

PRODUCT DATA SHEET

SikaPower®-1277

Toughened and high impact-resistant 2-component structural adhesive

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Properties	SikaPower®-1277 (A)	SikaPower®-1277 (B)
Chemical base	Epoxy	Amine
Color (CQP001-1)	Red	White
	mixed	Light red
Density	1.08 g/cm ³ (9.0 lb/gal)	1.06 g/cm ³ (8.8 lb/gal)
	mixed (calculated)	1.07 g/cm ³ (8.9 lb/gal)
Mixing ratio	A:B by volume A:B by weight	2:1 2:1
Viscosity (CQP029-4)	at 10 s ⁻¹	430 Pa·s ^A 100 Pa·s ^A
Consistency	Thixotropic paste	
Application temperature	15 – 35 °C (59 – 95 °F)	
Open time (CQP046-11 / ISO 4587)	as contact adhesive	1 hour ^{B, C, D}
Handling time (CQP046-11 / ISO 4587)		11 hours ^{C, D}
Curing time (CQP046-9 / ISO 4587)	time to reach 20 MPa (2900 psi)	24 hours ^{C, D}
Shore D hardness (CQP023-1 / ISO 48-4)		75 ^{C, E}
Tensile strength (CQP543-1 / ISO 527)		30 MPa (4350 psi) ^{C, E}
E-Modulus (CQP543-1 / ISO 527)		2000 MPa (290 ksi) ^{C, E}
Elongation at break (CQP543-1 / ISO 527)		4 % ^{C, E}
Tensile lap-shear strength (CQP046-9 / ISO 4587)		28 MPa (4050 psi) ^{C, D, E}
Impact peel strength (CQP505-1 / ISO 11343)		30 N/mm (170 pli) ^{C, D, E, F}
Glass transition temperature (CQP509-1 / ISO 6721)		67 °C (153 °F) ^E
Shelf life (CQP016-1)	cartridges pails	24 months ^G 12 months ^G

CQP = Corporate Quality Procedure

C) 23 °C (73 °F) / 50 % r. h.

F) impact speed: 2 m/s

A) tested at 20 °C (68 °F)

D) adhesive layer: 25 x 10 x 0.3 mm / on steel

G) storage between 10 and 30 °C (50 and 86 °F)

B) applied on both bonding surfaces

E) cured for 2 weeks at 23 °C (73 °F)

DESCRIPTION

SikaPower®-1277 is a structural 2-component epoxy adhesive, which cures at room temperature. It is designed for high strength and impact-resistant bonding of metallic substrates, like steel and aluminum, as well as of composite substrates, like GFRP and CFRP laminates. The adhesive has good non-sag properties and contains glass beads of 0.3 mm (0.012 in) to ensure an optimal bonding thickness.

PRODUCT BENEFITS

- High structural and high impact-resistant properties
- Contains anti-corrosion agents
- Contains glass beads to ensure an optimal bonding thickness
- Does not contain solvents or PVC
- Cures at room temperature
- Accelerated curing and higher mechanical strength with heat

AREAS OF APPLICATION

SikaPower®-1277 is suitable for structural bonding applications in transportation and general industry. It can also be used for repair applications in combination with spot welding, riveting or clinching. The product is applied as contact adhesive (2-side application). In case of single bead application contact Sika. This product is suitable for professional experienced users only. Test with actual substrates and conditions have to be performed ensuring adhesion and material compatibility.

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Version 05.01 (01 - 2025), en_US

013106122770001000

CURE MECHANISM

SikaPower®-1277 cures by chemical reaction of the two components at room temperature. The cure rate is accelerated and the final glass transition temperature, as well as the tensile and shear strengths, may be significantly increased at higher curing temperatures. The following table shows typical lap-shear strengths reached after different curing times and temperatures.

Temperature	Time	Strength
23 °C (73 °F)	24 hours	20 MPa (2900 psi)
60 °C (140 °F)	60 minutes	10 MPa (1450 psi)
80 °C (176 °F)	30 minutes	15 MPa (2150 psi)

Table 1: Typical lap-shear strength development at different curing conditions (strength tested at 23 °C / 73 °F)

CHEMICAL RESISTANCE

In view of potential chemical or thermal exposure, it is required to conduct a project related testing.

METHOD OF APPLICATION

Surface Preparation

Surfaces must be clean, dry and free from grease, oil and dust. 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.

Application

SikaPower®-1277 is dispensed from dual cartridges with adequate piston guns or from pails / drums with 2-component equipment. If dispensed out of equipment, the mixer needs to be tailored for the specific application.

Cartridge use: Extrude adhesive without mixer to equalize the filling levels. Attach the mixer and dispose the first few cm of the bead prior to the application.

Apply the adhesive on both bonding surfaces and use a spatula to spread it. Join the parts within the open time of 1 hour. If the product is used with a single bead contact Sika prior to the application. The mixer open time is 30 minutes.

Removal

Uncured SikaPower®-1277 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 a suitable industrial hand cleaner and water.

Do not use solvents on skin.

STORAGE CONDITIONS

SikaPower®-1277 has to be kept between 10 °C and 30 °C (50 °F and 86 °F) in a dry place. Do not expose to direct sunlight or frost. After opening of the packaging, the contents have to be protected against humidity.

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
- AT: Mixer alternatives for cartridges

PACKAGING INFORMATION

SikaPower®-1277 (A+B)

Dual cartridge	400 ml
Mixer: Sulzer MixPac™ MFQ 08-24T	

SikaPower®-1277 (A)

Pail	19 kg
Drum	170 kg

SikaPower®-1277 (B)

Pail	19 kg
Drum	195 kg

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.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

LEGAL DISCLAIMER

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by contacting SIKA's Technical Service Department via email at tsmh@us.sika.com. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

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