INFRALIT PE 8315-09

Polyester powder

INFRALIT PE 8315-09 is a TGIC-free powder coating based on solid polyester resin. At elevated temperature the powder will melt, cure and form the final paint film.

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 for outdoor use should be discussed with the paint manufacturer.

INFRALIT PE 8315-09 forms a film with mechanical and chemical resistance and good anticorrosive properties. The surface has good gloss retention even in outdoor conditions. INFRALIT PE 8315-09 is a metallic or pearlescent colour designed for corona charging spray.

APPROVALS:
EN 45545-2:2013+A1:2015 Fire protection on railway vehicles. Requirement sets R1, R7, R10 & R17 - Hazard levels HL1, HL2 & HL3.

NFPA 130:2020 Standard for Fixed Guideway Transit and Passenger Rail Systems, Chapter 8 - Vehicles
- ASTM E 162:2016 Standard Test Method for Surface Flammability of Materials Using a Radiant Heat Energy Source
- ASTM E 662:2017 Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials

TECHNICAL DATA

Certificates, approvals and classification	ASTM E 662:2017, ASTM E 162:2016, EN 45545-2
Fields of application	Transportation equipment, Machinery, Steel constructions
Recommended substrate	Steel, Zinc, Aluminium
Binder	Polyester
Solids	100 %
Practical spreading rate	6 - 10 m^2/kg depending on the film thickness.
Film thickness	The recommended film thickness is 60 - 100 µm. The optimal film thickness must be defined case-specifically by test applications. In some cases the film thickness might exceed the previously mentioned maximum value.
Colours	By agreement.
Gloss (60°)	Gloss
Density	Approx. 1.25 - 1.70 kg/dm^3 depending on colour.

Storage	The storage life is minimum 18 months in dry and cool conditions when the temperature during storage and transportation is 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.
Packaging	15 kg or 20 kg according to the density of the powder.

DIRECTION FOR USE

Surface preparation	STEEL SURFACES: Remove grease and dirt. After that blast-cleaning at least to preparation grade Sa 2½ (ISO 8501-1) and/or a suitable chemical pretreatment. ALUMINIUM SURFACES: Remove grease and dirt. After that chromating or alternatively a suitable chemical pretreatment. HOT-DIP-GALVANIZED AND ZINC-ELECTROPLATED SURFACES: Remove grease, dirt and white rust by e.g. alkali wash. Depending on exposure conditions, chromating or alternatively a suitable chemical pretreatment is also required.
Application method	Corona charging spray
Curing time	10 min/180°C (substrate temperature) Curing time indicates the time needed for the curing of the coating. Curing parameters and oven type may effect the colour and gloss of the coating. The temperature of the powder coating has to reach the temperature inside the paint shop before the package is opened. The application properties may be deteriorated, if the temperature of the powder is lower than this.

HEALTH AND SAFETY

Safety and precaution measures	See safety data sheet. 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 explosion limit of typical powder coatings is between 20 g/m³ and 80 g/m³ (CEPE, Safe Powder Coating Guideline 8th Edition, 2020). 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.

FILM PROPERTIES

Typical values	Substrate 0.6 mm thick chromated aluminium, curing 10 min/+180°C, film thickness 70 µm. Testing 1 h after curing:
Cross-cut test ISO 2409	GT0
Cupping ISO 1520, mm	6.0
Impact resistance, ISO 6272-2, direct, kgcm	40.0
Impact resistance, ISO 6272-2, reverse, kgcm	40.0
Bend test (cylindrical mandrel) ISO 1519, mm	5.0

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