DATA SHEET 1611
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INFRALIT EP 8040
Epoxy Powder

PAINT TYPE

INFRALIT EP 8040 Epoxy Powder is coating based on epoxy resin. At elevated temperatures the powder will melt, cure and form the final paint film.

USAGE

INFRALIT EP 8040 Epoxy Powder is used for product coating within the metal industry, e.g. for lighting fixtures, apparatuses, furniture, shop fittings, agricultural and household appliances. Also suitable for use on many special areas in the heavy metal and chemical industry.

SPECIAL PROPERTIES

The resultant paint film has excellent mechanical properties, i.e. good abrasion and impact resistance and elasticity. It will not be scratched easily and withstands action by acids, alkalis, greases and solvents. The anticorrosive properties are also good. The product can be used for base coating in systems where powder coating is used as top coat. On outdoor exposure the paint film has tendency towards chalking. This phenomenon, however, affects only the appearance, not the protective power. If this is to be avoided, INFRALIT polyester powder with minor tendency towards chalking may be used.

TECHNICAL DATA

Spraying	General variant EP 8040-00 is suitable for all corona charging and for most tribo charging sprays.
Colours	By agreement.
Finish	10 - 30 by agreement (Gardner 60°)
Solids	100%
Specific gravity	Abt. 1,3 - 1,7 kg/dm³ depending on colour
Spreading rate	4 - 15 m²/kg depending on the film thickness
Film thickness	One application with the standard grade gives a film thickness of 40 - 150 µm.
Curing time	10 min/200°C (metal temperature)
Melting point	abt. 100°C
Packages	15 kg or 20 kg according to the specific gravity of the powder.
Storage	In dry and cool conditions.

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.

PTO

DIRECTION FOR USE

Surface preparation

Remove all grease and dirt with care. Mere degreasing can be done e.g. by trichloroethylene vapour bath or alkali wash. Blast-clean or etch and phosphate rusty and mill-scaled surfaces.
The profile of the blast-cleaned surface must be at least medium (G). See standard ISO 8503-2.

COLD-ROLLED SURFACES: Degrease by thrichloroethylene vapour bath or alkali wash. Application by electrostatic spraying to a film thickness of 80 - 150 µm.

ALUMINIUM SURFACES: Degrease by e.g. alkali wash. Surfaces to be exposed to severe atmospheric conditions should also be chromated.

HOT-DIP-GALVANIZED AND ZINC-ELECTROPLATED SURFACES: Remove grease and white rust by e.g. alkali wash. Depending on exposure conditions, zinc phosphating or chromating is also required.

HOT-ROLLED SURFACES AND CASTINGS: Remove grease and dirt. Blast-clean at least to grade Sa 2½ (ISO 8501-1). The surface profile at least medium (G) ISO 8503-2 . Remove the dust.

Blast-cleaning is also recommended for other surfaces, such as cast iron, whenever it is practicable, since it provides an excellent adhesion for epoxy powder.

FILM PROPERTIES

The following results have been obtained with the standard grade, curing 10 min/200°C, film thickness 50 µm:

Physical properties

Flexibility (Erichsen, ISO 1520)	7 mm
Impact resistance (Erichsen, SFS EN ISO 6272)	
- direct	20 kgcm
- reverse	20 kgcm
Flexibility (SFS ISO 6860)	less than 5 mm
Adhesion (cross-cut test, EN ISO 2409)	GT 0

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