

FIRESHIELD SQ476

Steel Intumescent coating up to 120 minutes FRR



PRODUCT DESCRIPTION

Fireshield® SQ476 is a single component, solvent based acrylic thin film intumescent basecoat for the fire protection of structural steelwork. Fireshield® SQ476 has been optimised and formulated for 120-minute FRR.

CONDITIONS OF USE:

Fireshield SQ476 is an industrial product and can only be applied by Accredited Applicators.

This product provides fire protection to steel beams and columns, for both open and hollow section profiles.

COATING REQUIREMENTS:

Interior or C1 use sequence of required coatings:

1. Fireshield Approved primer coat.
2. Fireshield® SQ476.

Exterior use or C2-C4 or when used in areas where constant air humidity is over 75% or when a washable surface is required, sequence of required coatings:

3. Fireshield approved primer coat (suitable for Corrosion Zone).
4. Fireshield SQ476
5. Fireshield Approved Top Coats

NOTE: Dry film thicknesses must be checked to ensure the specified thickness has 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. Final dry film thicknesses 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 **1000 µm per coat**.

Applying too thick in one coat may cause:

- Cracking
- Poor adhesion
- Delay of drying time.

NOTE: 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:

Fireshield® SQ476 can only be applied to a primed surface. For the Fireshield Approved Primers list go to www.fireshieldcoatings.com.

TOPCOATS:

Fireshield® SQ476 can only be top coated with Fireshield approved top coats. For the Fireshield Approved Top Coats list go to www.fireshieldcoatings.com. SQ476 can be used in C1 Zones without a top coat, for zones up to C4 an approved top coat system is required.

LIMITATIONS:

- Do not use on exterior steel structure without an approved top coat system.

TECHNICAL INFORMATION

STORAGE CONDITIONS:

Recommended storage conditions:

- Keep cool. Store at a temperature above +5°C and below +35°C.
- Store in a well-ventilated place.
- Keep lid closed when not in use.
- Store locked up.
- Do not store in the vicinity of fire as the contents are flammable.
- Do not drop or overload when shipping or storing the product.
- **Keep out of reach of children!**

SHELF LIFE:

Recommended 18 months at +25°C if stored in original sealed containers under recommended storage conditions listed above.

VOLUME SOLIDS: 65%

SPECIFIC GRAVITY: 1.3

VISCOSITY: High viscosity

FLASH POINT: 32°C (hermitically)

COLOUR/GLOSS: White / Flat

PACKAGING: Volume 18 litre / weight 23.4 kg approx

MIXING: Mechanically mix. Max thin 1%.

DO NOT OVER THIN!

CLEAN UP: White Spirits

THEORETICAL COVERAGE: Approx. 6.5m² / litre at 100µm DFT.
Approx. 1.3m² / litre at 500µm DFT.

DRYING TIMES:

The following drying times have been measured with a wet film thickness of 1000 µm:

At a minimum air temperature of +25°C and relative air humidity of 50% the following drying times are applicable:

- 24 hours between coats of Fireshield SQ476
- 72 hours minimum before top coating with Fireshield Approved top coat.

At a minimum air temperature of +10°C and relative air humidity of 50% the following drying times are applicable:

- 48 hours between coats of Fireshield SQ476: and
- 7 days before top coating with Fireshield Approved top coat.

NOTE:

Above times at +25°C and below 85% relative Humidity in well-ventilated conditions. Dry times may be lengthened by poor air flow and environmental conditions differing from those listed above, which are a guide only.

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.

Dry film thickness must be checked to ensure that specified thickness has been achieved before the protective top coat is applied.

FIRESHIELD SQ476

Steel Intumescent coating up to 120 minutes FRR



APPLICATION NOTES

The product 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° 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.
- Check compatibility with any previous applied product before application.

ENVIRONMENT:

During application and curing day or night ensure that:

- The air temperature must be between +5°C minimum to a maximum +35°C.
- The relative air humidity level is below 85%.
- Protect from wetting/moisture/windblown rain and do not let water pool on or around the coated steel section.

APPLICATION METHOD:

AIRLESS SPRAY:

Airless spray gives the best result.

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, 100-300 microns(µm) 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, 100-300 µm can be achieved.

COMPLIANCE:

AUSTRALIA: Tested to BS476 parts 21 : 1987 and assessed by Exova Warringtonfire to AS1530.4 using AS4100:1998 complying with the NCC 2019 Building code of Australia Volume 2, Schedule 5.

NEW ZEALAND: Tested to BS476 parts 21 : 1987 as per NZS3404:Part 1, 1997 and complying with the New Zealand Building Code B1/VM1 and C2/AS1-C6/AS1 Section C5.1.1.

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.
- Before use Read the Fireshield SQ476 Material Safety Data Sheet (MSDS) before application 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.
- When welding or heat cutting steel sections coated with Fireshield SQ476, the appropriate personal protective equipment must be used and adequate ventilation to avoid dust and fumes created.
- Prior to the application of the topcoat, the applicator must ensure that the specified dry film thickness of SQ476 has been achieved. The SQ476 material should be allowed to harden sufficiently so that thickness readings can be taken.
- Top coated steelwork should not be exposed to direct sunlight and/or elevated temperatures immediately after application, as this may encourage a blistering effect caused by volatilisation of residual retained solvent within the SQ476 product. This can be exaggerated, in the case of direct sunlight, by the use of dark coloured topcoats that absorb more heat and so develop higher surface temperatures.

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.