

PRODUCT DATA SHEET

Sikaflex® EBT+

1-part high grab polyurethane adhesive, sealant and gap filler

PRODUCT DESCRIPTION

Sikaflex® EBT+ is a multi purpose, one part, elastic, polyurethane adhesive and sealant. It bonds to all common building materials, is permanently elastic and has excellent grab and gap filling properties making it ideal for use in a wide range of building and maintenance situations.

USES

- Sealing and bonding metal panels and trim.
- Expansion joint sealing in concrete panels and floor joints.
- Sealing in applications subject to vibration and mechanical abrasion.
- Multitude of sealing and bonding applications in the construction and engineering markets.
- Bonding in container fabrication.
- High traffic floor joints such as those found in garage forecourts, warehouse, factory floors, sports arenas, shopping centres etc.
- Bonding/fixing cabinets, shower trays, mirrors, ceramics.
- Bonding and sealing flashings, roof tiles, gutters, architrave, skirting, panelling, mouldings and acoustic tiles.
- Filling and sealing internal and external cracks and gaps around window and door frames.
- Forming gaskets in ducting and sealing between metal components.
- Fabrications and shop fitting.
- Flexible draught proofing.

PRODUCT INFORMATION

Chemical Base

Sika® Purform® polyurethane with a monomeric diisocyanate content of less than 0.1 % by weight. Therefore, users do not require training on the safe use of diisocyanates according to Commission Regulation (EU) 2020/1149.

CHARACTERISTICS / ADVANTAGES

Sikaflex® EBT+ is:

- 1-part, ready to use.
- Flexible and elastic.

Advantages:

- Bonds to concrete, brick, mortar, wood, metals, glass, stone, ceramics, resins and plastics.
- Excellent grab and non-slip.
- Fast curing rate.
- Good weather and water resistance.
- Permanently flexible and elastic.
- Non corrosive.
- Provides excellent mechanical resistance.
- Resistance to most common chemicals.
- Can be overpainted when cured.
- Good sea water resistance.
- Can be used as an easy flow flooring grade for all concrete saw cuts and floor slab expansion joints, where abrasion resistance is required.

ENVIRONMENTAL INFORMATION

- VOC emission classification GEV-Eimcode EC1^{PLUS}.
- Conformity with LEED v4 EQc 2: Low-Emitting Materials.

APPROVALS / STANDARDS

- CE and UKCA Marked to types F EXT-INT CC and PW EXT-INT CC.

Packaging	300 ml cartridges	12 cartridges per box
	600 ml cylindrical foil pack	20 foil packs per box
Refer to the current price list for available packaging variations.		
Colour	Available in a range of colours, refer to the price list for further information.	
Shelf Life	15 months from date of production if stored in undamaged original unopened containers.	
Storage Conditions	Store in dry conditions and protected from direct sunlight at temperatures between +5 °C and +25 °C.	
Density	~ 1.35 kg/L (ISO 1138-1)	

