

Jotapipe HT 1030

PRODUCT DESCRIPTION

This product is a fusion-bonded epoxy powder coating designed to be used as a stand-alone coating, as a primer in dual layer and as a primer multi-layer polyolefin systems for pipeline operating at elevated temperature.

Operating conditions

This product can be suitable for HOT (High Operating Temperature) pipelines operating at continuous temperatures up to 135 °C (275 °F) when properly applied. The product performance and the maximum operating temperature can depend on the coating system and the field conditions such as type of soil, moisture and salt content.

POWDER PROPERTIES

Property	Standard	Result
Cure time	CSA-Z245.20 (12.1) at 232 °C (450 °F)	< 90 seconds
Gel time	CSA-Z245.20 (12.2) at 205 °C (400 °F)	16-23 seconds
Moisture content	CSA-Z245.20 (12.4B)	Below 0.50 % (at time of manufacture)
Particle size	CSA-Z245.20 (12.5)	3.0 % max retained on 150 µm (100 mesh) 0.2 % max retained on 250 µm (60 mesh)
Density	CSA-Z245.20 (12.6)	1480±50 g/l
Thermal characteristics	CSA-Z245.20 (12.7) Inflection point	T _{g1} = 40-55 °C (104-131 °F) T _{g2} = 137-148 °C (279-298 °F) ΔH = 110-145 J/g

Powder DSC heating cycles, 20 °C/min: 30-70 °C (conditioning), 30-255 °C (T_{g1} and ΔH), 30-170 °C (T_{g2}). Cured film DSC heating cycles, 20 °C/min: 30-160 °C hold 1.5 min (conditioning), 30-255 °C (T_{g3}), 30-170 °C (T_{g4})

Storage

Keep in a dry cool area. Maximum temperature 25°C (77°F). Maximum relative humidity 60 % a shelf life of 12 months can be obtained from the date of manufacture.

APPLICATION

Powder application

Application conditions depend on such factors as specification, plant capability and pipe characteristics.

Application conditions	Typical application temperature	Typical film thickness
As a stand-alone and dual layer FBE coating	220-240 °C (428-464 °F)	300-500 µm (12-20 mils)
As a primer in 3LPO	200-240 °C (392-464 °F)	150-500 µm (6-20 mils)

Higher thickness may be used for applications under concrete weight coating. Evaluation show that thicker film can enhance service capabilities.

Please refer to the relevant Application Guide for guidelines on the factory application of this product.

PERFORMANCE

Property	Standard	Result
Cathodic disbondment	CSA-Z245.20 (12.8) 24 hours, -3.5 V, 65 °C (149 °F) 28 days, -1.5 V, 20 °C (68 °F) 28 days, -1.5 V, 65 °C (149 °F) 28 days, -1.5 V, 95 °C (203 °F)	Average 3.0 mm disbondment Average 3.5 mm disbondment Average 3.0 mm disbondment Average 2.5 mm disbondment
Flexibility	CSA-Z245.20 (12.11) 2.0° PPD at -30 °C (-22 °F)	Pass
Impact resistance	CSA-Z245.20 (12.12) at -30 °C (-22 °F)	> 1.5 J
Strained polarization	CSA-Z245.20 (12.13) 2.5° PPD at -30 °C (-22 °F)	Pass / No cracking
Adhesion	CSA-Z245.20 (12.14) 24 hours, 75 °C (167 °F) 28 days, 75 °C (167 °F) 28 days, 95 °C (203 °F)	Rating 1 Rating 1 Rating 1

The performance of the coating is based on 300-400 µm thick film applied as a stand-alone FBE on 6 mm steel plates which have not been chemically pretreated. These are typical results and should not be viewed as a product specification.

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. 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.