



VARZIRAN CO. (P.J.S.)

Technical Data

Product Name: Bituseal® Enamel

Standard: EN 10300

Category 2, Grade b

Product Description

The Bituseal® Enamel is based on a specially selected bitumen, modified with high performance engineering polymers. This polymer modification ensures improvements of a number of the product's qualities, e.g. flexibility, adhesion and durability. Bituseal® Enamel is supplied in different types/grades, depending on the varying requirements for corrosion protection materials for pipelines.

Delivery

Bituseal® Enamel is available cold in 20 kg block or hot in bulk.

Application

Bituseal® Enamel is applied to steel pipes, previously primed with Bituseal® Primer, at 190-230°C using computer controlled extrusion technology, which ensures an optimum coating quality. Optimum adhesion and bleed-through is obtained when the pipe surface temperature prior to coating is 30-50°C. However, minimum surface temperature is 15°C and 3°C above the dew point. Minimum enamel thickness is 4.0mm.

Storage

Heated Bituseal® Enamel is to be stored under constant low-speed stirring. Storage temperature and duration depends on the Bituseal® grade stored.

Standards

The Bituseal® Enamel meets or exceeds all the performance requirements of EN 10300.

Quality Control

All raw materials for Bituseal® Enamel are tested and approved in the laboratories of Varziran. The quality of the finished enamel is controlled to either EN 10300 or the the costumer's specific requirements and a quality certificate is issued for each batch produced.

Bituseal® Coatings

Bituseal® Enamel is suitable for pipelines operating at temperatures in the range -30°C to 90°C. The enamel is environmentally safe.

Mechanical Protection

A polypropylene shield can be applied to the Bituseal® coated pipe in order to obtain improved mechanical protection of onshore pipelines..

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Properties	Unit	Requirement	Method of test
Softening Point	°C	115 to 135	EN 1427
Penetration	0.1 mm	5 to 15	EN 1426
Density at 25 °C	g/cm³	1.2 to 1.4	EN 10300, Annex K
Filler Content	%	25 to 35	EN 10300, Annex L
Flash Point	°C	Min 260	ISO 2592
Sag at 90 °C , 24 h	°C	Max 1.5	EN 10300, Annex D
Impact disbonded area at 0 °C	mm²	Max 6500	EN 10300, Annex E
Peel Initial / Delayed at 30 °C 40 °C 50 °C 60 °C	N/20 mm	80 50 30 20	EN 10300, Annex F, F.4.2
Bend at -10 °C	°C	Min 15	EN 10300, Annex G
Cathodic Disbonding, Disbonded radius after 28 day	mm	Max 7	EN 10300, Annex I

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