

TECHNICAL DATASHEET

PENOSIL Premium FireStop Silicone

One-component, neutral-curing silicone sealant with increased fire resistance for filling joints exposed to fire. Specially designed for weathersealing of expansion joints where a fire resistance is required. Adheres well to wide range of porous and non-porous substrates such as glass, bricks, ceramics, enamel, glazed stones and clinker, metals etc.

- Withstands fire up to 4 hours.
- Halogen, solvent and asbestos free.
- High movement capability ($\pm 25\%$).
- No odour.
- Excellent adhesion to a wide range of construction materials.
- Very good UV-, weather- and ageing resistance.

Field of applications

Fire-stop expansion joint sealing in construction applications, for example prefabricated panels, curtain walls, facades, partition walls, fire proof doors, fire proof windows etc. The silicone is also suitable for sealing ventilation and smoke ducts, cable passages, pipe penetrations, etc.

Technical specifications and standards

Product has been tested and is classified accordingly:

FIRE RESISTANCE classification according to EN 13501-2.

Tested according to EN 1366-4 "Fire resistance test for service installations. Linear joint seals".
(Equivalent to BS 476, Part 20).

Tested according to EN 1366-3 "Fire resistance test for service installations. Penetration seals".

FIRE PERFORMANCE classification: B-s3, d0 according to EN 13501-1.

Tested according to EN 13823: "Reaction to fire tests for building products" and EN-ISO 11925-2
"Ignitability of building products subjected to direct impingement of flame".

Sealant for facade for interior and exterior application, intended for use in cold climate.
EN 15651-1:2012: Type F-EXT-INT-CC: CLASS 25HM

Application conditions

Application temperature between +5 °C and +40 °C. The application temperature of the sealant must be between +20 °C and +25 °C.

Application instructions

The surfaces must be clean from dust, loose particles and oil. In case of porous substrates (e.g. concrete) a primer should be used.

310 ml cartridge: Cut off the threaded end of the cartridge and screw on the application nozzle for directing sealant. Cut the threaded end in a way where a suitable opening for application is produced. Place the cartridge together with the applicator in the gun and fill the installation nozzle with sealant, by repeatedly pressing the gun trigger.

Apply sealant in the joint by repeatedly and evenly pressing on gun trigger and smoothly dragging the nozzle along the joint. After application, smooth the surface with a rubber silicone scraper and remove excess material.

Cleaning

Uncured acrylic can be removed from hands and tools with water or use PENOSIL Premium Cleaning Wipes.

Cured acrylic should be first removed mechanically and then with a moist cloth.

Technical data

Properties	Unit	Value
Skin forming time	minute	20
Curing time	mm/24 h	2-3
Density	g/cm ³	1,25
Properties of cured sealant		
Elongation at break (ISO 37)	%	>650
Hardness (Shore A) (ISO 868)		25
Movement of the joint (ISO 11 600)	%	± 25
Modulus at 100% elongation (ISO 37)	N/mm ²	0,38
Tensile strength (ISO 37)	N/mm ²	1,60
Temperature resistance	°C	-40 to +150

The parameters indicated have been measured at +23 °C and 50% relative air humidity.

Colour

White, gray.

Package

310 ml cartridge, 12 pcs in a box.

Storage conditions

Guaranteed storage time 18 months starting from the date of manufacture if stored in a closed original package in a dry place between +5 °C and +25 °C.

Fire rating

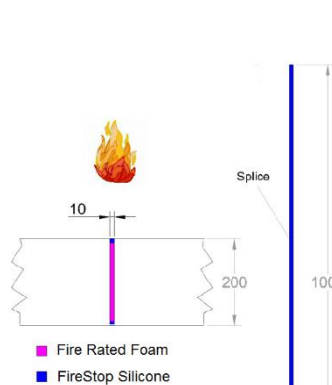
Fire resistance according to EN 1366-4 Linear joints

Sealant dimensions		Backing material	Orientation	Rating acc. EN 1366-4		Classification according EN 13501-2	Nº report
Width (mm)	Depth (mm)			Integrity (E) (min.)	Insulation (I) (min.)		
10 ⁽¹⁾	10	FR-PU	Vertical	242	242	E 240 EI 240 V-X-F-W 10 to 10	13_02508-1
60 ⁽²⁾	30	FR-PU	Vertical	242	242	E 240 EI 240 V-X-F-W 60 to 60	13_02508-2-3-a
10 ⁽³⁾	10	PE	Vertical	114	88	E 90 EI 60 V-X-F W 10 to 10	13_02508-1
40 ⁽⁴⁾	10	PE	Vertical	246	164	E 240 EI 120 V-X-F-W 00 to 40	17067-4
40 ⁽⁵⁾	30	PE	Vertical	242	242	E 240 EI 240 V-X-F-W 40 to 40	13_02508-2-8-a

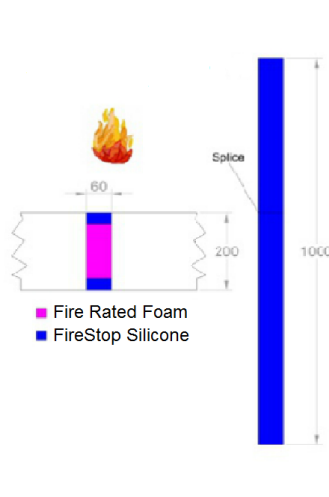
Legend: FR-PU: Fire Rated PU foam / PE: Polyethylene Backer Rod

