RENITHERM® PMA 1200

Intumescent Waterborne Basecoat for structural steelwork Indoors and semi exposed areas

Fire resistance rating: up to 120 minutes

Product Description
Renitherm® PMA 1200 is a white thin film waterborne intumescent coating for the fire protection of internal and semi exposed structural steelwork.

Application Check List
The following instructions are for on-site application only. Seek our advice for off-site application.
Ensure that:
- Primer is compatible with Renitherm® PMA 1200 and has been applied correctly.
- Overcoating time for the Primer has not been exceeded
- All damage to the Primer has been repaired and re-primed
- Site and weather conditions are within the specification
- Renitherm® PMA 1200 is stored correctly
- Surface is dry, clean and free from contamination
- Correct spray equipment is used
- Application instruction have been read before starting of work
- Different basecoats are not applied on the same section of steel
- Equipment is clean and free from contaminants or dried material
- Wet film gauges are available for use

Surface Preparation
Renitherm® PMA 1200 should be applied onto a clean, undamaged, dry and primed steel surface only.
Following Primers are not compatible with Renitherm® PMA 1200: Chlorinated rubbers, Bitumen, Thermoplastic Primers. Contact AUDAX for compatibility of Primer if you intend to use different Primer like Renitherm® Primers.

Product Data

Specific Gravity:	1.37
Colour	white
Volume Solids:	68% ± 2% (ISO 3233:1998)
VOC	15 g/litre
Theoretical coverage:	1.4 ltr/m² at 1.0 mm DFT

Conditions during application
Renitherm® PMA 1200 is recommended for use and application on dry protected structural steel only. If the basecoat is allowed to get wet, it is likely to be damaged. Blistering and wrinkling may occur. Renitherm® PMA 1200 should only be applied when the air and steel temperatures are above 5°C. Relative humidity should be below 80% for successful

application. Steel surface temperature should be a minimum of 2°C above the dew point. Ensure the steel is dry and free from contact with rain or condensation during the application and drying of Renitherm® PMA 1200.

Application Methods
Renitherm® PMA 1200 is supplied ready for use and must not be thinned but should be thoroughly mechanically stirred prior to use.

Airless Spraying:
Renitherm® PMA 1200 may be applied to a maximum wet film thickness (WFT) of 1.2 mm in a single spray coat comprising of several passes. Achieving of maximum loadings will depend on site conditions.
Build up thickness to achieve loading required in several quick passes. It may be possible to apply two coats of Renitherm® PMA 1200 in one day particularly if the atmospheric temperature is above 20°C and relative humidity below 70%. However before doing this, ensure that previously applied coat is dry, particularly in the web/flange junctions.

Airless spray equipment is recommended and should match these guidelines:

Tip size	19 – 25
Fan Angle	20° - 40°
Operating Pressure	2500 – 3000 psi
Hose diameter	10 mm (⅜") internal diameter
Hose length	Max. 60 metres

Brush / Roller Application:
For brush application use a 'laying on' technique to avoid heavy brush marking.
Maximum wet film per coat when using a brush or roller is 1.0 mm. A short piled roller will produce a light textured finish.

Thickness Requirements
During the application, measure the wet film thickness frequently with the WFT gauge provided to ensure the correct thickness is being applied.
To use the gauge, insert the teeth into the wet basecoat. The last tooth to be coated indicates the wet film thickness achieved.
In the event of over or under applications, adjustments to the loading rates of subsequent coats will be required.

Drying Times
Drying of Renitherm® PMA 1200 is depending upon a number of factors like
- ❖ Temperature
- ❖ Air Movement
- ❖ Humidity
- ❖ Method of Application
- ❖ Thickness of coating

High humidity and low air movement or low steel temperatures can result in condensation on the steelwork causing prolonged drying times and possibly poor basecoat adhesion.

Overcoating Times in Hours
Indication of recoat or topsealing times taking into account loading areas and application methods are given below:

Hours per application (0.3 mm WFT) – thin coat
Hours per application (0.6 mm WFT) – medium coat
Hours per application (1.2 mm WFT) – thick coat

		10 °C		20 °C		30 °C	
RH	Spray	Still Air Hrs	Air Flow Hrs	Still Air Hrs	Air Flow Hrs	Still Air Hrs	Air Flow Hrs
30%	Thin Medium Thick	8 6 12	2 ½ 3 ½ 4 ½	4 6 8	2 3 4	4 5 6	1 ½ 2 ½ 3
50%	Thin Medium Thick	10 12 18	3 4 6	6 8 12	3 4 5	5 6 10	1 ½ 3 3 ½
70%	Thin Medium Thick	12 18 24	6 9 12	10 12 18	5 7 9	8 10 12	3 6 7

- Brushing or rolling adds about 20% to drying time, compared to spraying
- Drying are doubled at 5 °C or at over 75% relative humidity
- Final drying time before topsealing is a minimum of 16 hours
- These figures are based on constant conditions, fluctuations up or down will give variations to the drying time. If overnight condensation causes wetting a further full drying period should be allowed.

Final thickness check
Take dry film thickness (DFT) readings as soon as coating is sufficiently hard to allow reading to be made without indenting surface.
DFT's may be taken using equipment such as an electronic electromagnetic type recorder. Ensure that the DFT of the primer is deducted from the reading of the intumescent basecoat. Do not apply topseal until the readings are in accordance with the specified thicknesses.

Application of topseal
Once DFT's have been achieved as specified, Renitherm® TC topseal can be applied. Make sure that Renitherm® PMA 1200 is completely dry before applying topseal.

Maintenance
Damaged areas should be abraded back to a sound surface. The surface should then be clean and dry before re-applying. Renitherm® Filler may be used for repairing scratches and chips. Once repaired, topseal should be re-applied.

Storage
Renitherm® PMA 1200 should be stored internally between +5 °C and +30 °C. Do not store below +5 °C. At temperatures above 25 °C the shelf life will be reduced. Shelf life normally is 12 months in originally sealed containers.

AUDAX-Keck GmbH, Weiherstr. 10, 75365 Calw / Germany
☎ +49 7051 1625-0 +49 7051 1625-50 fire@audax.de www.audax.de