

Jotapipe IL 6002

PRODUCT DESCRIPTION

This product is a fusion-bonded epoxy coating designed as an anti-corrosion coating for the internal surface of line pipe used in aggressive service environments up to 110 °C (230 °F). Applied over Jotapipe PR 460, the product provides excellent resistance to sour gas, hydrocarbons and sea water at elevated temperatures and pressures. The product also offers a high degree of flexibility to meet stringent field bending requirements, and is available in two reactivities to suit application on various pipe diameters.

POWDER PROPERTIES

Property	Standard	Result
Gel time	ISO 8130-6 200 °C (392 °F) Jotapipe IL 6002 60S Jotapipe IL 6002 120S	48-72 seconds 90-140 seconds
Moisture content	CSA-Z245.20 (12.4B)	Below 0.50 % (at time of manufacture)
Particle size	CSA-Z245.20 (12.5)	0.2 % max retained on 250 µm (60 mesh)
Density	CSA-Z245.20 (12.6)	1460 ± 50 g/l
Thermal characteristics	CSA-Z245.20 (12.7)* Inflection point	T _{g1} = 50-65 °C (122-149 °F) T _{g2} = 108-116 °C (226-241 °F) ΔH = 45-80 J/g

* Powder DSC heating cycles, 20 °C/min: 30-70 °C, 30-300 °C under inert gas, (T_{g1} and ΔH), 30-140 °C (T_{g2}). Cured film DSC heating cycles, 20 °C/min: 30-120 °C and hold 1.5 min, 30-285 °C (T_{g3}), 30-140 °C (T_{g4}).

Storage

When stored at a maximum 25 °C (77 °F), a shelf life of 12 months is obtained from the date of manufacture.

APPLICATION

Powder application

Surface preparation meeting Sa 2½ to Sa 3 with a surface profile of 40-100 µm is recommended.

This product is typically applied over Jotapipe PR 460.

Pre-heat time depends on factors such as plant configuration and pipe characteristics.

Application conditions	Typical application temperature	Typical film thickness
Typical application	160-210 °C (320-410 °F)	350-600 µm (14-24 mils)

Coated items shall be post cured at a temperature of 180-220 °C (356-428 °F) for minimum of 30 minutes. Optimum duration of post cure for different wall thicknesses shall be determined by the applicator and full cure shall be confirmed by a DSC cure test.

For specific data on the phenolic primer, refer to the Technical Data Sheet for Jotapipe PR 460. Please refer to the relevant Application Guide for guidelines on the factory application of this product.

PERFORMANCE

Property	Standard	Result
Flexibility*	CSA-Z245.20 (12.11) 5.45° PPD at 0 °C (32 °F)	Pass/No cracking
Abrasion resistance	ASTM D4060 CS-17 wheel, 1000 cycles 1 kg load	0.036 g weight loss
Autoclave test*	Saudi Aramco 90-SAMSS-091 3000 psi for 24 h at 95 °C, decompression in 3 min at 90 °C Test A: Treated sea water (ASTM D1141 stock solution 1+2), 100 % N ₂ Test B: Brine, 3 mole % CO ₂ , 3 mole % H ₂ S, 94 mole % CH ₄ Test C: Wasia water, 100 % CO ₂	Pass, no blistering or delamination Pass, no blistering or delamination Pass, no blistering or delamination
Adhesion*	CSA-Z245.20 (12.14) 28 days, 75 °C (167 °F)	Rating 1-2
Cure test**	CSA-Z245.20 (12.7)	ΔT _g of ±3 °C is considered as full cure

* The performance of the coating is based on 350-600 μm thick film applied over Jotapipe PR 460. 6 mm steel plates were used. These are typical results and should not be viewed as a product specification.

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Repair system

Jotapipe RC 490

Sustainability

Powder coating is applied in air-and-powder mix in a strictly controlled factory process using electrostatic gun and a high temperature curing oven to create film. Virtually no VOCs are released in the process compared to traditional liquid paints. Unused or oversprayed powder can be recycled with minimal wastage, and disposal is easy and safe. In addition, all Jotun Powder Coatings' products do not contain intentionally added lead.

Disclaimer

The information in this document is given to the best of Jotun's knowledge, based on laboratory testing and practical experience. Jotun's products are considered as semi-finished goods and as such, products are often used under conditions beyond Jotun's control. Jotun cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Jotun reserves the right to change the given data without further notice.

Users should always consult Jotun for specific guidance on the general suitability of this product for their needs and specific application practices.

If there is any inconsistency between different language issues of this document, the English (United Kingdom) version will prevail.

Technical Data Sheet

Jotapipe IL 6002

