TECHNICAL DATA SHEET Issue 2 - Jan 2025

Heatshield S550

Premium Intumescent Sealant

Product Description

Heatshield S550 is a premium quality, water based acrylic intumescent sealant used to maintain fire resistance in compartment walls (including gypsum drywalls) and floors where openings in these construction elements are formed to accommodate building service penetrations or where linear joints (discontinuities) are located. In a fire situation, **Heatshield S550** expands to form a robust flexible barrier which prevents the passage of flames and hot gases through these openings and which restricts temperature rise on the non-fire side of the wall or floor. **Heatshield S550** is comprehensively tested and independently certified for use with a wide range of penetrating services, including small diameter plastic pipes, Insulated Copper & Steel Pipes, and data cable bundles. It can be used in low movement linear gaps up to 40mm wide. (see performance data).

Heatshield S550 is available in 300ml cartridges and 600ml foils as standard.

300ml cartridges packed - 25 per carton
600ml foils packed - 20 per carton

Intended Uses

Heatshield S500 is comprehensively tested and independently certified in a wide range of applications, from linear gap seals in concrete walls and floors to service penetrations seals in concrete walls and floors and gypsum drywalls.

A. Linear Gap Seals

240 Mins for joints up to 40mm wide in concrete walls.

240 Mins for head of wall up to 200mm wide in concrete walls when used with B50-XT Batts

120 Mins up to 30mm wide joints in concrete floors.

B. Penetration Seals

120 Mins fire resistance (Insulation & Integrity) when used to seal a wide range of services penetrating concrete walls and floors and gypsum drywalls. Single electrical cables, data cable bundles, insulated steel pipes up to 76mm diam and copper pipes up to 108mm diameter.

C. Plastic Conduits

120 Mins fire resistance (Insulation & Integrity) when used to seal a range of PVC-u electrical conduits up to 32mm diam x 3.25mm refer to ETA & relevant detail drawings.

NOTE: backing material for all installations is min 50kg mineral fibre packed into void.

Application Instructions

Heatshield S550 is easily installed using readily available hand tools (standard cartridge gun or professional foil gun, knife, and spatula or flat tool for finishing).

A. Linear Joints

1. Remove all loose debris, grease, oil and bituminous material.
2. Install backing material as per manufacturers recommendations. A width to depth ratio of 2:1 for the sealant is recommended to avoid future defects caused by material shrinkage.
3. Extrude sealant into joint removing any air voids by applying light pressure. Use a wet spatula or flat tool to provide a smooth finish to the seal.

B. Penetration Seals

1. Ensure the annular space around the service penetration complies with the manufacturers recommendations, and is free from contaminants and loose material.
2. Install backing material to allow specified depth of sealant around services.
3. Cut nozzle to desired angle/bead size and extrude into the annular space. Remove air voids by applying light pressure and ensure the sealant is adequately adhered to the substrate and service penetration.

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Heatshield

Key Benefits

- Independently Tested & Certified
- Water Based
- Solvent Free
- Easy Installation
- Flexible
- Durable
- Non Hazardous
- Economic Solution
- 3rd Party Audited & Accredited
- International Approvals
- Readily Available via Local Representatives
- Ongoing testing and certification program to expand range of applications
- ISO 9001 Quality Assured

Coverage

$$\frac{\text{Sealant Depth} \times \text{Gap Width} \times \text{Total Length}}{300} = \text{No of cartridges Required}$$

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European Assessment Documents:
EAD350454-00-1104 - Sep 2017
EAD350141-00-1106 - Sep 2017

UL EU

ENCG R.40333

Certificate No:
UL-EU-01301-EN

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Heatshield

Heatshield S550

Premium Intumescent Sealant

Physical Properties

Composition	Viscous water based paste with additives
Colour	Grey White. Other colours available subject to min order qty.
Sg	1.6 - 1.66
pH	7.9 - 8.66
Themal Conductivity	0.845 W/mk
Solids %:	79% - 82%
Skin Forming Time	8 - 10 mins @ 24˚C & 50%
Tack Free Time	27 mins @ 24˚C & 50%
Depth Cure	2mm to 3mm per day
Application Temperature	+4˚C - +38˚C
Service Temperature	-15˚C - +75˚C
Limitations	Do not use in conditions of continuous immersion, below ground or in areas of high mechanical abrasion.
Storage	Store between 10 - 35˚C, do not store below 5˚C
Shelf Life	Min 15 months in unopened tubes.

Fire Performance - WALLS

Reaction to Fire	BS EN13501.1	Class E
Resistance to Fire	BS EN13501.2	

Linear Gap Seals - BS EN1366.4

Min 120mm thick rigid wall with sealant to both sides of wall (vertical orientation)				
Depth of Sealant	**Max Joint Width**	**Depth of Backing Material***	**Fire Resistance**	**Fire Performance Classification**
10mm	20mm	50mm	240 mins (E & I)	EI 240-V-X-B-W10 to W20
20mm	40mm	40mm	240 mins (E & I)	EI 240-V-X-B-W10 to W40

