DATA SHEET 1051
19 08.06.2020

INFRALIT PE 8311, 8312, 8315, 8316, 8317, 8322

Polyester Powder

PAINT TYPE

INFRALIT PE 8311, 8312, 8315, 8316, 8317 and 8322 are TGIC-free polyester powder coatings based on polyester resin. At elevated temperatures the powders melt, cure and form the final paint film.

USAGE

INFRALIT polyester powders are suitable for product coating within the metal industry for objects that require a weather resistant coating that will not yellow on exposure to heat or ultraviolet light. Examples of use are e.g. constructions that are permanently outdoors.
The suitability of the metallic colours of polyester powders for outdoor use should be discussed with the paint manufacturer.

SPECIAL PROPERTIES

INFRALIT polyester powders form a mechanically and chemically resistant paint film that has good anticorrosive properties. The surface has good gloss retention even in outdoor conditions.
Variant PE...-07 is a bonded metallic colour.
Variant PE...-09 is a metallic or pearlescent colour designed for corona charging spray.
Variant PE...-13 is a metallic or pearlescent colour.
Variant PE...-29 has improved degassing properties on porous surfaces.
Variant PE...-39 has improved scratch resistance.
Variant PE...-40 is a flexible metallic or pearlescent colour.
Variant PE...-66 has improved wear and scratch resistance.

APPROVALS

EN 45545-2:2013+A1:2015 Fire protection on railway vehicles. Requirement sets R1, R7, R10 & R17 - Hazard levels HL1, HL2 & HL3.
INFRALIT PE 8317 - all variants:Quality-System Approval (Module D) number EUFI29-19001263-MED and EC Type-Examination Certificate (Module B) number EUFI29-19003427-MED according to Marine Equipment Directive (2014/90/EU).

TECHNICAL DATA

Spraying

Variant PE...-00 is suitable for both tribo charging and corona charging sprays. Variants...-02, ...-09 ans ...-40 only for corona charging sprays.
Variant PE...-03 only for certain special sprays (Corona Disk).

Colours

By agreement.

Gloss grades

PE 8311 - effect resembling sandpaper
PE 8312 - wavy structure
PE 8312-04 - wavy structure, full-matt
PE 8315 - gloss
PE 8316 - semigloss
PE 8317 - matt
PE 8317-10 - full-matt
PE 8317-14 - customer specified variant
PE 8322 - small wavy structure

Solids

100%

Specific gravity

Abt. 1,25 - 1,70 kg/dm³ depending on colour

Spreading rate

6 - 10 m²/kg depending on the film thickness

Film thickness

The recommended film thickness is 60 - 100 µm. When the film thickness exceeds 120 µm, water that evaporates in the curing process may form holes and bubbles in the paint film.
When painting with PE 8312 and PE 8322 powders the suitable film thickness is to be found by application tests individually for each powder. The minimum film thickness is typically 100-120 µm.

Curing time

20 min/170°C (metal temperature)
10 min/180°C (metal temperature).
6 min/200°C (metal temperature).
Variant PE...-25: 15 min/190°C (metal temperature)
Variant PE...-50: 10 min/160°C (metal temperature)

Packages

15 kg or 20 kg according to the specific gravity of the powder.

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 polyester powder is about 80 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.

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.

Storage

Powders should be stored in cool and dry environment, max 25 °C. Take special care during high temperature seasons. Avoid storing close to heat sources and heaters in trucks and storages. Don't store in direct sunlight. The recommended expiry date of the powder coating that has been stored according to the instructions is shown on the package label.

FILM PROPERTIES

Test after 1 h curing, substrate 0.6 mm thick chromated aluminium, curing 10 min/180 °C (metal surface), film thickness 70 µm:

Typical values

Flexibility (Erichsen, ISO 1520)	over 6 mm
Impact resistance (ASTM D 2794; 15.9 mm diameter)	
- direct	more than 40 kgcm
- reverse	more than 40 kgcm
Flexibility (ISO 1519)	less than 5 mm
Adhesion (cross-cut test, EN ISO 2409)	GT 0

Mechanical tests are not recommended for powder coatings with a structure surface.

EN_1051_Tuoteseloste.pdf