



STEEL1002

Interior waterborne intumescent coating up to 120 minutes 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 Fireshield® Registered Applicators.

COATING REQUIREMENTS

For C1 interior dry zone installation (concealed steel), for C1 exposed to view see C2 coating specification below:

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

For C2 interior zones concealed and exposed to view, in areas where constant air humidity is over 85%, or when a washable surface is required:

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

NOTE: All steel sections must be coated with the correct film thickness as scheduled to achieve the required fire rating for compliance purposes. Steel 1002 dry film thickness must be measured before any topcoat is applied to ensure the correct film thickness is applied.

MAXIMUM FILM THICKNESS

At +23°C air temperature, sufficient air exchanges (air flow) and 50% relative humidity the recommended maximum wet film thickness (WFT) is 1000µm per coat. Applying above 1000µm in one coat will cause cracking, poor intercoat adhesion and delays in drying time.

NOTE: The maximum film thickness per coat will be reduced by poor air flow, project specific environmental conditions differing from those listed above which are a guide only and the complexity of the steel section being coated. Also see Multi Coat Application below.

PRIMERS AND TOP COATS

Steel 1002 can only be applied to a primed and SA2.5 blasted steel surface. All primers and top coats must be approved by Fireshield, for the list of Fireshield® approved primers and top coats list go to 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

- For interior use only. **Do not use on exterior steel.**
- Intumescent coatings generally 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 Attachment Guide for full details.
- Multi coat application of single pack products at high film builds will slow curing times, consider Fireshield®920KS epoxy for high film build application for faster curing times.
- Dark decorative top coats (LRV≤25) used on exposed steel subject to direct sunlight such as behind windows or in atriums can be problematic, contact Fireshield before application.

TECHNICAL INFORMATION

Specific gravity	1.3 +/- 3%
Non-volatile content	67%
Flash point	Non-combustible
Colour	White / flat
Packaging	19 litre / 25kg buckets.
Mixing	Thorough mechanical mix.
Thinning	DO NOT THIN!
Clean up	Water
VOC	44 gram / litre
Environmental	Green Star
Film thickness	1000µm WFT = 685µm DFT

*WFT = Wet film thickness DFT=Dry film thickness

DRYING TIMES

The following drying times have been measured with a wet film thickness of 1000µm at a controlled temperature of 23°C and 50% relative humidity:

Dry to touch (surface)	4 hours
Dry to WeatherSeal	8 hours minimum
Dry to recoat with self.	8 hours minimum.
Dry to decorative top coat.	48 hours.

Drying times have been calculated with a wet film thickness of 1000µm. Do not top coat unless dry hard, see Multi Coat Application for reduction of maximum film builds.

Dry times will be lengthened by poor air flow, cold temperatures, high relative humidity and e 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

COMPLIANCE

New Zealand:

Tested to EN13381-8 :2013 and assessed by Exova Warringtonfire to BS476 parts 21 and 22 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.

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.

MULTI COAT APPLICATION

For multi coat application ensure that the previous coat is dry using a fingernail test or digital moisture meter, intercoat adhesion can be affected if the previous coat is not 100% dry. Reduce the max film build per coat to 700 microns WFT if necessary.

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. Seal with Fireshield® WeatherSeal for protection during construction.

ENVIRONMENTAL

Fireshield® Steel 1002 is has various environmental approvals and certifications, EPD documents are available:

- Red List Free
- Declare Status (Living Futures Building Council)
- Green Star

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

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Manufacturer



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.