

INFRALIT EP 8024-10

AR93180020

Epoxy Powder

PAINT TYPE	INFRALIT EP 8024-10 AR93180020 is a fine-grained powder coating based on epoxy resin. At elevated temperatures the powder melts, cures and forms the final paint film.
USAGE	INFRALIT EP 8024-10 AR93180020 Epoxy Powder is a fusion bonded epoxy coating designed for corrosion protection of internal surfaces of pipes and fittings in the oil facilities.
SPECIAL PROPERTIES	The resultant paint film has excellent mechanical properties, i.e. good abrasion and impact resistance and elasticity. It is not scratched easily and withstands action by acids, alkalis, greases and solvents. Its anticorrosive properties are also good.
TECHNICAL DATA	
Colours	TW-9302 (beige)
Gloss grades	Semigloss
Average particle size, D (v, 0.5) (laser diffraction method)	abt. 55 - 65 µm (ISO 8130-13)
Gel time	180°C / 65 - 75 s 190°C / 45 - 55 s 205°C / 25 - 35 s 210°C / 17 - 27 s The gel time will fluctuate greatly depending on the method used, and it should be always checked by the user's own method.
Moisture content, mass loss	<0.6%
Sagging	180°C / 6 - 10 cm. 3 g powder pressed into pellets on glass plate placed at 60° angle.
Specific gravity	abt. 1.4 - 1.5 kg/dm ³
Spreading rate	3 - 11 m ² /kg depending on the film thickness
Curing time	5 - 6 min /180°C 3 - 4 min /190°C 1.5 - 2 min /200°C
Glass transition temperature of the cured film	95 - 108°C, ISO 21809-1 Annex D
Glass transition temperature	Tg1 = 50 - 60°C , ISO 21809-1 Annex D Tg2 = 95 - 108°C , ISO 21809-1 Annex D delta H = 50 - 70 J/g , ISO 21809-1 Annex D
Glass transition temperature tolerance	-2°C to +3°C, ISO 21809-1 Annex D
FILM PROPERTIES	
	The performance of the coating will be influenced by quality of surface preparation and curing conditions. The following results have been obtained with a film that has been cured 10 min/+180°C, film thickness 350 – 500 µm on steel panels, cleaned to grade Sa2½ (without chemical pretreatment):
Shore-D-hardness	≥ 80 (250 µm film thickness) (ASTM D2240)
Hardness	>90, EN ISO 2815
Impact resistance	≥ 9 J at the film thickness 500 µm ASTM D2794-69
Adhesion to steel	≥ 15 MPa, ISO 4624:2016
Abrasion resistance	0.014 g (1000 g load, 1000 cycles, C17 wheels), ASTM D4060-10
Cupping test	≤ 10 mm, at the film thickness of 400 µm ISO 1520.
Hot water adhesion	≤ 2 (after 24 hours, 75 °C), CSA Z245.20-10 ≤ 3 (after 28 days, 75 °C), CSA Z245.20-10
Water immersion	1000 h, deionised water, 90 °C, no visible change

SAFETY PRECAUTIONS

The powder itself is non-flammable, but with air it can form an explosive mixture that in presence of adequate ignition energy ignites. The lower explosive limit for epoxy powder is about 60 g/m³ (Bundesanstalt für Materialprüfung). Ventilation of the spray booth should be adjusted so that the concentration of powder in the air is less than 50% of the lower explosive limit value. On calculation of

the powder concentration in the spray booth, the powder deposited on the workpiece is not taken into account.

In order to avoid the discharge of powder from the booth into adjacent working spaces, the speed of air flow in the apertures of the booth must not fall below 0.5 m/s.

Spray painters should wear dust masks and protective gloves. Any spatter of powder on the skin should be washed off with water and soap.

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DIRECTION FOR USE

Surface preparation and application Remove grease and dirt. Blast-clean at least to grade Sa 2½ (ISO 8501-1). Preheat the blast-cleaned steel before application. Minimal temperature during preheating is +180°C.

Required surface roughness 50 - 100 µm

Film thickness 300 - 500 µm

Application method Application by electrostatic spraying to a film thickness of 300 - 500 µm.

ADDITIONAL INFORMATION

Packages 20 kg box or 700 kg big bag

Storage In dry and cool conditions 6 - 12 months depending on the temperature (5 - 25°C).

The information of this data sheet is normative and based on laboratory tests and practical experience. Teknos guarantees that the product quality conforms to our quality system. Teknos accepts, however, no liability for the actual application work, as this is to a great extent dependent on the conditions during handling and application. Teknos accepts no liability for any damage resulting from misapplication of the product. This product is intended for professional use only. This implies that the user possesses sufficient knowledge for using the product correctly with regard to technical and working safety aspects. The latest versions of Teknos data sheets, material safety data sheets and system sheets are on our home pages www.teknos.com.



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