stamp-Ø 1.8 mm)	mm	+50°C (+122°F)	≥0.6	EN 12068
		≥1.1 0.4 / 10		
Impact resistance	J	≥16	≥15	EN 12068
Cathodic disbondment resistance	mm	<6	<20	EN 12068
Lap shear strength	N / cm ²	+23°C (+73.4°F)	5 5	EN 12068
on steel		≥15		
on factory coating		≥15		

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]	Tape length [m]	Tape area per roll (m ²)	Number of rolls	Content per box		
						Total tape area (m ²)	Total tape length (m)	App. weight (kg)
DENSOLEN®-AS40 Plus	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
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
	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.

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