TECHNICAL INFORMATION

Shore A Hardness	~33 after 28 days (ISO868)																			
Tensile Strength	~ 1.8 N/mm ²																			
Secant Tensile Modulus	~ 0.6 N/mm ² (100 % elongation at +23 °C ISO8339)																			
Elongation at Break	~ 800 % (+23 °C ISO37)																			
Elastic Recovery	~85 % (100 % elongation at +23°C ISO 7389)																			
Movement Capability	± 25 % (ISO 9047)																			
Chemical Resistance	Resistant to water, seawater, diluted alkalis, cement grout and water dispersed detergents. Not resistant to alcohols, organic acids, concentrated alkalis and concentrated acids, chlorinated, aromatic (hydro-carbons) fuel.																			
Joint Design	<p>The joint dimensions must be designed to suit the movement capability of the sealant. The joint width must be ≥ 10 mm and ≤ 35 mm. A width to depth ratio of 1:0.5 for facade joints and a width to depth ratio of 1:0.8 for floor joints must be maintained (for exceptions, see table below). Typical joint dimensions for joints between concrete elements:</p> <table border="1"> <thead> <tr> <th>Joint distance (m)</th> <th>Minimum joint width (mm)</th> <th>Minimum joint depth (mm)</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>10</td> <td>10</td> </tr> <tr> <td>4</td> <td>15</td> <td>10</td> </tr> <tr> <td>6</td> <td>20</td> <td>10</td> </tr> <tr> <td>8</td> <td>30</td> <td>15</td> </tr> <tr> <td>10</td> <td>35</td> <td>17</td> </tr> </tbody> </table> <p>Minimum joint width for perimeter joints around windows is 10 mm. All joints must be correctly designed and dimensioned in accordance with the relevant standards and codes of practice before their construction. The basis for calculation of the necessary joint widths are the type of structure, dimensions, technical values of the adjacent building materials, joint sealing material and the specific exposure of the building and the joints. Joints ≤ 10 mm in width are for crack control and therefore non-movement joints. For larger joints contact Sika Technical Services for additional information.</p>		Joint distance (m)	Minimum joint width (mm)	Minimum joint depth (mm)	2	10	10	4	15	10	6	20	10	8	30	15	10	35	17
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2	10	10																		
4	15	10																		
6	20	10																		
8	30	15																		
10	35	17																		
Service Temperature	-40 °C to +80 °C																			

APPLICATION INFORMATION

Consumption	Approximate Consumption (based on 300 ml cartridge)				
	Joint Width	10mm	15mm	20mm	25mm
	Joint Depth	10mm	12-15mm	17mm	20mm
	Joint Length / 300ml	~ 3.0m	~1.5m	~0.9m	~0.6m
Minimum gap width for perimeter joints around windows: 10 mm.					
Bonding:					
<ul style="list-style-type: none"> In dabs: 1 cartridge for 100 x 3 cm dabs of Sikaflex® EBT+ (Diameter =3 cm; thickness = 0.4 cm) In strips: 1 cartridge for 12 metres of Sikaflex® EBT+ with 5 x 5 mm cross section. On average 0.2 - 0.6 kg/m² depending on bonding area. 					
Ambient Air Temperature	+5 °C min. / +40 °C max.				
Substrate Temperature	+5°C min. / +40°C max.				
Substrate Moisture Content	Dry				
Curing Rate	~ 4 mm / 24 h (+23 °C / 50 % r.h.)				
Skin Time	~ 50 minutes (+23 °C / 50 % r.h.)				

VALUE BASE

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

LIMITATIONS

- Colour deviations may occur due to exposure to chemicals, high temperatures, UV radiation (especially with colour shade white). However a change in colour will not adversely influence the technical performance or the durability of the product.
- Always use Sikaflex® EBT+ in conjunction with mechanical fixings for overhead applications or heavy components.
- For very heavy components provide temporary support until Sikaflex® EBT+ has fully cured.
- Full surface applications / fixings are not recommended since the inner part of the adhesive layer may never cure.
- Before using on reconstituted, cast or natural stone, contact Sika Technical Services.
- Do not use on bituminous substrates, natural rubber, EPDM rubber or on any building materials which might leach oils, plasticisers or solvents that could degrade the adhesive.
- Do not use on polyethylene (PE), polypropylene (PP), polytetrafluoroethylene (PTFE / Teflon), and certain plasticised synthetic materials. Preliminary trials are recommended or contact Sika® Technical Services.
- Do not use to seal joints in and around swimming pools.
- Do not use for joints under water pressure or for permanent water immersion.
- Do not use to seal glass.
- Do not use for bonding glass if the bond line is exposed to sunlight.
- Do not use for structural bonding.
- Do not expose uncured Sikaflex® EBT+ to alcohol-

containing products as this may interfere with the curing reaction.

- The freshly applied sealant has a smell similar to 'Marzipan' until it has fully cured (benzalehyde).
- Do not mix with or expose uncured Sikaflex® EBT+ to substances that may react with isocyanates, especially alcohols which are often components within e.g. thinners, solvents, cleaning agents and form-work releasing compounds. Such contact could interfere or prevent the cross linking curing reaction of the material.**

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

- For good workability, the adhesive temperature should be +20 °C.
- Application during high temperature changes is not recommended (movement during curing).

