

Technical Data Sheet

EVT Fire Rated HPFR



Special Properties

- single-component, silicone based elastic sealant
- neutral curing – **MEKO-free** (no 2-butanoneoxime)
- low odour formulation
- resists up to four hours in case of fire
- ageing- and weather-resistant, good UV resistance
- compatible with paints
- good adhesion on metals and many plastics, compatible with copper

Fields of application

For sealing joints and connecting joints between room-sealing walls, as well as in glass and metal construction.

Tests & Standards

- **ISO 11600**: Class F&G 25 LM
- **DGNB** (Version 2018; ENV 1.2 Risks for the local environment, appendix 1, Nr. 12): Fulfils the requirements for quality levels 1 to 4
- **LEED** 2009: Fulfils the requirements of IEQ Credit 4.1 (VOC-content < 50g/l)
- **VOC-classification** (France): A+
- **EN 13501** (fire resistance): Class E
- **EN 1366-4** (fire resistance): resists up to four hours in case of fire
- **Vereinigung Kantonaler Feuerversicherungen (VKF)**; fire resistance, Switzerland): **5.3**
- Suitable for applications given in **IVD data sheet** Nr. 7, 9, 10, 13, 19-1, 20, 22, 24, 27, 28, 29, 31, 32 & 35

Colours and packaging

Standard colour: white; other colours available on request

Packaging: cartridges 310 ml; film bags 400 & 600 ml; other package sizes available on request

Technical Data

Density (DIN EN ISO 2811-1)	1,38 ± 0,05 g/cm ³
Skin forming time (23°C/50% r.F)	app. 20 min
Penetration (DIN 51579 / 5 sec.)	220 ± 30 1/10 mm
Slump ISO 7390)	≤ 2 mm
Cure rate (within first 24 hours)	app. 2 mm
Shore A hardness (DIN 53505)	20 ± 5 units
Tensile strength (ISO 8339-A, 100%)	app. 0,4 N/mm ²
Maximum movement tolerance	25 %
Volume loss (DIN EN ISO 10563)	max. 4 %
Application temperature (sealant & substrate)	+5 to +35°C
Temperature stability (fully cured sealant)	-40 to +150°C
Fire classification (EN 13501)	E
Shelf life (originally closed packages)	15 months (+5 to +35°C, 50% r.H.)

Rate of curing depends on temperature, humidity and depth of substrate. The data given refer to tests at standard conditions (23°C / 50% rel. humidity). Under these conditions, a 10 x 10 mm joint will cure in 8 to 14 days. Low temperature, low humidity and joint depth above 15 mm will retard skin formation and curing significantly.

Data given were determined shortly after production, and may slightly vary with increasing age of product and for different colours. They are not meant for specification purposes.

Usage instructions

Substrate pretreatment

The substrate must be dry, firm, and free of dust and grease (clean with isopropanol, if necessary). Porous substrates (e.g. concrete, plasterboard and untreated wood) must be primed (see primer table). Before primer application, remove any cement slurry, mold release agents or impregnations. In renovation projects, old sealant, remains of paint and loose material must be fully removed. On coated substrates (paints, lacquers), compatibility to the sealant must be tested.

The joint must always be provided with a suitable, correctly dimensioned joint backing (e.g. PE cord, PE foil) to prevent adhesion on three faces. In fire protection applications, special fire-rated backing material or mineral wool might be necessary.

To avoid contamination and to achieve a precise joint, we recommend masking the joint edges with adhesive tape before primer application and filling.

Joint dimensions

Joint dimensions should be at least 5 x 5 mm for indoor and 10 x 8 mm (width x depth) for outdoor applications. With increasing joint width (up to 30 mm), joint depth should be roughly half the joint width. Make sure that triangular bevels have uniform sides of equal length with at least 7 mm bonding surface on each side.

Tooling.

After applying the sealant with a suitable manual, battery-powered or pneumatic caulking gun, the sealant can be smoothed in the joint with water or with a neutral, non-staining water-based smoothing agent and a suitable tool (e.g. jointing trowel). Smoothing is not only recommended for optical reasons, but also establishes close contact and good adhesion to the substrate. Remove excess smoothing agent (risk of schlieren). Any adhesive tape used should be removed immediately after smoothing.

One cartridge (310 ml) will give app. 12 m (5 x 5 mm) or 3m (10 x 10 mm) joint length.
After being fully cured, remains of sealant can be disposed via domestic or commercial waste.

Important remarks

The function of the sealant can only be guaranteed if correctly applied in accordance with the technical recommendations given in this data sheet and in related standards. Sealant application in situations with strongly fluctuating temperatures (premature stressing of the sealant) must be avoided.

The sealant is compatible with many paints and lacquers. Owing to the large number of different coating systems on the market, own tests concerning adhesion and compatibility have to be performed prior to application. The sealant is not over-paintable,

Especially on powder-coated substrates, adhesion has to be tested carefully, since it can be affected negatively depending on the coating used (may even vary for different colours of the same brand of powder coating).

In contact with bituminous, tar- or plasticizer-releasing substrates (e.g. EPDM, neoprene, butyl), discolouration and/or loss of adhesion may occur.

Good ventilation must be provided during application and curing to allow curing by-products to evaporate. Low temperature, low humidity and joint depth above 15 mm can retard skin formation and curing significantly.

Exposure to liquid (e.g. acid-based cleaning agents, strongly coloured liquids) or gaseous chemicals (e.g. tobacco smoke, exhausts from other construction materials (e.g. wood, lacquers)) for longer periods can result in discolouration of the product, especially for light colours (white). In general, the mechanical properties of the sealant are not adversely affected.

The product must not be used in aquarium construction, on marble/natural stone, as mirror adhesive, in underwater applications and in areas with direct food contact.

Not suitable for plastics with in general poor adhesion to silicones (e.g. PE, PP, PET) and for two-dimensional bonding.

Safety advice

See material safety data sheet. Take all measures resulting from the safety data sheet and hazard labelling to prevent accidents and protect health.

Warranty information

Information given in this data sheet is based on the current state of knowledge. It is not meant as a guarantee. For a guarantee, a separate written statement from FS-BF GmbH & Co. KG is required. We reserve the right to make changes to the product data in the course of technical progress or due to operationally related further development. The information given does not exempt the purchaser from carrying out his own careful inspections of incoming goods in individual cases. Owing to factors beyond our control during application and service life, recommendations given in this data sheet require tests and experiments by the customer. Please contact us in case of special applications. Our recommendations do not exempt the customer from the obligation to check any infringements of third-party rights himself and eliminate them if necessary. The suggestions for product use are not equivalent to a warranty of its suitability for the recommended purpose. Especially, additional requirements from the client or local authorities may exist. We refer to your general terms and conditions.

Each new release of this data sheet supersedes the previous one.



FS-BF GmbH & Co. KG
Division EVT Sealants

Hahnenseifener Straße 15
D-51580 Reichshof / Hahn
Germany

Phone: +49-2297-9103-0
Fax: +49-2297-1826
Email: info@fsbf.com