V: Vertical supporting construction – vertical joint; X: No movement; F: Field (Joint made following real conditions); W: joint width

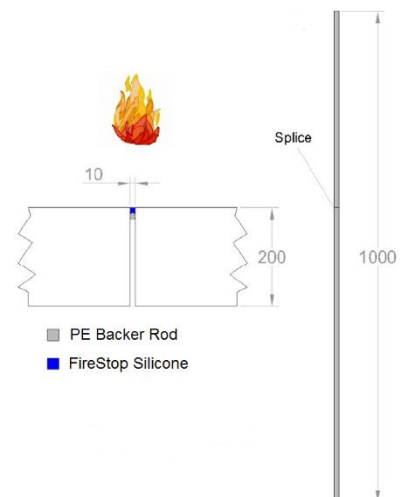
Test Sample 1



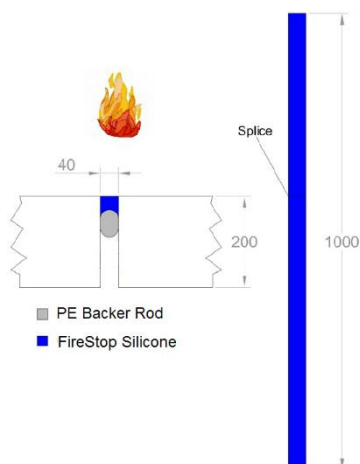
Test Sample 2



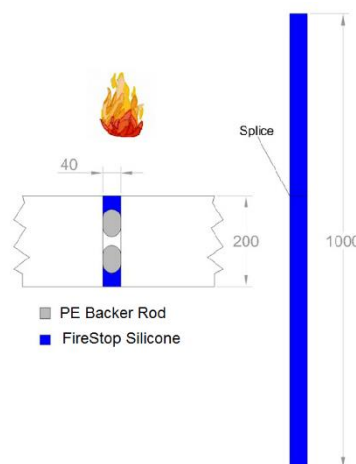
Test Sample 3



Test Sample 4



Test Sample 5



Remark: Fire Rated Foam- PENOSIL Premium FireRated Gunfoam

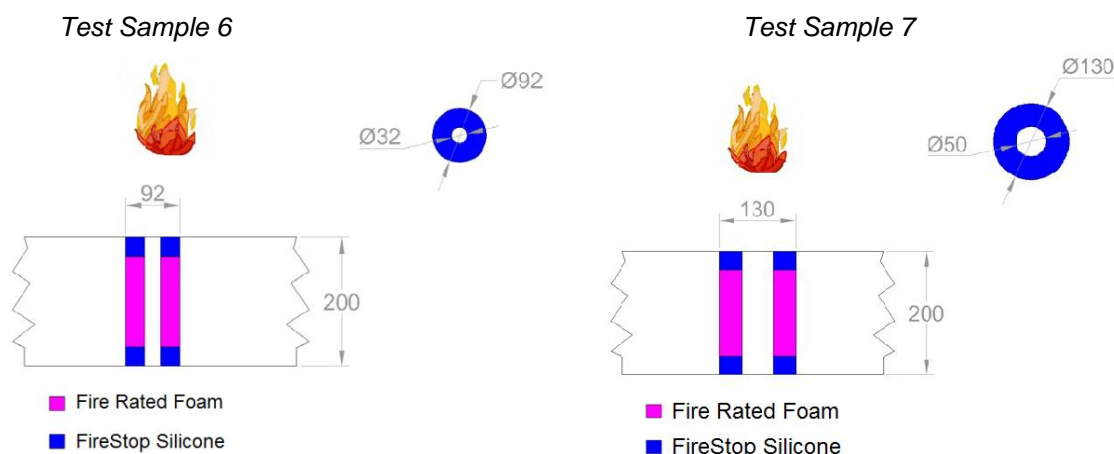
Fire resistance according to EN 1366-3 Penetration sealing system

Type of sealing system “sealant+foam+sealant”

PVC Piping diameter * (mm)	Thickness of sealing system (mm)	Sealant thickness (mm)	Length of foam layer (mm)	Rating acc. EN 1366-3		Classification according EN 13501-2	N ^o report
				Integrity (E) (min.)	Insulation (I) (min.)		
32 ⁽⁶⁾	30	30	140	242	242	EI 240 U/U**	13_02508-2-14-1-a
50 ⁽⁷⁾	40	30	140	118	101	EI 90 U/U**	13_02508-1

*Pipe wall thickness 3,0 mm

** Pipe end configurations: U: Uncapped (both inside and outside the furnace) /Tests applicable to lower diameter



Remark: Fire Rated Foam- PENOSIL Premium FireRated Gunfoam

Limitations

Do not use on bituminous substrates or on building materials which might bleed oils, plasticizers or solvents (e.g. natural rubber, chloroprene, EPDM, ...). There is no adhesion to PE, PP, PTFE (Teflon®). Do not use in contact with natural stones such as marble, granite, quartzite, as it may cause stains. Not suitable for sealing aquariums, structural glazing, for food direct contact and for under-water applications.

Due to the wide variety of possible substrates, we always recommend a preliminary compatibility test. Cannot be overpainted.

Safety regulations

Ensure sufficient ventilation during application. Keep out of the reach of children. Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with water and seek medical advice.

Cured sealant can be handled without any danger to health.

Detailed safety information is available on safety data sheet (SDS).