

Fireshield™

Steel 1002

Waterborne Intumescent Coating for Structural Steel up to 120 minutes

PRODUCT DESCRIPTION

Fireshield® Steel 1002 is a single pack, waterborne intumescent coating with a smooth white finish, designed for use on interior structural steel providing up to 120 minutes fire protection.

Steel 1002 is a more environmentally friendly option and is designed to offer a superior architectural finish particularly for exposed I-section beams, columns and hollow sections.

Coating Requirements

Sequence of required coatings for ISO 12944-2 C1 interior environment installation:

1. Fireshield® approved primer coat.
2. Fireshield® Steel 1002.

Sequence of required coatings when used in ISO 12944-2 C2 and C3 interior environments, or areas where constant air humidity is over 75%, or when a washable surface is required:

1. Fireshield® approved primer coat.
2. Fireshield® Steel 1002
3. Fireshield® Approved Top Coat

NOTE: The dry film thickness must be measured during application to ensure the specified film thickness has been achieved before a topcoat is applied.

All steel sections must be coated with the correct film thickness as scheduled to achieve the required fire rating for compliance purposes. Final dry film thickness's should not exceed over 30% of the specified dry film thickness scheduled.

Maximum film thickness

At +25°C and 50% relative humidity the recommended maximum wet film thickness is 1000µm per coat.

Applying too thick or more than 1000µm in one coat may cause:

- Cracking
- Poor adhesion
- Delay in drying time.

NOTE: The maximum film thickness may be reduced by poor air flow and environmental conditions differing from those listed above, which are a guide only. Contact Fireshield® for more information.

Primers

Steel 1002 can only be applied to a primed surface. For the Fireshield® approved primers list got to www.fireshieldcoatings.com.

Topcoats

Steel 1002 can only be top coated with Fireshield® approved top coats. For the approved top coats list got to www.fireshieldcoatings.com.

Limitations

- **For interior use only.** Do not use on exterior steel structure.
- Fireshield® Steel 1002 is an industrial product and should only be applied by Registered Applicators.

TECHNICAL INFORMATION

Specific gravity	1.3 +/- 3%
Non-volatile content	69%
Flash point	Non-combustible
VOC	<50 gram/litre
Colour	White / flat
Packaging	19 litre approx. / 25kg weight.
Mixing	Mechanically mix.
Thinning	DO NOT THIN!
Clean up	Clean potable water
Wet Film (WFT)	
655µm	450µm
1155µm	795µm
2900µm	2000µm
5800µm	4000µm
Dry Film (DFT)	

Drying times

At a minimum air temperature of +23°C and relative air humidity of 50% the following drying times are applicable:

- **8 hours to between coats of Steel 1002.**
- **48 hours before top coating with Fireshield® approved top coat.**

NOTE: Drying times have been calculated with a wet film thickness of 800µm

Dry times may be lengthened by poor air flow and environmental conditions differing from those listed above, which are a guide only. Contact Fireshield® for more information.

Application should not take place in conditions which are deteriorating, e.g. the temperature is falling or there is a risk of condensation forming. If condensation occurs over night during curing, dry times must begin again the following day.

Storage conditions:

Recommended storage conditions:

- Store at a temperature above +5°C and below +35°C
- Store indoors and undercover in temperate conditions.
- Store away from direct sunlight, do not expose to extreme heat.
- Do not allow to freeze.
- Keep containers closed when not in use.
- **Keep out of reach children!**

Shelf life

12 months at +25°C if stored in original sealed containers under recommended storage conditions listed above.

APPLICATION NOTES

Steel 1002 must be applied in strict accordance with the Fireshield® Application Instructions. In particular the applicator should ensure:

- Any steel surface that is to be coated is at a temperature above +5°C and below +35°C and is at least +3°C above the dew point.
- The surface to be coated must be completely clean and dry, remove all rust, dust, oil, grease, loose material or other contaminants as per AS1627.1, Definitions 2.1.
- Check compatibility with any previous applied product before application.

Precautions

The following precautions must be taken:

- All work involving the application and use of this product should be compliant with all relevant National Health, Work Safety & Environmental standards and regulations.
- Read the Fireshield Application Instructions in full before application.
- Before use read the Fireshield 1002 Material Safety Data Sheet (MSDS) and have a copy available on site at all times.
- Where conditions may require variation from the recommendations on this Product Data Sheet contact Fireshield for advice prior to painting. Do not apply in conditions outside the parameters stated in this document without the express written consent of Fireshield.

Application Environment

During application and curing day or night ensure that:

- The air temperature must be between +10°C minimum to a maximum +35°C.
- The relative air humidity level is between 20% to 80%.
- Protect from wetting/moisture/windblown rain and water pooling on or around the coated steel section.



It is the user's responsibility to check that you have the latest technical datasheet available by visiting fireshieldcoatings.com or checking with your local Fireshield Representative as the information contained in this technical data sheet is modified from time to time in line with our policy of continuous product development. The information in this data sheet is not intended to be exhaustive; any person using the product for any purpose other than that specifically recommended in this data sheet does so at their own risk. All advice given or statements made about the product (whether in this data sheet or otherwise) are correct to the best of our knowledge, Fireshield has no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing to do so, we do not accept any liability at all for the performance of the product or for (subject to the maximum extent permitted by law) any loss or damage arising out of the use of the product. Fireshield hereby disclaim any warranties or representations, express or implied, by operation of law or otherwise, including, without limitation, any implied warranty of merchantability or fitness for a particular purpose. You should request a copy of this document and review it carefully.

APPLICATION METHOD



Airless Spray

Airless spray is the recommended method of application and gives the best result. Airless spray with an in-line heater (heater maximum temperature +35°C) can be used to assist application in the minimum environmental temperature range.

Airless Equipment Recommendations

Pump flow rate	5 litres per minute e.g Graco Mk V
Spray Gun	Graco Heavy Duty Texture Gun or similar
Spray Tip	Graco LTX425 switch tip and guard or similar. Orifice size range of .015" - .021". Choose appropriate fan width depending upon structure(s) to be coated.
Atomising Pressure	2,500 - 3,000 P.S.I
Material Hose I.D	Up to 30mtrs of 3/8" material line and 3mtrs of 1/4" whip line.



Brush

Brush application only suitable for small areas or touch-up and may result in a textured finish. Care must be taken to achieve the required specified dry film thickness. Typically, 100-300µm can be achieved.



Roller

Roller application only suitable for small areas or touch-up and may result in a textured finish. Care must be taken to achieve the required specified dry film thickness. Typically, 100-300µm can be achieved.

Compliance

Fully compliant for use in New Zealand. Fire Tested to EN13381-8:2013 and assessed by Exova Warringtonfire to NZS3404: Part 1 : 1997 and complying with the New Zealand Building Code B1/VM1 and C2/AS1-C6/AS1 Section C5.1.1.

Supplier

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