SUBSTRATE PREPARATION

The substrate must be sound, clean, dry and free of all contaminants such as dirt, oil, grease, cement laitance, old sealants and poorly bonded paint coatings which could affect adhesion of the adhesive / sealant. The substrate must be of sufficient strength to resist the stresses induced by the sealant during movement. Removal techniques such as wire brushing, grinding, sanding or other suitable mechanical tools can be used.

All dust, loose and friable material must be completely

removed from all surfaces before application of any activators, primers or adhesive / sealant. Sikaflex® EBT+ adheres without primers and/or activators.

To ensure adhesion to many substrates, joint durability, and critical high performance applications the following priming and/or pre-treatment procedures must be followed:

Non-porous substrates

Aluminium, anodised aluminium, stainless steel, PVC, galvanised steel, powder coated metals or glazed tiles: slightly roughen surface with a fine abrasive pad. Clean and pre-treat using Sika® Aktivator-205 applied with a clean cloth. Before bonding / sealing, allow a waiting time of > 15 minutes (< 6 hours).

Other metals, such as copper, brass and titanium-zinc: clean and pre-treat using Sika® Aktivator-205 applied with a clean cloth. After a waiting time of > 15 minutes (< 6 hours) apply Sika® Primer-3 N by brush. Allow a further waiting time of > 30 minutes (< 8 hours) before bonding / sealing. PVC must be cleaned and pre-treated using Sika® Primer-215 applied with a brush. Before bonding / sealing, allow a waiting time of > 15 minutes (< 8 hours).

Porous substrates

Concrete, aerated concrete and cement-based renders, mortars and bricks: prime surface using Sika® Primer-3 N or Sika® Primer-115 applied by brush. Before bonding / sealing, allow a waiting time of > 30 minutes (< 8 hours).

Note: Primers and activators are adhesion promoters and not an alternative to improve poor preparation / cleaning of the joint surface. Primers also improve the long-term adhesion performance of the sealed joint. Contact Sika Technical Services for additional information.

APPLICATION METHOD / TOOLS

Sikaflex® EBT+ is supplied ready to use.

Strictly follow installation procedures as defined in method statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

Ensure that the joint design only permits adhesion to two surfaces, as three-sided adhesion will impair flexibility. Bond breaking tape, SikaSeal®-414 Backer Rod or cured Fix and Fill will remove third-side adhesion.

Application

After the necessary substrate preparation, prepare the end of the cartridge / foil pack, insert into the sealant gun then fit the nozzle.

Apply in triangular beads, strips or spots at intervals of a few centimetres each. Use hand pressure only to fix the components to be bonded into position before

skinning of the adhesive occurs. Incorrectly positioned components can easily be de-bonded and repositioned

during the first few minutes after application. If necessary, use temporary adhesive tapes, wedges, or supports to hold the assembled components together during the initial curing time.

Fresh, uncured adhesive remaining on the surface must be removed immediately. Final strength will be reached after complete curing of Sikaflex® EBT+, i.e. after 24 to 48 hours at +23 °C, depending on the environmental conditions and adhesive layer thickness.

Sealing Procedure

Masking

It is recommended to use masking tape where neat or exact joint lines are required. Remove the tape within the skin time after finishing.

Joint Backing

After the required substrate preparation, insert a suitable backing rod to the required depth.

Priming

Prime the joint surfaces as recommended in substrate preparation. Avoid excessive application of primer to avoid causing puddles at the base of the joint.

Application

Prepare the end of the cartridge / foil pack before or after inserting into the sealant gun then fit the nozzle. Extrude Sikaflex® EBT+ into the joint ensuring that it comes into full contact with the sides of the joint and avoiding any air entrapment.

Finishing

As soon as possible after application, sealant must be firmly tooled against the joint sides to ensure adequate adhesion and a smooth finish.

Use a compatible tooling agent (e.g. Sika® Tooling Agent N) to smooth the joint surface. Do not use tooling products containing solvents.

CLEANING OF TOOLS

Clean all tools and application equipment with Sika® Remover-208 / Thinner C immediately after use. Hardened / cured material can only be removed mechanically.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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