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SCHEDA TECNICA / TECHNICAL DATA SHEET

PROTHERM STEEL

S0001I.ST / Rev.0 MAG.04

Fire-proofing system - intumescent coating

Characteristics: "PROTHERM STEEL" is a solvent-based paint, consisting of acrylic polymers and specific reagents apt to generate an isolating foam when exposed to heat or flames.

Application fields: fireproofing intumescent system, specifically designed to increase fire resistance of structural steelwork inside civil or industrial buildings.

Type approval and Certifications

The examination of numerous certificates obtained from fire resistance tests (according to specific technical criteria, such as the Circular letter n.91/61, DIN 4102, BS476 and other documents) made it possible to plot a performance chart defining the quantity and thickness of the intumescent "PROTHERM STEEL" coating based upon the required fire resistance and thickness/volume ratio of the structural element to be protected. This diagram is the tool to be used by Professionals in charge of drawing up the "Fire resistance assessment report on structural bearing/partitioning elements" - to be attached to the application or renewal of the Fire Prevention Certificate according to the Italian Ministerial Decree dated march 10, 1998 – shall use this chart

Technical data

<i>Physical state:</i>	liquid
<i>Thinner:</i>	solvent
<i>Components:</i>	one
<i>Colour:</i>	white
<i>Section factor:</i>	1300-1400 g/l
<i>Solid content in weight:</i>	76-78 %
<i>Viscosity:</i>	thixotropic
<i>Drying time:</i>	based upon the temperature and R.H.;
	at 20°C and natural ventilation: 6-12 hours surface dry;
	cured after 24 - 48 hours
<i>Touch-up:</i>	after 24 hours
<i>Supply:</i>	in 25kg paintpots
<i>Storage:</i>	keep in original container in fresh and dry room
	if in sealed container, this product has at least one year shelf live.

Application Notes

Preparation of the support: the support to be treated shall be carefully cleaned; use a scraper or other suitable tool to remove any rust, calamine, dirt, oil or fat particles from the surface. On new surfaces SA 2^{1/2} sanding is recommended; while on old/treated surfaces, a strong mechanical brushing is recommended to be followed by thorough cleaning of the support, fully to eliminate all existing paint layers as well as any loose particles.

Protect the support with the corrosion-protecting primer called "PROTHERM STEEL PRIMER" before applying the intumescent coat, (for more detailed directions, refer to our Technical Data Sheet of the product).

If applied on galvanized plates or on surfaces treated with high-zinc coats, apply an intermediate epoxy two-component coat "PROTHERM STEEL PRIMEPOX" (as for more detailed information, read the Technical Data Sheet of the product). If in doubt, don't hesitate to contact our Technical Department for technical/application advice.

Quantity to be applied: the quantity of the intumescent coat to be applied is defined in the certificates, obtained by checking the correspondence between a building element in-place and the related certified element.

Theoretical consumption rates: the following table shows the theoretical consumption rates of the product to be applied of the quantity to be applied related to the required thickness values.

Theoretical consumption (in g/m²)	Wet film thickness (mm)	Dry film thickness (mm)
500	370	252
1000	740	504
1500	1110	756
2000	1480	1008
2500	1850	1260
3000	2220	1512

Dilution: this product is supplied ready for use and generally speaking dilution is not recommended; if necessary, dilute with max. 5% white spirit or "Solvesso 100", while keeping the product constantly stirred during this operation.

Application: by airless spray, roller or brush. A typical application rate is 800-1000g/m² in one single paint coat with an airless spray-gun (minimum compression ratio 40:1; minimum pressure 150 bar; 0.89/0.99 mm self-cleaning nozzle; 3/8" delivery pipe; remove the filters if any) or in two or more coats applied by brush or roller. Typically 400-600g/m² of product may be applied with one coat.

Mix well before use. The product shall be applied at temperature values ranging between 5°C, and 50°C, and less than 80% relative humidity.

Cleaning of the equipment: with synthetic thinner, immediately after use.

Protective finish: no protective finishing coat is required for in-door applications and in the absence of chemical aggressive agents. For outdoor applications or in aggressive environment, ask our Technical Department for advice regarding the most suitable paint cycle.

Special Instructions

"PROTHERM STEEL" is a hazardous product according to the Decree law dated 14th March 2003, n° 65, therefore, the use of this product for any job (production, handling, warehousing, transport, disposal and waste processing) involves the presence on the work place of chemical agents classified as harmful according to the decree law dated 2nd February 2002, n°25.

The hazardous substances in this formulation (according to the decree-law dated 3rd February 1997, n° 52 and subsequent modifications and integrations) are indicated on the package label of the product. Please ; refer to the safety data sheet of the product for more detailed information (safety data sheet of the product, with 16 items), drawn in compliance with the ministry decree dated 7th September 2002.

This information is based on the most recent state of the art information, development and application of our product. Since we have no influence on the application of this product we can only guarantee its constant quality.