

# Steel 1002

Structural steel intumescent coating up to 120 minute FRR.

## PRODUCT INFORMATION

Fireshield® Steel 1002 is a waterborne, thin film intumescent coating with a matt white finish, designed for use on interior structural steel open and closed sections providing up to 120 minute fire protection.

## CONDITIONS OF USE

Steel 1002 is an industrial product and should only be applied by Registered Applicators. Steel 1002 can be used in conjunction with the Fireshield Cladding Study which allows timber and plasterboard to be attached to the coated surface, contact Fireshield® prior to specification.

## COATING REQUIREMENTS

For C1 interior dry zone installation (concealed steel):

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

For C2 interior zone exposed to view, in 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 should be measured during application to ensure the specified film thicknesses have been achieved before any 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.

## MAXIMUM FILM THICKNESS

At +25°C air temperature 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 AND TOP COATS

**Steel 1002** can only be applied to a primed surface. For the list of Fireshield® approved primers list go to [www.fireshieldcoatings.com](http://www.fireshieldcoatings.com).

## WEATHER PROTECTION DURING CONSTRUCTION PHASE

During construction, we recommend the application of Fireshield® **WeatherSeal** to mitigate the risk of moisture ingress into the coating. Do not let water pool on coated surfaces or at the base of columns.

## LIMITATIONS

- During the construction phase use Fireshield WeatherSeal to protect Steel 1002 for up to 6 months protection.
- Do not let water pool on the coated surface.
- **For interior use only.** Do not use on steel structure permanently exposed to weather.
- All intumescent coatings require an expansion gap of 50 x the dry film thickness from the coated surface. However Steel 1002 can have timber and plasterboard attached to the coated surface, see the Fireshield Cladding Guide for full details prior to construction.

## TECHNICAL INFORMATION

Specific gravity	1.3 +/- 3%
Non-volatile content	67%
Flash point	Non-combustible
Colour	White / flat
Packaging	19 litre / 25kg weight approx.
Mixing	Thorough mechanical mix.
Thinning	<b>DO NOT THIN!</b>
Clean up	Clean potable water
VOC	44 gram / litre

	Wet Film (WFT)	Dry Film (DFT)
	728µm	500µm
	1092µm	750µm
	2184µm	1500µm
	3640µm	2500µm

## Drying times

The following drying times have been measured with a wet film thickness of 550µm:

Air Temperature (°C)	5°	15°	25°	35°
Dry to Touch (hours)	3.5	2.5	2.0	1.0
Dry to Hard (hours)	4.5	3.5	2.5	1.5
Re-coat time min. (hours)	8	8	8	8
Re-coat time max. (days)	free	free	free	free
Top Coating min. (hours)	6.0	5.0	5.0	5.0

## NOTE:

Drying times have been calculated with a wet film thickness of 550µm. Do not top coat unless dry hard.

Dry times may be lengthened by poor air flow, high relative humidity 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 before the product is cured

**APPLICATION NOTES**

The product must be applied in strict accordance with the Fireshield® Application Guide. 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.
- Application should be completed in conjunction with the FPANZ Intumescent Code of Practice.

**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® Steel 1002 Application Guide in full before application.
- Before use read the Steel 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 drying period, day or night ensure that:

- The air temperature is between +5°C minimum to a maximum +35°C.
- The relative air humidity level is between 20% to 85%.
- During application and drying, protect from direct wetting/ moisture/windblown rain and water pooling on or around the coated steel section. See section on WeatherSeal for protection during construction.

**Environmental**

Fireshield® is a member of the International Living Future Institute, Fireshield® Steel 1002 is Red List Free and has Declare status.



**Compliance**

**New Zealand:**

Tested to EN13381-8 :2013 and assessed by Exova Warringtonfire to BS476 parts 21 and 22 and 5th Edition Yellow Book using NZS 3404: Part 1, 1997 and complying with the New Zealand Building Code B1/VM1 and C2/AS1-C6/AS1 Section C5.1.1.

**Australia:**

Not available in Australia. Contact Fireshield for alternative products.

**APPLICATION METHOD**

**Airless Spray**

Airless spray is the recommended method of application and gives the best result. Airless spray with an in-line heater /heated hose (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 minimum
Spray Gun	Heavy Duty Texture Gun or similar
Spray Tip	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	Up to 30mtrs of 3/8" material line and 3mtrs of 1/4" whip line. Heated hose can be used max 35°C

**Brush**

Brush application only suitable for small areas or touch-up and may result in a textured finish.

**Roller**

Roller application only suitable for small areas or touch-up and may result in a textured finish.

**STORAGE**

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.

**Supplier**

Fireshield® New Zealand  
825 Colombo Street  
Christchurch 8013,  
New Zealand  
Ph: 0800 347 374

**Manufacturer**

Protega  
Verkstadsagan 6B, Trelleborg  
Sweden



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.