Penetration Seals - BS EN1366.3

Min 100mm thick flexible wall with sealant to both sides of wall				
Penetrations Specification	**Depth of Sealant**	**Depth of Backing Material***	**Fire Resistance**	**Fire Performance Classification**
Single Cable of H07RN-F (5x1.5mm^2) Ø ≤ 14mm	10x10mm Bead	15mm	120 mins (E & I)	E 60 EI 60
Single Cable of H07RN-F (4x95mm^2) Ø ≤ 60mm	10x10mm Bead	15mm	120 mins (E & I)	E 120 EI 120
Single Cable or bundle up to Ø ≤ 90mm or bundle Cat-5e data cable each with Ø ≤ 6mm	10x10mm Bead	15mm	120 mins (E & I)	E 120 EI 120
PVC Electical Conduit Ø ≤ 20mm	10x10mm Bead	15mm	60 mins (E & I)	E 60 C/C EI 60 C/C
PVC Electical Conduit Ø ≤ 32mm	10x10mm Bead	15mm	120 mins (E & I)	E 60 C/C EI 60 C/C
Insulated Copper, Steel or Cast Iron Pipes Ø ≤ 15mm	10x10mm Bead	15mm	120 mins (E & I)	E 120 C/C EI 120 C/C
Insulated Copper, Steel or Cast Iron Pipes Ø ≤ 67mm	10x10mm Bead	15mm	120 mins (E & I)	E 120 C/C EI 120 C/C
Insulated Steel or Cast Iron Pipes Ø ≤ 22.2mm	10x10mm Bead	15mm	120 mins (E & I)	E 120 C/C EI 120 C/C
Insulated Steel or Cast Iron Pipes Ø ≤ 76.2mm	10x10mm Bead	15mm	120 mins (E & I)	E 120 C/C EI 120 C/C
Insulated Steel or Cast Iron Pipes Ø ≤ 152.4mm	10x10mm Bead	15mm	120 mins (E) 90 mins (E & I)	E 120 C/C EI 90 C/C
Insulated Copper, Steel or Cast Iron Pipes Ø ≤ 108mm	10mm flush with surface	20mm	120 mins (E) 90 mins (E & I)	E 120 C/C EI 90 C/C

Fire Performance - FLOORS

Linear Gap Seals - BS EN1366.4

Min 150mm thick rigid floor with sealant to top side of floor				
Depth of Sealant	**Max Joint Width**	**Depth of Backing Material***	**Fire Resistance**	**Fire Performance Classification**
12mm	12mm	138mm	120 mins (E & I)	EI 120-H-X-B-W0 to W12
12mm	30mm	138mm	120 mins (E & I)	EI 120-H-X-B-W0 to W30

Penetration Seals - BS EN1366.3

Min 150mm thick rigid floor with sealant to both sides of floor				
Penetrations Specification	**Depth of Sealant**	**Depth of Backing Material***	**Fire Resistance**	**Fire Performance Classification**
Single Cable of NYM-J ($5x2.5mm^2$) Ø ≤ 14mm	12x12mm Bead	150mm full depth	120 mins (E & I)	E 120 EI 120
Single Cable of N2XH-F ($4x95mm^2$) Ø ≤ 45mm	12x12mm Bead	150mm full depth	120 mins (E & I)	E 120 EI 30
Single Cable of H07RN-F ($4x95mm^2$) Ø ≤ 60mm	12x12mm Bead	150mm full depth	120 mins (E & I)	E 120 EI 120
PVC Electical Conduit Ø ≤ 20mm	12x12mm Bead	150mm full depth	120 mins (E & I)	E 120 C/C EI 120 C/C
PVC Electical Conduit Ø ≤ 32mm	12x12mm Bead	150mm full depth	120 mins (E & I)	E 120 C/C EI 120 C/C
Insulated Steel or Cast Iron Pipes Ø ≤ 22.2mm	12mm	126mm	120 mins (E & I)	E 120 C/C EI 120 C/C
Insulated Steel or Cast Iron Pipes Ø ≤ 76.2mm	12mm	126mm	120 mins (E & I)	E 120 C/C EI 120 C/C
Insulated Steel or Cast Iron Pipes Ø ≤ 152.4mm	12mm	126mm	120 mins (E & I)	E 120 C/C EI 120 C/C
Insulated Copper, Steel or Cast Iron Pipes Ø ≤ 67mm	12x12mm Bead	150mm full depth	120 mins (E & I)	E 120 C/C EI 120 C/C
Insulated Copper, Steel or Cast Iron Pipes Ø ≤ 108mm	10x10mm Bead	150mm full depth	120 mins (E)	E 120 C/C EI 120 C/C

*Backing Material:

Backing material for ALL seals is minimum 50kg /m3 mineral wool packed into linear gap seals or annular space around services.

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UK OFFICE:

Greentech Heatshield UK Ltd
Lochnagar House
Drumlithie
Stonehaven
AB39 3YS

Tel: +44 (0)1569 769144

Email: info@greentech-heatshield.co.uk

UAE OFFICE:

Greentech Thermal Insulation Products Mfg LLC
Dubai
United Arab Emirates

Tel: +9714 5531316

Email: info@greentech-heatshield.com

EU Authorised Representative:

24Hour-AR
Van Nelleweg 1
3044 BC
Rotterdam
The Netherlands

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European Assessment Documents:
EAD350454-00-1104 - Sep 2017
EAD350141-00-1106 - Sep 2017

ETA 23/0979
ETA 23/0980

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