Technical Insulation

Passive Fire Protection

Great Britain & Ireland

K-Stop® High Temperature Adhesive

Technical Data Sheet

Description

Kingspan K-Stop® High Temperature Adhesive contains a water based inorganic polymer and filler, and is designed to withstand temperatures greater than 1,200°C.

It is supplied as a ready to use thixotropic paste which exhibits excellent early grab and rapid bond strength.

After curing the product forms a cement with a permanent bond giving excellent adhesion in service.

K-Stop® High Temperature Adhesive can be used both as an adhesive and as a filler, with multiple usages where bonding or sealing very hot surfaces is required, or sustaining a seal or a bond within a fire situation without detachment.

General Properties

- Ideal for bonding mineral fibre boards to steel, timber and concrete, adding an extra layer of protection against heat transfer.
- Ideal for sealing joints on stoves, flues, grates and central heating boilers.
- Ideal for sealing annular gaps on high surface temperature pipes.
- Ideal for sealing and repairing small cracks and holes in car exhausts systems - stops noise and gas emission leaks.
- Suitable for most surfaces, including stone, brick, concrete, cement, plaster, timber, metals, stone wool, glass, paper, vitreous and ceramic surfaces and all inorganic materials (on plastics and painted surfaces, adhesion should be tested).
- Instant grab with no need for additional support (under correct applications).
- High bond strength when cured.
- Designed to withstand temperatures above 1,200°C.
- Seals and repairs systems in situ.
- Prevents escape of dangerous exhaust fumes from joints and repairs.
- Ready to use and easy to apply.
- Fast setting - air cures to a hard finish especially when heated, tack free in approx. 1 hour, good bond in 4 hours and full cure in 48 hours.
- Slump resistant.
- Shock and vibration resistant during service.
- No priming necessary for application to most materials.
- The fire performance specification of a bond has been derived when the adhesive has been let to cure for only 24 hours.
- Product is practically odourless and VOC free.
- Alkaline - does not attack acid sensitive substrates.
- 18 months storage time (under correct conditions).
- 30 years working life (under correct conditions).

Kingspan®

K-Stop® High Temperature Adhesive

Limitations

- Not intended for application on substrates that can exude certain oils and plasticizers or solvents.
- Not suitable for food contact or medical applications.
- Cannot be subject to sub-zero temperatures before setting (48 hours).
- Cannot be subjected directly to water or moisture.

Resistance to Fire

Substrate	Insulation Product	Classification
Steel I beams and columns, and rectangular or circular hollow columns	Mineral fibre stone wool boards or sections ≤ 6.4 kg/m^2 (e.g. 40 mm thick at 160 kg/m^3)	R 120*

* Limited by the approval of the mineral fibre boards used. Tested with 20 - 40 mm thick Kingspan K-Stop® Coated Batt (mineral fibre stone wool at 160 kg/m^3).

Test Standards & Observations

This Technical Data Sheet's references to fire resistance are based on the product's tests and classifications in accordance with BS EN 13381-4: 2013 (Test methods for determining the contribution to the fire resistance of structural members - Applied passive protection products to steel members) and analysis at various design temperatures ranging from 350°C to 750°C, in conjunction with the fire resistance test standard BS EN 1363-1: 2020* (Fire resistance tests - General requirements).

The adhesive was subjected to 1,150°C after 4 hours in the fire tests without any bonded mineral fibre boards detaching, including bonded boards to loaded beams with up to 39 mm central vertical deflection.

Tests with the K-Stop® High Temperature Adhesive outperformed comparison tests with CHP welding pins on identical steel sections, suggesting the adhesive adds to the fire resistance compared to normal fixing methods.

The product is CE marked.

* And all previous editions.

General Application Instructions

1 All surfaces must be clean and sound, free from dirt, grease and other contamination that can prevent full bond strength being achieved. Remove any rust by abrading the surface with a wire brush. Loose particles should be cleaned away before applying the K-Stop® High Temperature Adhesive.

2 Apply K-Stop® High Temperature Adhesive to the prepared surfaces evenly ensuring good contact, clamp immediately and smooth as required. A damp cloth or sponge may be used to remove excess. A little water may be used to smooth the surface if necessary.

