

Steel 1001

Structural steel intumescent coating 30 to 60 minute FRR.

PRODUCT DESCRIPTION

Fireshield® Steel 1001 is a waterborne, thin film intumescent coating with a matt white finish, designed for use on interior structural steel open and closed sections providing 30 to 60 minute FRR.

Conditions of use

Steel 1001 is an industrial product and should only be applied by Registered Applicators. Steel 1001 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 1001

For C2-C3 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 1001
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 1001 can only be applied to a primed surface. For the list of Fireshield® approved primers list got 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

- During the construction phase use Fireshield WeatherSeal to protect Steel 1001 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.

TECHNICAL INFORMATION

Specific gravity	1.4 +/- 3%
Non-volatile content	68 +/- 2%
Flash point	Non-combustible
Colour	White / flat
Packaging	18 litre / 25kg weight approx.
Mixing	1 to 2 minute mechanical mix.
Thinning	DO NOT THIN!
Clean up	Clean potable water
VOC	<50 gram / litre

Wet Film (WFT)	Dry Film (DFT)
715µm	500µm
1070µm	750µm
2140µm	1500µm
3570µm	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 FPAZ 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 1001** Application Guide in full before application.
- Before use read the **Steel 1001** 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. Contact Fireshield® for protective measures.

Environmental

Fireshield® is a member of the International Living Future Institute, Fireshield® **Steel 1001** 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:

Fire Tested to EN13381-8:2013 and assessed by Exova Warringtonfire to AS1530.4 complying with the NCC 2019 Building code of Australia Volume 2, Schedule 5.

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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