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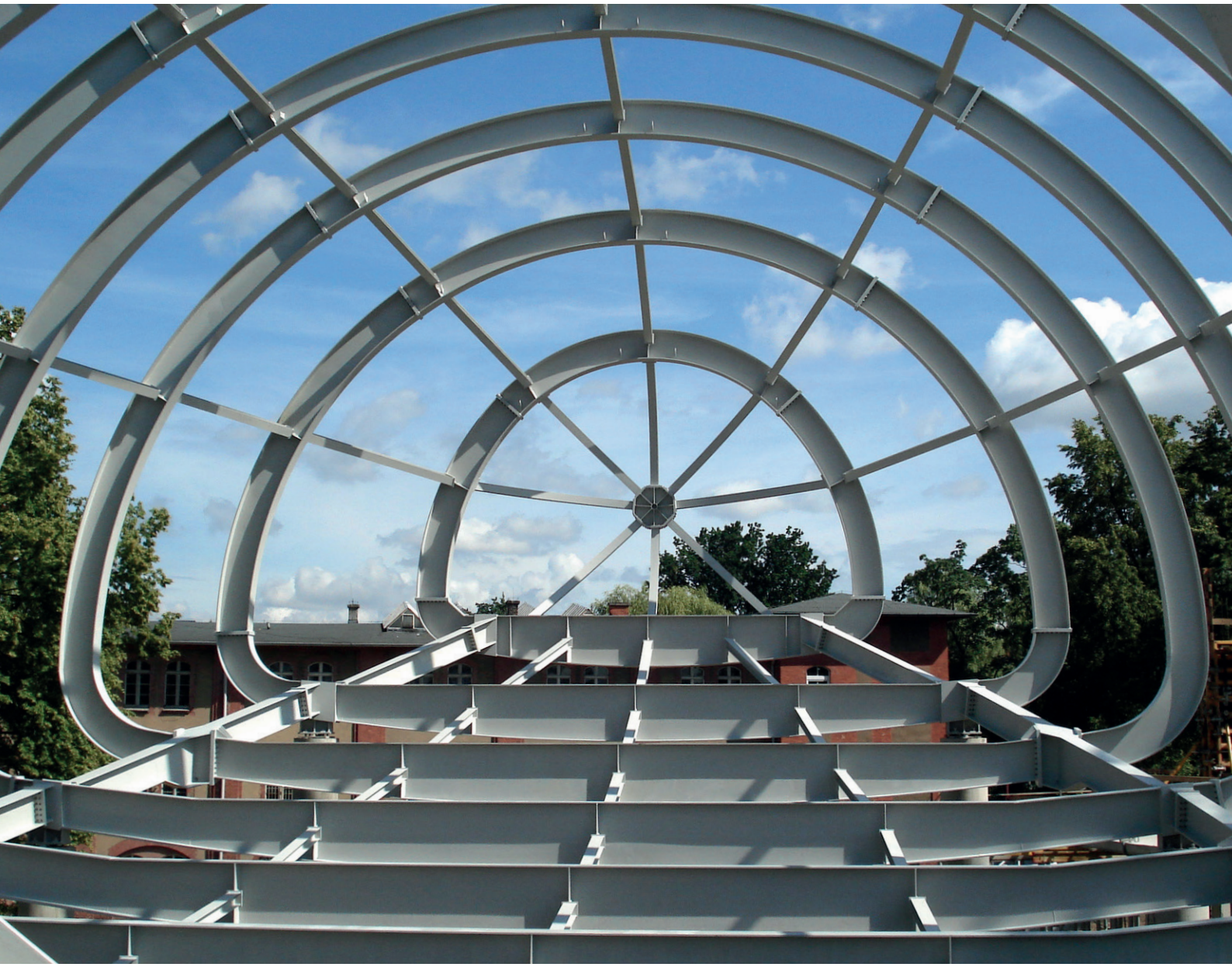
NEW



mcr Polylack W

Intumescent coating system for fire protection
of steel structures

APPLICATION

Water based, intumescent coating system mcr Polylack W is intended for fire protection of steel structures. It can be used both indoors and outdoors in partial exposure, especially where a high aesthetics of the protection is required to be made.

