Technical sheet

AK20
Alkyds

Villatherm D Primer

Solvent based alkyd primer for intumescent flame retardant systems.
Fast drying properties allowing for easy handling and repainting in a short period of time. Contains zinc phosphate.

Description

Villatherm D Primer is a certified fire retardant alkyd primer according to Euroclassification reaction to fire used in intumescent systems for the protection of metal structures.

Villatherm D Primer is designed to provide good corrosion protection in low to medium aggressive environments, offering an excellent recoatability with all types of products and quick drying for handling.

Characteristics

- Good anti-corrosion properties in environments of up to environmental category C3 (ISO 12944).
- It can be used both as a primer in both intumescent and corrosion protection systems.
- It contains special anticorrosive pigments.
- Thanks to its drying capabilities, it allows for quick handling.
- Excellent recoatability with most products of one or two components.

Recommended uses

- Suitable for use indoors and outdoors as well as in the workshop or on-site work.
- Suitable for maintenance on steel with manual preparation to grade St 3 (ISO 8501/1).
- It can be used as temporary protection (shop primer) or for new steel constructions.
- It can be used in moderately aggressive environments, such as those from industrial and agricultural buildings, and in all types of civil buildings (residential areas, halls, schools, hospitals, hotels, etc.)

Certifications and approvals

- **UNE-EN 13501-1:2007:** reaction to fire euroclassification A2-s1,d0 which is equivalent to the old M0 (UNE 23727: 1990).

Basic data

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

Colour:	Grey, white and red
Finish:	Matt
Volume solids:	42%± 3%
Density:	1.45 ± 0.05 g/ml
Indicated film thickness, dry:	Min: 20 µm Max: 80 µm
Theoretical spreading rate:	21,0 m^2 / l (20 µm) 5,20 m^2 / l (80 µm)
Dry to touch (40 µm):	20 min
Fully dried (40 µm):	1 hour
Overcoat interval:	Min: 3 hours Max: unlimited
VOC content	420 g/l (European directive 2004/42/CE)
Resistance to dry temperature	80ºC

Data table for drying and recoatability (40 µm secas)

Temperature	5 ºC	15 ºC	25 ºC	40 ºC
Totally dried	45 m	30 m	20 m	5 m
Totally cured	4 h	2 h	1 h	30 m
Recoatability	24 h	8 h	3 h	1 h

* Referred to substrate temperature.
d: days; h: hours; m: minutes

Protecflam System standard

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

* It is possible to apply other primers.

Additional technical information

- Technical Bulletin 003. Ed.04-15. Protecflam system.
- Technical Bulletin 005. Ed.01-11. Intumescent paint.thickness measurement

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Surface preparation

Villatherm D Primer is applied directly to metal. The surface should be clean, dry and free of any contaminants, removing all traces that could harm the adhesion of the product. Use wire brushes and scrapers for disposal, and clean with water or solvent depending on the type of pollutant in question (SSPC-SP1).

- On steel abrasive blasting recommended Sa 2½ (ISO 8501/1): sandblast carefully to remove mill scale and other foreign material. Then vacuum any dust and dirt. This set-up improves product performance.

Minimal preparation is possible: power tooling the entire surface to St 3 grade (ISO 8501/1). It must be done first in one direction and then in the resulting perpendicular.

Villatherm D Primer can be applied over aged surfaces (maintenance): remove contaminants and clean to grade St 3 in the corroded or damaged areas. The surface should have roughness with no polished or shiny look. Make the corresponding patching in these areas and provide a general layer.

Application instructions

Villatherm D Primer is supplied as a one-component system. It must be stirred mechanically to obtain a homogeneous product. Adjust the viscosity using the recommended thinners.

Adequate ventilation is recommended during application, especially in confined spaces to facilitate drying and evaporation of solvents.

Thinner	VD-200P
Airless Spray	Dilution: 0-3 % by volume Noozle diameter: 0.017“ a 0.023“ Noozle pressure: 150-200 bars
Airbrush gun	Dilution: 10-15% en volumen Noozle diameter: 0.070”-0.086“ Noozle pressure: 3-4 bars
Brush / Roller	Dilution: 0-5% v by volume

Clean equipment with cleaning solvent after application. Due to quick drying, for prolonged applications it is recommended to wash the application equipment periodically to maintain optimal operating conditions.

Application conditions

- Minimum ambient temperature should be between 5 °C and 40 °C with a maximum relative humidity of 85 %.
- To avoid condensation, the substrate must be at least 3 °C above dew point.

Observations

- Although **Villatherm D Primer** provides good coverage in one layer, a second coat is recommended especially in welds and sharp edges to enhance its protection.
- The theoretical performance may vary depending on several factors including the method of application, surface roughness, losses during preparation and implementation, excessive thinning or application on uneven surfaces.
- For high thickness it is recommended to use an airless gun and not to dilute the product. If an airspray gun is used, several layers will be necessary.
- Excessive application or an excessively high dry thickness can prolong the drying time and produce surface defects.
- The product is not designed for very corrosive environments (greater than C3) or for steel in poor condition.
- Long-term recoatability depends on the preexisting condition of the coating.
- It is not recommended to repaint the product with chlorinated rubber based paints.
- Not suitable for continuous immersion in water or continuous condensation.

Security precautions

The security labels in the containers provide the necessary information for proper handling. It is important to meet the requirements of any relevant regulation. 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.

Welding works or removal of paint with flame may cause dust emissions and fumes. For this reason, it is necessary to use appropriate protective equipment.

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

Packaging and storage

Cans of 4 l, 20 l.

Keep for 12 months in the unopened original packaging, in a controlled environment at a temperature between 5ºC 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 premises.

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