

PRODUCT DATA SHEET

Sikaflex®-668 + SikaBooster® P-50

By Booster accelerated high-performance assembly, glazing adhesive and sealant for rail applications

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Chemical base		Polyurethane (Purform®)
Color (CQP001-1)		Black
Cure mechanism		Moisture-curing ^A
Density (uncured)	Adhesive	1.3 kg/l
	SikaBooster® P-50	1.1 kg/l
Booster content	by volume	2.0 %
	by weight	1.7 %
Non-sag properties		Good
Application temperature		10 – 35 °C
Open time (CQP526-1)		40 minutes ^B
Early tensile lap-shear strength (CQP046-1 / ISO 4587)		(see table 1)
Shrinkage (CQP014-1)		1 %
Shore A hardness (CQP023-1 / ISO 48-4)		60
Tensile strength (CQP036-1 / ISO 527)		8 MPa
Elongation at break (CQP036-1 / ISO 527)		500 %
Tear propagation resistance (CQP045-1 / ISO 34)		12 N/mm
Tensile lap-shear strength (CQP046-1 / ISO 4587)		5 MPa
Service temperature (CQP513-1)		-50 – 90 °C
Shelf life	Adhesive (pail / drum)	6 months ^C
	SikaBooster® P-50	9 months ^C
Mixer		Statomix MS 13/18 G

CQP = Corporate Quality Procedure

^{A)} provided by SikaBooster® P-50^{B)} 23 °C / 50 % r. h.^{C)} stored below 25 °C
DESCRIPTION

Sikaflex®-668 + SikaBooster® P-50 is based on Purform®, a polyurethane with less than 0.1% monomeric diisocyanate for better health protection and occupational safety. Sikaflex®-668 + SikaBooster® P-50 is an accelerated adhesive system specifically designed for the rail industry. The curing of Sikaflex®-668 + SikaBooster® P-50 is accelerated by SikaBooster® P-50 which makes it largely independent of atmospheric conditions. It is suitable for assembly bonding and glazing applications. Its good resistance to weathering and to a wide variety of cleaning agents makes it an ideal solution for use in exterior joints in the rail industry.

Sikaflex®-668 + SikaBooster® P-50 is compatible with Sika's black-primerless bonding process.

PRODUCT BENEFITS

- Less than 0.1 % monomeric diisocyanate for better health protection and occupational safety
- Very good weathering stability
- Resistant to a wide variety of cleaning agents
- Passes EN45545 R1/R7 HL3, NFPA 130, BSS 7239
- Fast-curing by Booster Technology
- Phthalate-free

AREAS OF APPLICATION

Sikaflex®-668 + SikaBooster® P-50 is designed for assembly and direct-glazing applications in the rail and commercial vehicle industry. It exhibits very good tooling and application properties. With its superior resistance to a wide range of cleaning agents combined with outstanding weathering resistance, it can be used for exterior joints.

The use of SikaBooster® P-50 provides rapid attainment of strength and early adhesion development.

Seek manufacturer's advice and perform tests on original substrates before using Sikaflex®-668 + SikaBooster® P-50 on materials prone to stress cracking. This product is suitable for experienced professional users only. Tests with actual substrates and conditions have to be performed ensuring adhesion and material compatibility.

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CURE MECHANISM

Sikaflex®-668 + SikaBooster® P-50 cures by reaction with moisture provided by SikaBooster® P-50 and is 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	1
3	2.5
4	3
6	4

Table 1: Strength build-up of Sikaflex®-668 + SikaBooster® P-50

CHEMICAL RESISTANCE

Sikaflex®-668 + SikaBooster® P-50 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.

It is resistant to a wide range of rail cleaning agents if used according to the guidelines of the manufacturer. Some rail cleaning agents contain aggressive chemicals such as phosphoric acids which may influence the durability of Sikaflex®-668 + SikaBooster® P-50 significantly. Therefore it is of highest importance to limit the exposure time to a minimum, observe correct dilution of cleaning agent and to perform a thorough rinsing after the cleaning process. Test newly introduced cleaning agents.

The above information is offered for general guidance only. Advice on specific applications will be given on request.

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. All pre-treatment steps must be confirmed by preliminary tests on original substrates considering specific conditions in the assembly process.

Note: The maximum primer flash-off time is limited to 8 hours for Sikaflex®-668 + SikaBooster® P-50 at temperatures above 30 °C. The primer must then be reactivated with Sika® Aktivator-100 prior the bonding process.

Application

Sikaflex®-668 + SikaBooster® P-50 needs to be processed with an adequate dispensing system. The mixer type must be respected (see table Typical Product Data).

Sikaflex®-668 + SikaBooster® P-50 can be applied between 10 °C and 35 °C 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. To ensure a uniform thickness of the bondline it is recommended to apply the adhesive in form of a triangular bead (see figure 1).

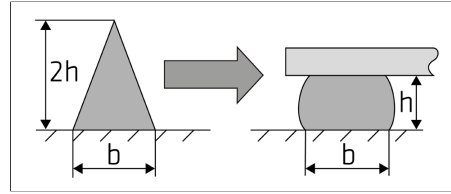


Figure 1: Recommended bead configuration

The open time is significantly shorter in hot and humid climate. The parts must always be joined within the open time. As a rule of thumb, a change of + 10 °C reduces the open time by half.

For advice on selecting and setting up a suitable pump system, contact the System Engineering Department of Sika Industry.

Tooling and finishing

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

Removal

Uncured Sikaflex®-668 + SikaBooster® P-50 may 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 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
- General Guideline Bonding and Sealing with 1-component Sikaflex®

PACKAGING INFORMATION

Sikaflex®-668

Pail	23 l
Drum	195 l

SikaBooster® P-50

Unipack	600 ml
Pail	23 l

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

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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