PRODUCT DATA SHEET

>120MINS

FIRESHIELDBOLT CAPS

Fire rated bolt and nut caps for interior and exterior galvanised or carbon bolts up to 120mins* FRR.

PRODUCT INFORMATION

SYSTEM DESCRIPTION

Fireshield® Bolt Caps are manufactured from Fireshield® 920KS a high build epoxy intumescent coating and utilise the same certification. 920KS Bolt Caps can be used on interior and exterior structural galvanised and carbon steel nuts and bolts for up to 120 minutes protection from cellulosic fire in C1 to C5H corrosivity zones.

Fireshield® Bolt Caps are fitted using **Fireshield®** 920KS epoxy as the adhesive filler, see Application Notes. The 920KS epoxy filler combined with the Fireshield® Bolt Cap provides up to 7000 microns dry film thickness of protection.

The installed Fireshield® Bolt Caps can be top coated with approved top coats, see the approved list SAPTCNZAU-920KS.

BOLT CAPS

- Bolt caps available in M12 to M36 sizes.
- No thread allowance.
- Install before or after intumescent application.

NUT CAPS

- Nut caps available in M12 to M36 sizes.
- With 5mm thread allowance.
- Install before or after intumescent application.

PRIMERS

Fireshield® Bolt Caps can be applied directly to the clean, unprimed galvanised or carbon nut/bolt, however if a primer is used the caps can be fitted over a wide range of approved primers for 920KS:

- Fireshield® system primers Hensogrund 2K-EP and Hensogrund 2K.
- Approved generic primers for interior only EAD 21/0475, contact Fireshield®.
- Fireshield® approved primers, go to www.fireshieldcoatings.com for the approved primers list for 920KS - SAPTCNZAU-920KS

TOP COATS

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

- Fireshield® Hensotop 2K PU.
- Fireshield® approved top coats, go to www.fireshieldcoatings.com for the approved top coats list for 920KS - SAPTCNZAU-920KS.

WEATHER PROTECTION DURING CONSTRUCTION PHASE

No limitations, UV exposure effects may occur such as colour fading which has no effect on the fire protection.

TECHNICAL INFORMATION

Adhesive Volume Solids	100% by volume and weight
Adhesive Flash point (C°)	Non-combustible.
Colour	Matt Grey (RAL7045)
Adhesive VOC	<30 gm/l ISO 11890-2:2020-12
Adhesive Clean Up	Fireshield® V55
Tested bond strength	> 8 MPa (DIN EN ISO 4624)
Environmental	Green Star / Solvent Free
Available Sizes	M12, M16, M20, M24, M27, M30 and M36

FIRESHIELD® 920KS ADHESIVE PACKAGING SIZES:

2K 920KS ready to go cartridge:

920KS Cartridge	520 gram (400 ml)

DRY TIMES FOR FIRESHIELD® 920KS ADHESIVE:

1000 microns film thickness (at 23°C)

Touch Dry	6 hrs (ISO 9117-3:2010)
Hard Dry	24 hrs

3000 microns film thickness (at 23°C)

Touch Dry	8 hrs (ISO 9117-3:2010)
Hard Dry	30 hrs

*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.

FIRESHIELD® BOLT CAPS 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.
- Keep out of reach children!

BOLT CAPS SHELF LIFE

Indefinite when stored in the conditions listed above.

LIMITATIONS

- Limited to a dry film thickness of 7000 microns for the primary fire rated member at 120 minutes.

INSTALLATION NOTES

Fireshield® Bolt Caps are installed using the Fireshield® 920KS 520gm 2K cartridge and 2-component manual gun dispenser.

Use Fireshield® 920KS 2-component 520gm cartridges and Fireshield® 2-component manual gun dispenser.

The Fireshield® 920KS 520gm 2K cartridge requires no preparation and can be dispensed directly from the manual gun into the bolt cap.

Alternatively Fireshield® 920KS kits can be used and applied with a putty knife or similar. Fireshield® 920KS standard epoxy kits must be used in strict accordance with the Fireshield® Application Guide AI:FS920KS.

The installer should ensure:

- Any steel surface that the bolt cap is affixed to is at a temperature below +35°C and is at least +3°C above the dew point.
- The bolt surface 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 coating if present before application.

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 installation.

SUPPLIER

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INSTALLATION METHOD

Fireshield® Bolt Caps can be installed during any phase of the construction program after the bolt and nut installation is complete:

- After steel erection.
- Before application of intumescent coating to the primary steel sections.
- After application of the intumescent coating to the primary steel section.

Prior to installation of the bolt caps it should be verified that the bolted connections are complete and installed in accordance with the project specification.

Prior to installation visually inspect each bolt cap for damage, any defective caps should be returned to Fireshield. Ensure that the bolt cap is the correct size for the bolt and nut connection.

APPLICATION OF FIRESHIELD® 920KS FILLER:

Fireshield® Bolt Caps are installed using the Fireshield® 920KS adhesive filler available in 520 gram 2K cartridges and the 2-component manual gun dispenser.

INSTALLATION ENVIRONMENT

During installation and drying of the 920KS adhesive, day or night ensure that:

- The air temperature is between +10°C minimum to a maximum +35°C.
- Temperatures < 10 °C can extend the adhesive drying time.
- The relative air humidity is < 80%.

Alternatively standard Fireshield® 920KS kits can be used for the adhesive and applied with a putty knife or similar to fill the Fireshield® Bolt Cap.

The combined dry film thickness of bolt cap and adhesive is up to 7000 microns.

- Fill the bolt cap with Fireshield®920KS to the top of the cap.
- Carefully place the full cap over the bolt or nut head and firmly press with even pressure ensuring full adhesion to the bolt or nut head, the cap must sit tight against the steel surface.
- For clean-up around the cap if requried, use V55 cleaner to wipe away any excess Fireshield®920KS epoxy filler.

920KS EPOXY ADHESIVE POT LIFE:

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

920KS ADHESIVE CLEANING UP

Clean equipment using Fireshield® V 55 or standard xylene based 2-pack epoxy intumescent cleaner.

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 AS4100:2020 amendment 1 and with the Australian National Construction Code.