BUILDING TRUST

PRODUCT DATA SHEET

Sikaflex®-558 PowerCure

Accelerated STP assembly and glazing adhesive

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Chemical base	Silane Terminated Polymer
Color (CQP001-1)	Black
Cure mechanism	Moisture-curing [A]
Density (uncured)	1.5 kg/l
Non-sag properties (CQP061-1)	Very good
Application temperature	10 – 35 °C
Open time (CQP526-1)	15 minutes [B]
Early tensile lap-shear strength (CQP046-1 / ISO 4587)	(see table 1)
Shore A hardness (CQP023-1 / ISO 48-4)	55
Tensile strength (CQP036-1 / ISO 527)	3 MPa
Elongation at break (CQP036-1 / ISO 527)	300 %
Tear propagation resistance (CQP045-1 / ISO 34)	20 N/mm
Tensile lap-shear strength (CQP046-1 / ISO 4587)	2.3 MPa
Service temperature (CQP509-1 / CQP513-1)	-50 – 90 °C
Shelf life	9 months [C]

CQP = Corporate Quality Procedure [A] Provided by PowerCure [B] 23 °C / 50 % r.h. [C] Storage below 25 °C

DESCRIPTION

Sikaflex®-558 PowerCure is an accelerated-curing elastic Silane Terminated Polymer (STP) direct-glazing and assembly adhesive system with good gap-filling capabilities. Sikaflex®-558 PowerCure is designed for bonding and sealing applications in the commercial-vehicle industry.

Sikaflex®-558 PowerCure is textured and has a mat black color. This texture cannot be eliminated and will remain visible after full cure.

Curing of Sikaflex®-558 PowerCure is accelerated by Sika's PowerCure technology which makes it largely independent of atmospheric conditions.

PRODUCT BENEFITS

- Solvent-, PVC-, isocyanate- and phthalate-free
- Passes EN45545-2 R1/R7 HL-3
- Fast-curing by Sika PowerCure Technology
- Excellent weathering stability
- Suitable for bonding and sealing
- Low-modulus and highly elastic
- Very good processing and tooling characteristics

AREAS OF APPLICATION

Sikaflex®-558 PowerCure is designed for assembly and direct-glazing applications in the commercial-vehicle industry. It exhibits very good weathering, tooling and application properties and is therefore suitable for exterior joints.

Curing of Sikaflex®-558 PowerCure is accelerated by Sika's PowerCure technology which makes it largely independent of atmospheric conditions.

Seek manufacturer's advice and perform tests on original substrates before using Sikaflex®-558 PowerCure on materials prone to stress cracking.

Sikaflex®-558 PowerCure is suitable for experienced professional users only. Test with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.

CURE MECHANISM

Sikaflex®-558 PowerCure cures by reaction with the accelerator and largely independent from atmospheric moisture. For typical strength build up data see table below.

Time [h]	Tensile Lap-Shear Strength at 23 °C [MPa]
2	0.1
4	0.3
8	0.7
24	2.0

Table 1: Strength build-up of Sikaflex®-558 PowerCure

CHEMICAL RESISTANCE

Sikaflex®-558 PowerCure is generally resistant to fresh water, seawater, diluted acids and diluted caustic solutions; temporarily resistant to fuels, mineral oils, vegetable and animal fats and oils; not resistant to organic acids, glycolic alcohol, concentrated mineral acids and caustic solutions or solvents.

METHOD OF APPLICATION

Surface preparation

Surfaces must be clean, dry and free from grease, oil, dust and contaminants.
Surface treatment depends on the specific nature of the substrates and is crucial for a long lasting bond. Suggestions for surface preparation may be found on the current edition of the appropriate Sika® Pre-treatment Chart. Consider that these suggestions are based on experience and have in any case to be verified by tests on original substrates.

Application

Setup the PowerCure Dispenser according the PowerCure User Manual. If the application is discontinued for more than 5 minutes, the mixer needs to be replaced. Sikaflex®-558 PowerCure can be processed between 10 °C and 35 °C (climate and product) but changes in reactivity and application properties have to be considered. The optimum temperature for substrate and sealant is between 15 °C and 25 °C.

Consider the viscosity increase at low temperature. For easy application, condition the adhesive at ambient temperature prior to use. The open time is significantly shorter in hot and humid climate. The parts must always be installed within the open time.
To ensure a uniform thickness of the bondline it is recommend to apply the adhesive in form of a triangular bead (see figure 1).

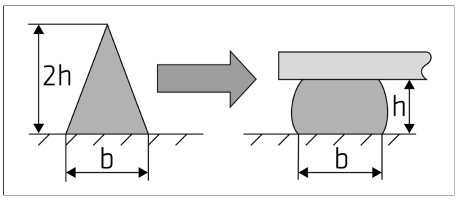

Figure 1: Recommended bead configuration

Tooling and finishing

Tooling and finishing must be carried out within the skin time of the product. It is recommended using Sika® Tooling Agent N. Other finishing agents must be tested for suitability and compatibility prior the use.

Removal

Uncured Sikaflex®-558 PowerCure can be removed from tools and equipment with Sika® Remover-208 or another suitable solvent. Once cured, the material can only be removed mechanically.
Hands and exposed skin have to be washed immediately using hand wipes such as Sika® Cleaner-350H cleaning towels or a suitable industrial hand cleaner and water.
Do not use solvents on skin.

FURTHER INFORMATION

The information herein is offered for general guidance only. Advice on specific applications is available on request from the Technical Department of Sika Industry.
Copies of the following publications are available on request:

- Safety Data Sheets
- Sika Pre-treatment Chart
  For Silane Terminated Polymers (STP)
- PowerCure User Manual
  and Quick Reference Guide
- General Guidelines
  Bonding and Sealing with 1-compontent Sikaflex®

PACKAGING INFORMATION

PowerCure Pack	600 ml

BASIS OF PRODUCT DATA

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

HEALTH AND SAFETY INFORMATION

For information and advice regarding transportation, handling, storage and disposal of chemical products, users shall refer to the actual Safety Data Sheets containing physical, ecological, toxicological and other safety-related data.

DISCLAIMER

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Sika Danmark A/S
Hirsemarken 5
3520 Farum
Tlf. +45 48 18 85 85
www.sika.dk