DATA SHEET 1041
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INFRALIT EP/PE 8081, 8082, 8085, 8086, 8087

Epoxy/Polyester Powder

PAINT TYPE

INFRALIT EP/PE 8081, 8082, 8085, 8086, 8087 are powder coatings based on a mixture of solid epoxy and polyester binders. At elevated temperatures the powders will melt, cure and form the final paint film.

USAGE

INFRALIT EP/PE 8081, 8082, 8085, 8086, 8087 Epoxy/Polyester Powders are suitable for coating metal industry products, such as lighting fixtures, apparatuses, wire gratings and refrigerating fixtures.

SPECIAL PROPERTIES

INFRALIT EP/PE 8081, 8082, 8085, 8086, 8087 Epoxy/Polyester Powders form a film with mechanical and chemical resistance and good anticorrosive properties. On outdoor exposure INFRALIT EP/PE 8081, 8082, 8085, 8086, 8087 Epoxy/Polyester Powders have a tendency towards matting down (chalking) similar to that of pure epoxies. On the other hand, its tendency to yellow on overbaking and exposure to heat and ultraviolet light is minor as compared with epoxy powders. Variant EP/PE...-66 has improved wear and scratch resistance.

APPROVALS

Group M1 in Emission Classification of building materials.
IMO FTPC Part 5 - Test for Surface Flammability and IMO FTPC Part 2 - Smoke and toxicity test.

TECHNICAL DATA

Spraying

Variants EP/PE...-00, -13 and -19 are suitable for both tribo charging and for corona charging sprays. Variants ...-02, -09 and -17 only for corona charging sprays.

Colours

By agreement.

Gloss grades

EP/PE 8081 - effect resembling sandpaper
EP/PE 8082 - wavy structure
EP/PE 8085 - gloss
EP/PE 8086 - semigloss
EP/PE 8087 - matt

Solids

100%

Specific gravity

Abt. 1.25 - 1.70 kg/dm³ depending on colour

Spreading rate

4 - 15 m²/kg depending on the film thickness

Film thickness

One application gives a film thickness of 40 - 150 µm.
When painting with EP/PE 8082 powder it is best to find a suitable film thickness experimentally for each shade. The typical minimum film thickness is 70 µm or more.

Curing time

EP/PE 8081, 8082, 8085 and 8086: 15 min/180°C (metal temperature)

Exceptions:
EP/PE 8087, 8085-18, 8086-18: 10 min/200°C (metal temperature)
EP/PE 8087-01: 10 min/180°C (metal temperature)
EP/PE 8085-26, 8086-26: 15 min/190°C (metal temperature)
EP/PE 8082-04: 15 min/180°C or 10 min/200°C (to obtain a matter finish)
EP/PE 8081-50, 8082-50: 10 min/160°C or 5 min/180°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 is about 70 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

COLD-ROLLED SURFACES: Degrease by trichloroethylene vapour bath or alkali wash. Zinc phosphating is also required if the workpiece is destined for outdoor exposure or will be subjected to exceptional strain indoors.
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: Blast-clean to preparation grade Sa 2½ (ISO 8501-1).
The profile of the blast-cleaned surface must be at least medium (G). See standard ISO 8503-2.

FILM PROPERTIES

Substrate cold-rolled steel, curing time 15 min/180°C:

Typical values

Flexibility (Erichsen, ISO 1520)	7 mm
Impact resistance (Erichsen, SFS EN ISO 6272)	
- direct	40 kgcm
- reverse	40 kgcm
Pendulum hardness (König, SFS 3642)	180 s
Flexibility (SFS ISO 6860)	less than 5 mm
Adhesion (cross-cut test, EN ISO 2409)	GT 0

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