Steel elements of open and hollow sections, protected with mcr Polylack W intumescent coating have been classified according to EN 13501-2:2007+A1:2009 to fire resistance classification from R15 to R60.

mcr Polylack W paint may be used to make protection coats on the following elements of steel structures:

- **structural open sections - columns and beams**
  - fire resistance classification R15-R60
  - coating thickness from 0.224 to 1.430 mm
  - A/V factor up to 388 m^{-1}
  - design temperatures in the range from 350°C to 750°C
- **structural hollow sections (circular and rectangular) - columns**
  - fire resistance classification R15-R45
  - coating thickness from 0.262 to 1.392 mm
  - A/V factor up to 467 m^{-1}
  - design temperatures in the range from 350°C to 750°C
- **structural hollow sections (rectangular) - beams**
  - fire resistance classification R15-R45
  - coating thickness from 0.289 to 1.387 mm
  - A/V factor up to 348 m^{-1}
  - design temperatures in the range from 350°C to 750°C

TECHNICAL PARAMETERS

- density 1.34 ± 0.06 g/cm^3
- intumescent paint colour: white
- solids content: 70 ± 2 m/m %
- designed paint consumption: 1.95 kg/m^2 to obtain 1 mm dry coat

Fire resistance of the system is provided by an appropriate selection of coating thickness, depending on:

- protected element A/V factor,
- fire resistance classification,
- critical temperature of steel.

APPROVALS

- European Technical Assessment ETA-15/0801
- Certificate of constancy of performance 81230

KEY FEATURES

- high aesthetic values
- high durability
- fast and easy to be applied
- resistant to fracture, wear and dust
- environmentally friendly, non-toxic
- ability to perform protections on previously coated with epoxy resin primers with no necessity to remove them

TECHNIQUE OF PAINTING

Making fire retardant insulation consists in applying coats of mcr Polylack W system on the individual elements of structure. The works made do not induce any shape deformations of the sections.

Before the application of mcr Polylack W fire retardant paints, the components to be protected should be cleaned thoroughly from dirt, oils, grease, old paint coats flaking off and rust.

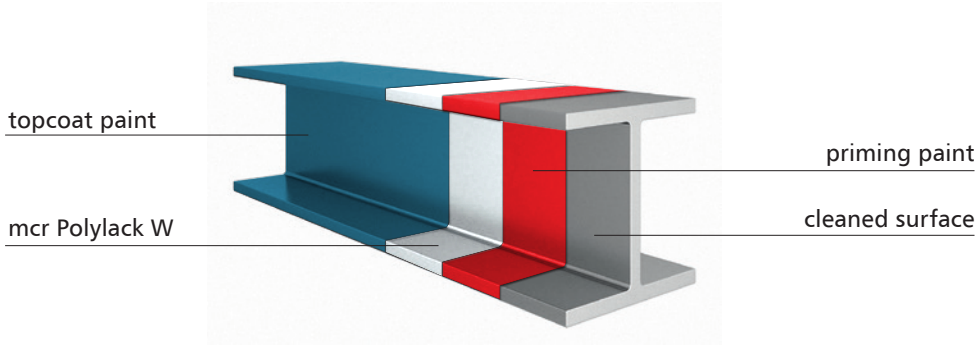
The system includes the following coat layers:

- epoxy or alkyd undercoat – primer
  - the coat thickness depends on an oxidizing capability of the environment
- reactive coating – intumescent material
  - during a fire under the effect of flame and radiating heat, this coat produces a layer of insulating foam that protects the structure from high temperature, providing the required fire resistance class
  - the thickness of applied coat depends on A/V factor of the required fire resistance class and a critical temperature of the steel
- epoxy topcoat:
  - protects the intumescent coat against humidity, mechanical damage and dirt, it is also a decorative finish
  - the coat thickness depends on an oxidizing capability of the environment

mcr Polylack W paints may be applied on a substrate with a paint roller, brush (300-500 μm of wet paint/coat) or using a spray gun (800-1000 μm of wet paint/coat; hydro-dynamic spray – recommended spray nozzles 0.43-0.53 mm).

mcr Polylack W may be applied with no dilution or diluted after their thorough mixing. Recommended diluent: water (max 3%).

A drying time of the paint depends on temperature, ventilation, air renewal, drying state of the paint coat applied earlier.



The topcoat may be applied after 24 hours.

Application conditions: The protected surface temperature should be within the range from 5°C to 40°C, relative humidity (RH) 70% and must always be at least 3°C above the dew point.

It is not recommended to paint when the ambient temperature is below 5°C.

FIRE PROTECTION SYSTEMS

- fire protection of building structures
- fire ventilation systems
- smoke and heat exhaust systems

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