

INFRALIT EP 8054-00 AK10680700 and AK10680020 Epoxy Powder

PAINT TYPE	INFRALIT EP 8054-00 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 8054-00 Epoxy Powder is used as primer when coating preheated steel pipes with polyolefines.
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	Pipe grey
Gloss grades	Semigloss
Average particle size, D (v, 0.5) (laser diffraction method)	55 - 65 µm (ISO 8130-13)
Gel time	180°C / 85 - 105 s (CSA Z245.20-10) 190°C / 65 - 85 s (CSA Z245.20-10) 205°C / 34 - 50 s (CSA Z245.20-10) 210°C / 25 - 40 s (CSA Z245.20-10) 220°C / 20 - 35 s (CSA Z245.20-10)
	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%
Specific gravity	1.45-1.55 kg/dm ³
Spreading rate	2 - 10 m ² /kg depending on the film thickness
Film thickness	200 - 400 µm
Curing time	120 s/215°C 50 s/232°C
Glass transition temperature of the cured film	98 - 108°C, DSC - ISO 21809-1 Annex D
Glass transition temperature	Tg1 = 60 - 70°C, DSC - ISO 21809-1 Annex D Tg2 = 98 - 108°C, DSC - ISO 21809-1 Annex D delta H = 23 - 53 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 6 min/+220°C, film thickness 200 – 400 µm on steel panels, cleaned to grade Sa2½ (without chemical pretreatment):
Shore-D-hardness	≥ 80 (250 µm film thickness) (ASTM D2240)
Buchholz hardness (ISO 2815) Adhesion (ISO 4624)	>110 >15 MPa
Impact resistance (ASTM D 2794)	over 8 J, (20 °C, d=15,875 mm, weight 2 kg)
Cathodic disbondment (ISO 21809-1 Annex H)	3 - 4 mm (after 24 h, 65°C,-3.5 V)
Hot water adhesion rating (ISO 21809-2 Annex A15)	≤ 2 (after 24 h, 65°C)
Bending 2,0°/PD at -40°C	no cracking, ISO 21809-2 Annex A. 12
Salt spray resistance (ISO 9227:2012)	4000 h, degree of rusting Ri0 (ISO 4628-3), degree of blistering: None (ISO 4628-2)
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/m ³

(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. Recommended temperature during preheating is +180 - 230°C.

Required surface roughness

50 - 100 µm

Application method

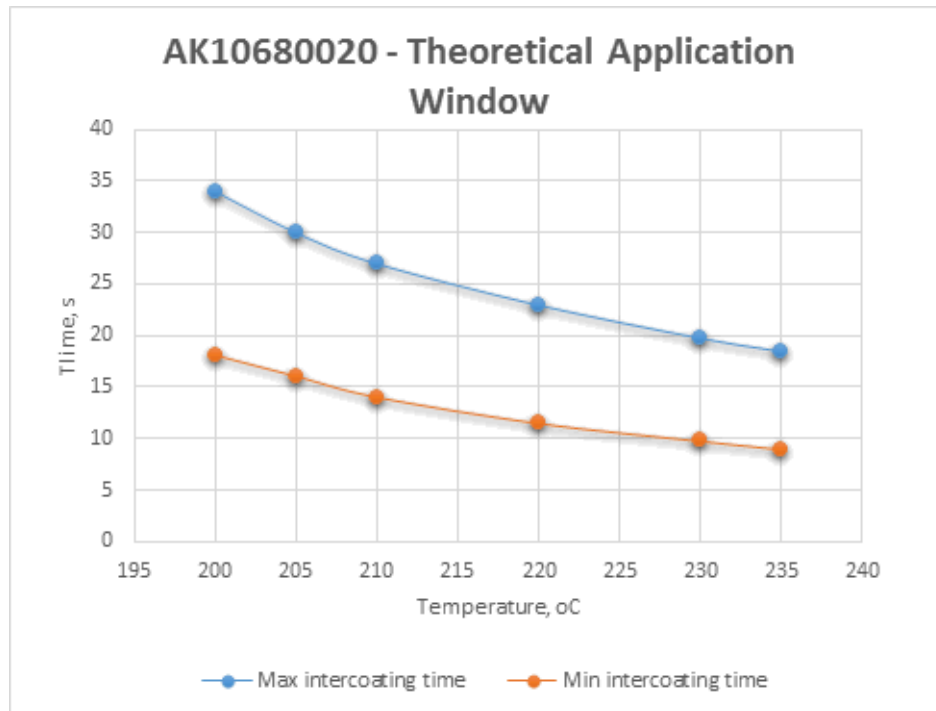
Electrostatic powder spray

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).

THEORETICAL**APPLICATION WINDOW**

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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