3 As the K-Stop® High Temperature Adhesive hardens it will form a gas tight seal. Heat will accelerate the cure time.

4 Tools and any excess uncured material may be cleaned with water. Close container after use to preserve unused product.

Additional Instructions Bonding Mineral Fibres

1 Mineral fibre boards have a degree of loose fibres on the board surfaces, and to secure a good bond, it is recommended to apply a thin coating of K-Stop® High Temperature Adhesive to the boards on the areas that will be bonded to the substrate. Adhesive can be thinned slightly with clean water to reduce viscosity if required. All excess adhesive must be removed.

2 Leave to skin and dry (this will be in a relatively short space of time depending on atmospheric conditions).

3 Apply adhesive to the substrate with 5 x 5 mm toothed trowel leaving a uniform continuous toothed bed of K-Stop® High Temperature Adhesive. Do not allow to skin.

4 Place the board on the bed of adhesive. Once in place give the board a side to side movement to aid suction and contact to the adhesive.

5 Fill any gaps between boards using K-Stop® High Temperature Adhesive contained in a sealant cartridge using a nozzle with the appropriate sized opening.

6 All tools should be kept clean during and after each application; it is advised to keep tools in a bucket of clean water to prevent the adhesive setting on the tools.

These instructions should be used in conjunction with the approvals and instructions for the mineral fibre boards selected for the project.

K-Stop® High Temperature Adhesive

Emission Data (Indoor Air Quality)

Compound	Emission Rate After 4 Weeks
TVOC	< 5 µg/m^3
Formaldehyde	< 3 µg/m^3
Carcinogenic	< 1 µg/m^3

NB n.d. or < means not detected.

Regulation or Protocol	Conclusion
French VOC Regulation	A+
French CMR Regulation	Pass
Italian CAM	Pass
ABG / AgBB	Pass
Belgian Regulation	Pass
EMICODE	EC 1 PLUS
Indoor Air Comfort GOLD®	Pass
Blue Angel (DE-UZ 132)	Pass
BREEAM International	Exemplary Level
BREEAM NOR	Exemplary Level
M1	Pass

K-Stop® High Temperature Adhesive has been tested by Eurofins Product Testing; reports available upon request.

Technical Data

Condition	Ready for use paste
Cure System	Water loss, hardens in air and especially at raised temperatures
Specific Gravity	1.7 - 1.9
Flash Point	None
Colour	Beige
Odour	Barely perceptible odour
Evaporation Rate	Negligible
Solubility in Water	Soluble
Viscosity	Viscous
pH	11.0
Solids content (% w/w)	> 70 %
Flexibility	None
Tack Free	Approx. 60 minutes
Film Forming	Approx. 10 minutes
Totally Hardened	12 to 48 hours depending on temperature
Application Temperature	+5°C to +30°C (during application and curing)
Service Temperature	-50°C to +1,200°C (avoid condensation on product)
Shelf Life & Storage	Up to 18 months when stored in unopened containers under cool dry conditions. Avoid frost and extremes of temperature
Working Life	Minimum 30 years if protected from water / moisture contact
Packaging	Box containing 25 cartridges each 310 ml Pallets 310 ml: 64 boxes per pallet equals 1600 pcs

Health and Safety

Keep container tightly closed when not in use. Use the product in a well-ventilated area. Avoid contact with the eyes and skin. Wash the material from the skin while still wet using water. Material in contact with eyes should be washed out immediately with water. Seek medical advice if discomfort persists. More detailed information can be found in the relevant Safety Data Sheet.

Contact Details

Great Britain

Kingspan Technical Insulation Ltd
Harvey Road | Burnt Mills Industrial Estate
Basildon | SS13 1QJ

T: +44 (0) 1524 388 898
E: sales.pfp@kingspan.com
www.kingspanpassivefireprotection.co.uk

For individual department contact details please visit
www.kingspantechnicalinsulation.co.uk/contacts

Ireland

Kingspan Insulation Ltd
Castleblayney | County Monaghan

T: +353 (0) 42 975 4219
E: sales.pfp@kingspan.com
www.kingspantechnicalinsulation.ie

Technical Data Sheet to
ETA 22/0203

To check that you have the latest version of this brochure please visit **www.kingspanpassivefireprotection.co.uk** or scan the QR code directly above.

To access pre-existing product information or information relating to previously sold/discontinued products please email info.kti@kingspan.com.

First Issue | 07/2025