SHUK ENGINEERING DISTRIBUTORS LTD

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Denso® CORROSION PREVENTION

Technical Data Sheet Denso S43 Tape

Description:

Denso S43 tape is an integral component of the Denso Butyl Tape System. The system comprises of; Denso Butyl Primer, Butyl Mastic Strip, Denso S43 self-amalgamating inner wrap tape, and Denso R23 amalgamating outer wrap tape.

Composition:

Self-amalgamating butyl rubber-based compound encasing a polyethylene reinforcing film.

Characteristics:

- stable over a wide temperature range, non-hardening or cracking
- accommodates vibration and movement of substrate
- highly resistant to mineral acids, alkalis and salts
- self-amalgamating butyl rubber compound
- compatible with factory applied pipeline coatings such as Fusion

Uses:

Bonded Epoxies (FBE), Polyethylene (PE) and Polypropylene (PP) The Denso Butyl Tape System is designed for the protection of line pipe, joints, welds, bends and fittings.

Repairs to damaged areas in factory coated pipes.

Denso S43 tape provides the anti-corrosion protection to the substrate.

Surface Preparation:

Prepare steel to St2 (power brushed) / AS1627 P.2 (minimum) Edges should be chamfered to remove step down.

Approximately a 100mm band of the pre-existing factory coatings should be abraded and solvent (toluene) degreased either side of joint.

Application:

Primer:

Denso Butyl Primer should be applied to the prepared substrate at a rate of Sm2/litre and allowed to tack dry before applying mastic or tape (5 to 10 minutes). Ensure mastic or tape is applied when primer is tack dry.

Profiling:

Denso Butyl Mastic Strip is used to contour weld beads, step downs on shop coatings and fill irregular surfaces so that subsequently applied tape can conform smoothly to the substrate being protected. It can be cut into smaller strips and moulded into crevices and cavities.

Wrapping:

Denso S43 tape should be applied with a 55% overlap using the Denso Hand Wrapping Machine.

Recommended Temperatures:

Application: - 30 to + 50 °C
Service: - 40 to + 75 °C
Peak: + 85 °C

Storage: In cool, dry, ambient conditions, in original cartons away from heat and direct sunlight.

Dimensions:

DENSOS43050	50mm x 15m x 0.75mm Roll (20/Carton)
DENSOS43100	100mm x 15m x 0.75mm Roll (15/Carton)
DENSOS43150	150mm x 15m x 0.75mm Roll (10/Carton)

Physical Properties:

Test	Test Methods	Units	Value
Total Thickness	ASTM D1000	mm	≥ 0.76
Total Adhesive Thickness	ASTM D1000	mm	≥ 0.48
Backing Thickness	ASTM D1000	mm	≥ 0.28
Breaking Strength	DIN EN 12068	N/cm	≥ 0.50
Elongation at Break	DIN EN 12068	%	≥ 300
Tear Resistance	DIN 53515	N/mm	≥ 60
Lap Shear Resistance @23°C	DIN EN 12068	N/cm2	≥ 1.2
Primed Adhesion @23°C to steel Power tool cleaned to St2 Blast cleaned to Sa2½	DIN EN 12068	N/mm	 ≥ 2.0 ≥ 2.0 ≥ 2.5
Adhesion R23 / R23 @23°C	DIN EN 12068	N/mm	≥ 1.6
Adhesion R23 / S43 @23°C	DIN EN 12068	N/mm	≥ 2.0
Impact Resistance	DIN EN 12068	J	≥ 15
Primed Adhesion to Factory Coatings @23°C To PE To Bitumen To PP	DIN EN 12068	N/mm	 ≥ 2.0 ≥ 1.0 ≥ 2.0
Water Absorption	DIN 53495	%	≤ 1.0
Water Vapour Transmission Rate	DIN 53122 (ASTM E96)	g/m^2 .24hr	< 0.2
Dielectric Strength	DIN 53481 (ASTM D149)	kV/mm	≥ 25
Insulation Resistance	ASTM D257	MΩ	10^6
Resistance to Cathodic Disbanding	DIE EN 12068 (ASTM G8)	Mm	≤ 13 (Group A)
Resistance to Hydrocarbons* Aromatics Aliphatics Resistance to Acids & Alkali	ASTM G20		 Good Excellent Excellent

*Not in Permanent Solution