



70 YEARS OF PIPELINE PROTECTION

PROTECTION OF PIPELINE FITTINGS AND VALVES

Product and Application Data



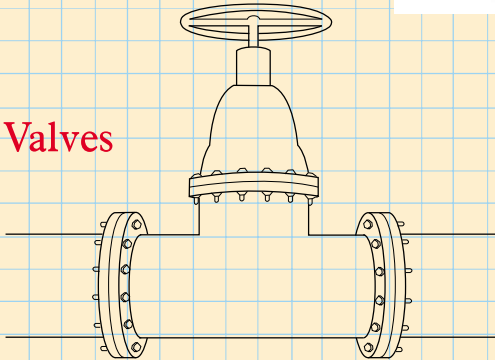
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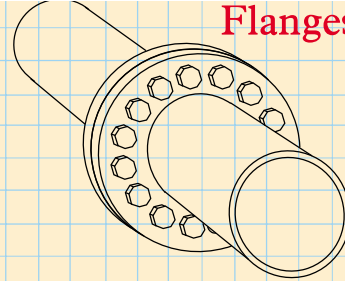
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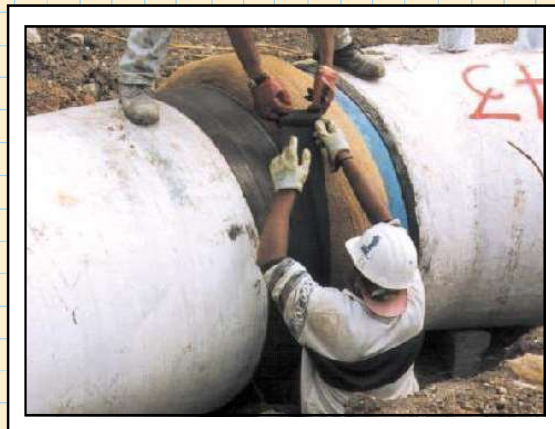
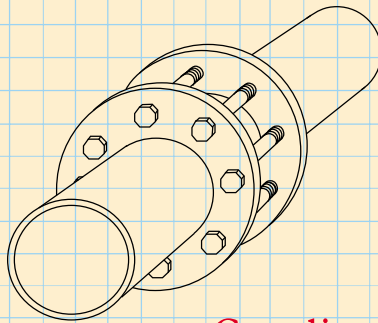
Valves



Flanges



Couplings



Features

- Easy to use
- No skilled labour required
- Products allow easy inspection at later date
- Long term corrosion prevention
- Resistant against aggressive backfill
- Choice of outerwraps to suit P1* or P2* specifications

Introduction

Backed by many years of experience, research and development Denso have produced an extremely versatile range of cold applied petrolatum based mastics. Used in conjunction with other Denso products, they provide economical efficient solutions to the problems of long term corrosion protection as well as water and gas proofing. With the benefit of easy handling and conformability they are primarily used as filler materials to afford smooth profiles to awkward shapes such as mechanical joints, flanges and valves. They are also used for general sealing, filling and caulking applications.

*Civil Engineering Specification for the Water Industry, Fourth Edition 1993

Denso Pipeline Mastics

Self-supporting and non-cracking, Denso Pipeline Mastics remain permanently plastic whilst being impervious to moisture. They are highly resistant to mineral acids, alkalis, salts and mechanical stress over a wide temperature range. These characteristics give the products great versatility. Used prior to the application of Denso or Densoclad Tape, the products are ideal for building up contours on mechanical pipe joints, valves, bolted flanged joints, etc. Should it be necessary at any time to examine, modify or repair the items so sealed, the Mastics can be easily removed and re-used if required provided the product has not been contaminated.



Densyl Mastic Blankets



Denso Profiling Mastic.

Denso Profiling Mastic

Composition:	petrolatum compound containing beads of cellular polymer and flow control additives. Contains no volatile organic solvents.	
Specific Volume:	1650cc/kg	
Temperature Range:	application	0°C to 45°C
	service	60°C maximum
Packing:	6 x 1.75kg blocks per carton	
	4 x 3.5kg blocks per carton	

Denso Profiling Mastic HT

Intended for the same applications as Denso Profiling Mastic but has a higher temperature limit and is suitable for use in tropical climates.

Densyl Mastic

Composition:	petrolatum compound containing inert siliceous fillers and vegetable fibres. Contains no volatile organic solvents.	
Specific Volume:	720cc/kg	
Temperature Range:	application	0°C to 70°C
	service	90°C maximum
Packing:	6 x 3kg blocks per carton	

Densyl Mastic Strips

Densyl Mastic Strips are preformed mastic with a triangular profile. They provide a quick and simple method of protection on tyton joints or where access may be difficult.

Size:	330mm x 50mm x 50mm x 70mm
Packing:	20 strips per 12kg carton

Densyl Mastic Blankets

Preformed blankets of Densyl Mastic supported by a coated textile backing and protected by a removable plastics film interleaving. The Densyl Mastic Blanket has an overall thickness of 10mm. Densyl Mastic Blankets were developed for use on proprietary mechanical joints such as Viking Johnson Couplings.

They provide a quick and easy method for this type of application.

