

# Fireshield® 920KS

Interior and Exterior 2-pack Epoxy Intumescent Coating 30 - 120 minutes FRR.

## PRODUCT INFORMATION

### DESCRIPTION

Fireshield® 920KS is a high build epoxy, solvent-free intumescent coating that does not require any form of reinforcement. For use on interior and exterior structural steel open and closed sections for 30 to 120 minutes protection from cellulosic fire in C1 to C5H corrosivity zones.

Fireshield® 920KS is available as a full Fireshield® system, can be applied direct to blasted steel or can be used with approved primers and top coats from other manufacturers. Fireshield® 920KS available with fire rated bolt caps see TD-FS920KS BOLT.

### CONDITIONS OF USE

Fireshield® 920KS is an industrial product that can be applied on or off site by Fireshield® Registered Applicators.

Intumescent coatings require an expansion gap of 50 x the dry film thickness from the coated surface. Fireshield® 920KS can have timber and plasterboard attached directly to the coated surface up to 60 mins FRR, see the Fireshield® Attachment Guide for full details.

### MAXIMUM FILM THICKNESS

The recommended maximum film thickness is 3000µm per coat. Complex steel sections and poor environmental conditions can reduce the maximum film build per coat and extend dry times.

### SURFACE PREPARATION

Abrasive blast-clean to a minimum of AS1627.4 Class 2.5 (SSPC SP10) the blast profile should be a minimum of 50 microns for steel substrates, with reference to visual standard ISO 8501-2. Blasted surface must comply with SSPC-SP1, remove all water soluble salts by using appropriate methods.

For galvanised steel substrates prepare steel substrates by sweep abrasive blasting to provide a roughened surface, to a standard similar to Sa 1 (ISO 8501-1)

Fireshield® 920KS can be applied direct-to-steel for some service environments - contact Fireshield for details, application should be undertaken before oxidation of the blast cleaned surface occurs.

### PRIMERS

Fireshield® 920KS can be applied over a wide range of approved primers:

- Fireshield® system primers Hensoground 2K-EP and Hensoground 2K.
- Approved generic primers EAD 21/0475, contact Fireshield®.
- Fireshield® approved primers, go to [www.fireshieldcoatings.com](http://www.fireshieldcoatings.com) for the approved primers list.

### TOP COATS

Where a decorative finish is required, Fireshield® 920KS can be top coated with the following approved top coats:

- Fireshield® Hensotop 2K PU.
- Fireshield® approved top coats, go to [www.fireshieldcoatings.com](http://www.fireshieldcoatings.com) for the approved top coats list.

See Dry Times for application of top coats.

### WEATHER PROTECTION DURING CONSTRUCTION PHASE

No limitations for surfaces with an anti-corrosive primer for exposure to exterior elements, UV exposure effects may occur such as chalking and poring which have no effect on the fire protection. Contact Fireshield for direct to steel application without anti-corrosive primer.

### ENVIRONMENTAL

- Green Star compliant VOC <30 g/L tested to ISO 11890-2:2020-12.
- 100% solvent free + AgBB tested to emissions class A+
- Free of halogens, alkylphenol and benzyl alcohol.

## TECHNICAL INFORMATION

Density	1.3 kg/l (± 1%)
Volume Solids	100% by volume and weight
Flash point (C°)	Non-combustible: Pt A and Pt B.
Colour	Matt Grey (RAL7045)
VOC	<30 gm/l ISO 11890-2:2020-12
Clean Up	Fireshield® V55
Tested bond strength	> 8 MPa (DIN EN ISO 4624)
Theoretical Coverage	1 kg at 1000 µm = 0.77m <sup>2</sup> coverage.

