



mcr Polylack A

Intumescent coating system for fire protection
of steel structures

APPLICATION

mcr Polylack A solvent-based intumescent coating system provides fire protection for steel structures in building industry. It can be used both indoors and outdoors in partial exposure, especially in places where it is necessary to maintain high aesthetic value of the protective coating.

Fire resistance classification of open and hollow steel sections protected with mcr Polylack A intumescent coatings ranges from R15 to R90, in accordance with the EN13501-2:2016 standard.

mcr Polylack A paint may be used for protection of the following elements of steel structures:

- ▶ **structural open sections - columns and beams**
 - fire resistance classification R15-R90
 - coating thickness from 0.236 to 1.883 mm
 - A/V section 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-R60
 - coating thickness from 0.410 to 2.525 mm
 - A/V section factor up to 468 m⁻¹
 - design temperatures in the range from 350°C to 750°C
- ▶ **structural hollow sections (rectangular) - beams**
 - fire resistance classification R15-R60
 - coating thickness from 0.377 to 2.511 mm
 - A/V section factor up to 345 m⁻¹
 - design temperatures in the range from 350°C to 750°C

TECHNICAL PARAMETERS

- ▶ density: 1.35 ± 0.06 kg/m³
- ▶ intumescent paint colour: white
- ▶ solids content: 76 ± 2 m/m %
- ▶ designed paint consumption: 1.8 kg/m² to obtain 1 mm of dry coat

Fire resistance of the system relies on securing proper thickness of the coating, i.e. adequate to:

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

APPROVALS

- ▶ European Technical Assessment ETA-17/0735



KEY FEATURES

- ▶ high aesthetic value
- ▶ high durability
- ▶ quick and simple application
- ▶ resistance to fracture, wear and dust
- ▶ ability to apply onto elements previously painted with other epoxy primers without the need of removing them

TECHNIQUE OF PAINTING

Application of mcr Polylack A system coatings onto specific structural elements creates a fire retardant insulation. This procedure does not alter the shape of the coated sections.

Before the application of mcr Polylack A fire protection coatings any dirt, oils, grease, flaking off paint, or rust must be removed from the elements that are to be covered.

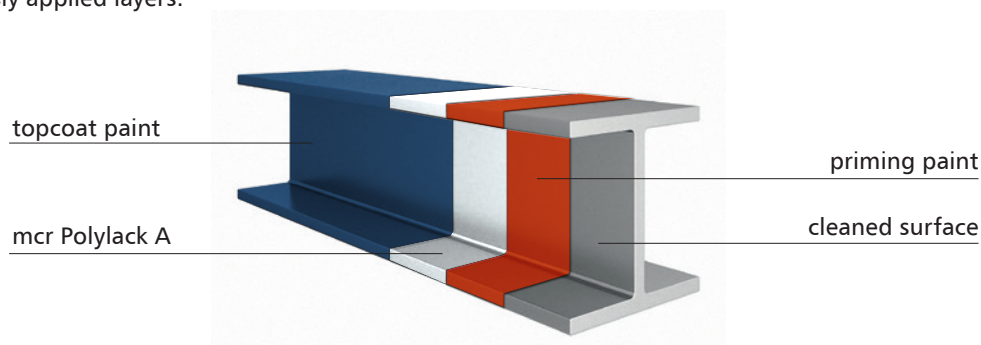
The system consists of the following coat layers:

- ▶ epoxy or alkyd undercoat - primer
 - the coat thickness should be adequate to the oxidizing capability of the environment
- ▶ reactive coating - intumescent material
 - when exposed to fire and heat radiation the layer produces a coat of insulating foam that protects the structure from high temperature, thus providing the required fire protection class
 - the coating thickness should be adequate to the A/V section factor, the required fire resistance class, and the critical temperature of the steel
- ▶ epoxy topcoat
 - protects the intumescent layer against humidity, mechanical damage and dirt, while serving as a decorative finish
 - the thickness of the layer should be adequate to the oxidizing capability of the environment

mcr Polylack A paints may be applied on a substrate with a paint roller, brush (300-500 μm of wet paint per layer), or paint sprayers (800-1000 μm of wet paint per layer; recommended nozzles for airless spraying: 0.48-0.63 mm).

mcr Polylack A may be applied thinned - after it is thoroughly mixed - or unthinned. The recommended maximum content of aromatic compounds in the thinner is 5%.

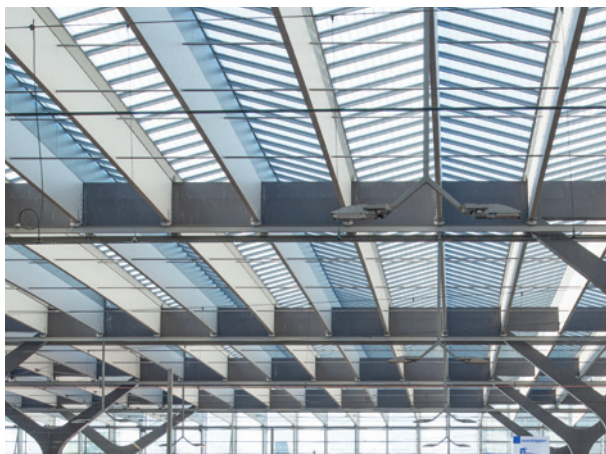
The drying time of the paint depends on the temperature, ventilation, air circulation, and the dryness of previously applied layers.



The topcoat may be applied after 24 hours.

Application conditions: The temperature of the covered surface should not exceed the range of 5°C to 40°C at 70% of relative humidity, and remain at least 3°C above the dew point at all times.

It is not recommended to paint at ambient temperatures below 5°C.



FIRE PROTECTION SYSTEMS

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



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