BUILDING TRUST

PRODUCT DATA SHEET

Sikaflex®-118 Extreme Grab

CONSTRUCTION ADHESIVE WITH VERY HIGH INITIAL GRAB STRENGTH

DESCRIPTION

Sikaflex®-118 Extreme Grab is a 1- part construction adhesive with very high initial* grab which bonds most construction material substrates. Internal and external use.

USES

An adhesive to bond most construction components and materials such as:
- Concrete
- Masonry
- Most stones
- Ceramic
- Wood
- Metals
- Glass
- Mirrors**

CHARACTERISTICS / ADVANTAGES

- Very high initial* grab
- Bonding of heavy objects without using temporary or permanent fixings
- Good workability using a Sika Trade Gun Pro 26:1 high ratio caulking gun
- Very low emissions
- Adhesive/Sealant with CE marking

ENVIRONMENTAL INFORMATION

- Conformity with LEED v4 EQc 2: Low-Emitting Materials
- VOC emission classification GEV-EMICODE EC 1PLUS
- VOC emission classification of building materials RTS M1
- Class A+ according to French Regulation on VOC emissions

APPROVALS / STANDARDS

- CE Marking and Declaration of Performance to EN 15651-1 - Sealants for non-structural use in joints in buildings - Facade elements: Class F EXT-INT CC 20HM

NZ Building Code Compliant
- B1 Structure. When used as a component of compliant building element systems
- B2 Durability: Clauses B2.3.1 (b) 15 years. (c) 5 years
- F2 Hazardous Building Materials: Clause F2.3.1

PRODUCT INFORMATION

Chemical Base	Silane terminated polymer	
Packaging	290 ml cartridge, 12 cartridges per box	
Colour	White	
Shelf Life	12 months from the date of production	
Storage Conditions	The product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +25 °C. Always refer to packaging.	
Density	~1,40 kg/l	(ISO 1183-1)

TECHNICAL INFORMATION

Shore A Hardness	~50 (after 28 d)	(ISO 868)
Tensile Strength	~2,2 N/mm²	(ISO 37)
Elongation at Break	~350 %	(ISO 37)
Tear Propagation Resistance	~10,0 N/mm	(ISO 34)
Service Temperature	–40 °C min. / +80 °C max.	

APPLICATION INFORMATION

Yield

Yield **1 Cartridge (290 ml)**	**Dimension**
~100 spots	Diameter = 30 mm Thickness = 4 mm
~5 m bead *	Nozzle diameter = 5 mm (~60 ml per linear metre)

*Note: For heavy objects thicker beads (up to ~120 ml per linear metre) maybe required.

Sag Flow	0 mm (20 mm profile, 23 °C)	(ISO 7390)
Ambient Air Temperature	+5 °C min. / +40 °C max.	
Substrate Temperature	+5 °C min. / +40 °C max., min. 3 °C above dew point temperature	
Curing Rate	~3 mm/24 h (23 °C / 50 % r.h.)	Sika Corporate Quality Procedure (CQP 049-2)
Skin Time	~15 min (23 °C / 50 % r.h.)	(CQP 019-1)

BASIS OF PRODUCT DATA

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

FURTHER DOCUMENTS

- Pre-treatment Chart Sealing and Bonding

LIMITATIONS

- *Initial grab: 14 N/cm2
- **For mirror bonding, do not use over vinyl backing.
- For good workability, the adhesive temperature shall be +20 °C.
- Application can be improved by using a 26:1 high ratio caulking gun
- Application during high temperature changes is not recommended (movements during the curing).
- Before bonding, check adhesion and resistance of paints and coatings by carrying out a trail.
- Sikaflex®-118 Extreme Grab can be overpainted with most conventional water-based coating and paint systems. However, paints must first be tested to ensure compatibility by carrying out preliminary trials. The best over-painting results are obtained when the adhesive is allowed to fully cure first. Note: non-flexible paint systems may impair the elasticity of the adhesive and lead to cracking of the paint film.
- Colour variations may occur due to exposure to chemicals, high temperatures and/or UV-radiation (especially with the colour shade white). However, a change in colour is purely of aesthetic nature and does not adversely influence the technical performance or durability of the product.
- Always use Sikaflex®-118 Extreme Grab in conjunction with mechanical fixings for very heavy overhead applications.
- When bonding very heavy components the use of temporary support until Sikaflex®-118 Extreme Grab has fully cured is recommended.
- Full surface applications are not recommended as the inner part of the adhesive layer may never cure.
- Before using on natural stone, contact Sika Technical Service.
- Do not use on bituminous substrates, natural rubber, EPDM rubber or on any building materials which might leach oils, plasticizers or solvents that could attack the adhesive, contact Sika Technical Service for advice.
- Do not use on polyethylene (PE), polypropylene (PP), polytetrafluoroethylene (PTFE / Teflon), and plasticised synthetic materials. Preliminary trials shall be carried out or contact Sika Technical Services.
- Do not use for glass bonding if the bond line is exposed to sunlight.
- Do not use for structural bonding.
- Do not expose uncured Sikaflex®-118 Extreme Grab to alcohol containing products as this may interfere with the curing reaction.

ECOLOGY HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

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.
For optimum adhesion and critical, high performance applications the following priming and/or pre-treatment procedures should be followed:
Non-porous substrates
Aluminium, anodised aluminium, stainless steel, 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 applied by brush. Allow a further waiting time of > 30 minutes (< 8 hours) before bonding / sealing.
PVC has to be cleaned and pre-treated using Sika® Primer-215 applied with a brush. Allow a waiting time of > 15 minutes (< 8 hours) before bonding / sealing.
Porous substrates
Concrete, aerated concrete and cement based renders, mortars and bricks, prime surface using Sika® Primer-3 N applied by brush.
Before bonding / sealing, allow a waiting time of > 30 minutes (< 8 hours).
For more detailed advice and instructions contact Sika Technical Services.

Note: Primers are adhesion promoters and not an alternative to improve poor preparation / cleaning of joint surfaces. Primers also improve the long term adhesion performance of a sealed joint.

APPLICATION METHOD / TOOLS

Bonding Procedure
After the necessary substrate preparation, prepare the end of the cartridge before or after inserting 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 unbonded 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®-118 Extreme Grab, i.e. after 24 to 48 hours at +23 °C, depending on the environmental conditions and adhesive layer thickness.

CLEANING OF TOOLS

Clean all tools and application equipment immediately after use with Sika® Remover-208. Once cured, hardened material can only be removed mechanically. For cleaning skin use Sika® Cleaning Wipes-100.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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