Sizes:	250mm, 300mm, 350mm wide
	1.0, 1.25, 1.5, 1.75 metres long

Method for protecting Viking Johnson Couplings, flanges and Tybar Joints:



Profiling and infilling with Densyl Mastic.



Overwrapping with Denso Tape



Completed coupling.

Denso Pipeline Tapes

A range of petrolatum tapes and cold applied bitumen laminate tapes for pipeline protection and overwrapping couplings, joints and fittings previously profiled with mastic. The tapes offer a choice of mechanical protection to suit a wide variety of environments and are suitable for applications where protection to P1* or P2* is specified.

Denso Tape

For the protection of metal against corrosion above and below ground e.g. the wrapping of small and medium diameter pipes, joints, tie rods and post tension cables. The extreme conformability enables the tape to be easily applied to awkward profiles. Suitable for P1* specifications.

Standard sizes: 50mm, 75mm, 100mm, 150mm, 200mm, 300mm wide
10metre rolls

Densyl Tape

Intended for the same applications as Denso Tape but has a higher temperature limit and is suitable for use in tropical climates.

Densoclad Tapes

For the anti-corrosion protection of all sizes of buried or immersed pipes and fittings e.g. the machine or hand wrapping of welded joints, bends, bare pipe lengths and pipe fittings. Available in several grades these tough tapes offer flexibility combined with mechanical strength. Suitable for P2* specifications.

Standard sizes: 50mm, 75mm, 100mm, 150mm wide
12, 15metre rolls

Densoclad HT Tapes

Intended for the same applications as Densoclad Tape but have a higher temperature limit and are suitable for use in tropical climates.

Method for protecting valves:



Profiling with Densyl Mastic.



Overwrapping with Denso Tape



Completed valve.

*Civil Engineering Specification for the Water Industry, Fourth Edition 1993

General application methods

1. Cleaning

Clean the joint and the adjacent pipe by removing all loose scale, rust, dirt etc.

2. Priming

Prime the cleaned area with appropriate primer for the overwrapping tape (e.g. Denso Paste for Denso Tape or Denso Primer D for Densoclad Tapes).

3. Profiling

Apply Mastic around and between all bolts and to fill all hollows and voids. Continue to apply Mastic until the valve or fitting has a profile suitable for wrapping.

4. Wrapping

Spirally apply tape with a 55% overlap. Care should be taken to ensure that tape is in contact with the underlying surface to prevent wrinkles or air pockets. On flanges, couplings, and fittings, wrapping with Densoclad Tapes should be on a reducing diameter/circumference.

**Civil Engineering Specification for the Water Industry, Fourth Edition 1993*



P1 application: Mastic Blanket on flange...*



being overwrapped with Denso Tape...



protection completed.



P1 application: Profiling Mastic on Tybar...*



being overwrapped with Denso Tape...



protection completed.



P2 application: Profiling Mastic on flange...*



being overwrapped with Densoclad Tape...



protection completed.



Denso
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Densyl Tape

Conformable, cold applied fabric tape for corrosion protection

Composition

Durable synthetic fibre fabric impregnated and coated with a petrolatum compound

Uses

Densyl Tape is used for the corrosion protection of buried or exposed pipes, valves, and fittings.

Service temperature: -20°C to +70°C

Characteristics

Densyl Tape is:

- resistant to water, water vapour and gases,
- resistant to mineral acids, alkali and salts,
- non-hardening,
- non-cracking, and
- conformable over a wide temperature range.

Surface preparation

See *Instructions for Use* for additional detail. Surfaces must be clean and dry. Remove all loose, rust, scale and flaking coatings by scraping, wire brushing or blast cleaning. Apply Denso Paste or Denso Priming Solution.

Application

See *Instructions for Use* for additional detail. Place the outer surface of the tape roll on the pipe. Wrap spirally around the pipe, taking care to overlap each layer by at least 55%. Smooth the compound with a gloved hand.

Application temperature: -5°C to +55°C

Availability

Densyl Tape is available in 10 metre rolls in widths from 50 mm to 300 mm.

Storage conditions

Store in a cool dry place in original packaging.

Waste material

Please avoid or minimise waste wherever possible. Please do not discard waste material, including packaging, in the surrounding environment. Follow all relevant legislation for disposal.

Typical properties

Breaking Strength	200 N/50mm minimum	ASTM D1000
Elongation at Break	10%	ASTM D1000
Breakdown Voltage	16 kV minimum per double layer	
Resistance to Cathodic Disbonding	<500 mm ²	ASTM G8 (30 days)
Total Thickness	1.15 mm	ASTM D1000
Weight	1.44 kg/m ²	

Important: Winn & Coales (Denso) Ltd pursue a policy to develop and continually improve all of our products and therefore the information given in this data sheet is intended as a general guide and does not constitute a warranty of specification. However, our sales personnel are committed to assist the user in establishing the suitability of the product for its intended purpose and additional specific information is available on request. Winn & Coales (Denso) Ltd operate a Quality Management System registered to BS EN ISO 9001 (BSI Certificate no. FM01548) and an Environmental Management System registered to BS EN 14001 (BSI Certificate 583748).