Technical Data Sheet

TH02
Intumescents

Protecflam

High solids solvent-based intumescent coating for the protection of structural steelwork from fire. Protection optimized for R30 and R60. Excellent application at high builds in a single coat.

Description

Protecflam is a solvent based intumescent coating with a thixotrophic structure which enables a maximum film build in one coat above 1000 microns with an excellent finish. It allows for fast recoating resulting in increased productivity.

Protecflam is certified by independent laboratories in accordance with European standards UNE-ENV 13381-4:2005 for cellulosic fires and provides fire protection from R15 to R120.

Characteristics

- It expands when exposed to heat sources, developing a thermally insulating foam that protects the substrate reducing the presence of oxygen and slowing heat from reaching steel.
- It provides fast drying and short recoating interval time.
- Higher spreading rates at lower temperatures than water-based systems.
- Unlimited recoatability.
- Excellent application with Airless gun and also with brush.
- Applicable to high builds without sagging.
- Compatible with various primers and authorized topcoats

Recommended uses

- To increase fire resistance of structural steelwork as defined in the applicable regulations (CTE and RSCIEI).
- Suitable for use indoors and outdoors provided that the recommended repaint finish is used.
- Recommended for all types of environments: rural, urban, and industrial and marine (moderate).
- Suitable for application both on site and the workshop.

Certifications/Approvals

Report on classification in accordance with UNE -ENV 13381-4: 2005 Test methods for determining the contribution to the fire resistance of structural members. Part 4: applied passive protection to steel members.

Basic data

The following data was calculated at 23 °C and 60% RH:

Colour:	White and grey
Finish:	Matte
Volume solids:	73% ± 2
Density:	1.37 ± 0.05 g/ml
Recommended dry film thickness:	min. 300 µm max. 1000 µm
Theoretical spreading rate:	2, 45 m^2 / l (300 µm) 0, 73 m^2 / l (1000 µm)
Dry to touch (1000 µm):	< 60 minutes
Fully dried (1000 µm):	24 hours
Overcoat interval, min.:	12 hours
Overcoat interval, max:	unlimited
VOC content:	335-355 g/l
Flash point	26ºC

Data table for drying and recoatability (1000 µm dry)

Substrate temperature	10 ºC	20 ºC	30 ºC	40 ºC
Totally dried	90 m	60 m	45 m	30 m
Totally cured	32 h	24 h	18 h	10 h
Recoatability	18 h	12 h	6 h	4 h

d: days; h: hours; m: minutes

System Protecflam

Primer:	AK20 – Villatherm D Primer *
Intumescent coating:	TH02 – Protecflam
Finish:	CC04 – Villatherm D Esmalte *

* It is possible to apply other primers and finishes.

Other technical information

- Technical bulletin 003. Ed.04-15. Protecflam System.
- Technical bulletin 005. Ed.01-11. Thickness measurements of intumescent paint.

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Surface preparation

Protecflam is applied to adequately primed surfaces according to the selected anticorrosion system. The surface must be clean, dry and free of zinc salts (for ZN primers) and generally free of any contaminants, removing all traces that hinder product adhesion.

Before application, evaluate the primed surface and perform the cleaning process according to ISO 8501 and SSPC -SP1 standards (cleaning with solvents and detergents).

Repair damaged or corroded areas to the specified grade (P Sa or P St) according to standard ISO 8501.

Patch conveniently with primer to re-create the original thickness, and proceed with the application of **Protecflam.**

Application instructions

Protecflam is supplied in a single container to be homogenized with a power mixer before use. Do not stir manually. Being a highly thixotropic product, add a small percentage of the recommended thinner for easier homogenization of the product - this is recommended especially in cold weather.

Thinner: VD - 200P

Cleaning solvent: VD -250

Airless Spray:	Dilution: 0-5 % by volume Nozzle diameter: 0.025 " to 0.031" Nozzle pressure: 160-200 bar
Brush:	Patching, touch-ups and small areas Dilution: 0-5 % by volume
Roller	Not recommended

Application conditions

- The substrate temperature must be above 5ºC and 3ºC above dew point.
- Adequate ventilation is recommended during application, especially in confined spaces to facilitate drying and evaporation of solvents.

Observations

- If used outdoors it will be necessary to apply a topcoat to preserve the intumescent properties of the product. Nevertheless, it can be outside at moderate ambient temperatures up to C4 (ISO 12944) for up to 3-4 months before the final coating, although it is advisable to protect it from rain or high humidity environments
- Avoid immersing in water. The topcoat application will not prevent the deterioration of the intumescent properties.
- It is recommended that application takes place at 15 ° C or above as lower temperatures will require the use of more solvents to achieve the required viscosity for application.
- Drying times are dependent on temperature, ventilation and film thickness. It is advisable to determine the dry thickness once the film is hard and the meter doesn't sink on it.
- The theoretical spreading rates may vary depending on several factors including method of application, surface roughness, losses during preparation and application, excessive dilution or application on uneven surfaces.
- It is advisable to apply an extra coating by brush in welds and sharp edges to optimize the intumescent protection.
- Application by brush will require multiple coats to achieve the desired thickness and will result in a less aesthetic finish.

Safety precautions

The security labels in the containers provide the necessary information for proper handling. It is important to meet the requirements of any applicable law. As a general rule, inhalation of solvent vapours and paint mist must be avoided, as well as contact with liquid paint on the skin and eyes. When paint is applied in confined spaces, forced ventilation should be provided, together with appropriate respiratory protection of the skin and eyes, especially when applied with a gun.

Further information is accessible on the Safety sheet FDS readily available on our website: www.pinvisacoatings.com

Packaging and storage

Sets of 20 litres (27,4 Kg).

Keep for 24 months in the unopened original packaging, in a controlled space between 10ºC and 35ºC and away from heat sources. After that period of time, it is recommended not to use the product and consider a possible re-inspection in our installations.

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