### DRY TIMES

1000 microns film thickness (at 23°C)

Touch Dry	~ 6 hrs (ISO 9117-3:2010)
Hard Dry	~ 24 hrs
Recoat (with self)	24 hrs min to 7 days max.
Top Coat	24 hrs minimum

3000 microns film thickness (at 23°C)

Touch Dry	~ 8 hrs (ISO 9117-3:2010)
Hard Dry	~ 30 hrs
Recoat (with self)	36 hrs min to max. 7 days
Top Coat	36 hrs minimum

\*See the Fireshield 920KS Application Guide AI:FS920KS for additional information. An increase in film thickness, a rise in the relative humidity can slow drying.

### PACKAGING

Single component airless machines (21 kg kit)

920KS Part A Base	15 kg
920KS Part B Hardener	6.0 kg

Plural component airless machines

920KS Part A Base	20 kg / 200 kg options
920KS Part B Hardener	20 kg / 200 kg options

Repair Kits

920KS Part A Base	2.5 kg
920KS Part B Hardener	1.0 kg

## APPLICATION NOTES

The product must be applied in strict accordance with the Fireshield® Application Guide AI:FS920KS by Registered Fireshield Applicators. In particular the Applicator should ensure:

- Store both Parts A and B at a minimum of +15°C for 24 hours prior to mixing and subsequent application.
- Any steel surface that is to be coated is at a temperature 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 and SSPC-SP1.
- Check compatibility with any previous applied product before application.
- Application should be completed in conjunction with the FPANZ or 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® 920KS Application Guide AI:FS920KS in full before application.
- Before use read the Fireshield® 920KS Material Safety Data Sheets Pt. A and Pt. B (MSDS) and have copies 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.

## APPLICATION ENVIRONMENT

During application and drying, day or night ensure that:

- The air temperature is between +10°C minimum to a maximum +35°C.
- The relative air humidity is < 80%.
- Optimal surface finish is obtained at a room temperature of +20°C to +30°C during application and curing.
- Environmental temperatures < 12 °C can affect the visual appearance of the final product, the flow properties during application and extend the drying time

## COMPLIANCE

### New Zealand:

Tested and assessed in accordance with EN 13381-8:2013 and BS476:1987 Parts 20 and 21 complying with NZS 3404 Pts 1 and 2:1997 and the New Zealand Building Code.

### Australia:

Tested and assessed in accordance with EN 13381-8:2013 complying with AS4100:1998 amendment 1 and with the National Construction Code.

## SUPPLIER

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## APPLICATION METHOD

The application of Fireshield® 920KS requires a high performance airless unit with paint heating unit(s) and feed pump(s) or gravity feed unit.

### AIRLESS SPRAY

2-component plural feed or single component with stainless hopper. See the Fireshield Application Guide for pump and tip settings.

### MIX RATIO

	920KS Base (Part A)	920 KS Hardener (Part B)
By Volume	2.5 parts	1 part
By Weight	100 parts	40 parts

### MIXING

Single-component airless equipment with stainless steel hopper:

- Thoroughly mix Part A (base) using a power mixer to a material temperature of at least +15 °C.
- Continue to power mix and add Part B (hardener) to the specified mixing ratio above.
- Continue power mixing for at least 5 minutes until the compound becomes homogeneous.
- It is recommended to keep the coating materials (base and hardener) in an appropriately temperature controlled room for at least 12 hours prior to their application.

### WORKING POT LIFE

+ 23 °C	+ 30 °C	+ 40 °C
~ 60 minutes	~ 45 minutes	~ 30 minutes

### CLEANING EQUIPMENT

Clean using Fireshield® V 55 cleaner immediately after completion or interruption such as protracted work stoppages. When completed, drain the cleaner material completely out of the airless equipment and hoses.

### BRUSH APPLICATION

Can be applied undiluted by brush to small areas to repair joints and bolt connections. Repair kits are available.

### TRANSPORT

When transporting steel sections that have been coated off site, handle with care to avoid damage.

### 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

Parts A and B : minimum 15 months when stored in original sealed containers in the conditions listed above, product is subject to re-inspection thereafter as shelf life is not an expiry date.

It is the user's responsibility to check that you have the latest technical datasheet available by visiting [fireshieldcoatings.com](http://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.