

Jotapipe HT 1020

PRODUCT DESCRIPTION

This product is a fusion-bonded epoxy for higher operating temperatures designed for use both as a stand-alone coating and as a primer in multi-layer polyolefin systems.

Operating conditions

This product is suitable for pipelines operating at continuous temperatures up to 120 °C (248 °F). However, product performance including maximum operating temperature can depend on plant application, pipe configuration, coating system and local field conditions.

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)	14-21 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)	1400 ± 50 g/l
Thermal characteristics	CSA-Z245.20 (12.7) Inflection point	T _{g1} = 40-60 °C (104-140 °F) T _{g2} = 124-132 °C (255-270 °F) ΔH = 100-147 J/g

Powder DSC heating cycles, 20 °C/min: 30-70 °C (conditioning), 10-255 °C or 30-255° C depending on cooling capacity of DSC (T_{g1} and ΔH), 30-160 °C (T_{g2}). Cured film DSC heating cycles, 20 °C/min: 30-140 °C hold 1.5 min (conditioning), 30-255 °C (T_{g3}), 30-160 °C (T_{g4}).

Storage

Keep in a dry cool area. When stored at maximum 25 °C (77 °F) and maximum relative humidity of 60%, a shelf life of 12 months is 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 coating	220-240 °C (428-464 °F)	300-500 µm (12-20 mils)
As a primer	200-240 °C (392-464 °F)	150-300 µm (6-12 mils)

Higher thickness may be used for applications under concrete weight coating. Evaluations 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) 28 days, -1.5V, 120 °C (248 °F)	2-3 mm radius average 2-4 mm radius average 3-5 mm radius average 2-3 mm radius average 2-3 mm radius average
Flexibility	CSA-Z245.20 (12.11) 2.5° 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) 28 days	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 1-2 Rating 1-2

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.