

PRODUCT DATA SHEET

SikaPower®-1200

Fast curing, tough and high strength assembly adhesive

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Properties	Component A SikaPower®-1200	Component B SikaPower®-1040
Chemical base	Epoxy	Amine
Color (CQP001-1)	Yellow	Blue
	mixed	Green
Density	1.15 g/cm ³	1.25 g/cm ³
	mixed, calculated	1.18 g/cm ³
Mixing ratio	A:B by volume A:B by weight	100:50 100:54
Solid content	100 %	
Viscosity (CQP029-4)	at 10 s ⁻¹	120 Pa·s ^A 45 Pa·s ^A
Consistency	Thixotropic paste	
Application temperature	15 – 30 °C	
Open time (CQP046-11 / ISO 4587)	45 min ^{B, C, D}	
Curing time (CQP046-9 / ISO 4587)	at 23 °C at 70 °C	48 hours 2 hours
Tensile strength (CQP543-1 / ISO 527)	40 MPa ^{C, E}	
E-Modulus (CQP543-1 / ISO 527)	2600 MPa ^{C, E}	
Elongation at break (CQP543-1 / ISO 527)	3.5 % ^{C, E}	
Tensile lap-shear strength (CQP046-9 / ISO 4587)	20 MPa ^{C, D, E}	
Critical stress intensity factor K_{Ic} (ISO 13586)	2.7 m ^{1/2} MPa ^{C, E, F}	
Critical energy release rate G_{Ic} (ISO 13586)	3.5 N/mm ^{C, E, F}	
Glass transition temperature (CQP509-1 / ISO 6721-2)	90 °C ^E	
Shelf life	drum cartridges	12 months ^G 24 months ^G

CQP = Corporate Quality Procedure

^{C)} 23 °C / 50 % r. h.

^{F)} CT-specimens (Optical Crack Tracking)

^{A)} Rheometer PP = 25, d = 1 mm

^{D)} adhesive layer: 25 x 10 x 3 mm / on GFRP

^{G)} stored between 10 and 35 °C

^{B)} cured for 7 days at 23 °C

^{E)} cured for 4 hours at 70 °C

DESCRIPTION

SikaPower®-1200 is a tough, high strength, solvent free, thixotropic, fast curing epoxy adhesive. It is designed for fast assembly bonding of structural composite substrates, like GFRP and CFRP laminates, as well as metallic substrates. The adhesive cures by polyaddition of the two components.

PRODUCT BENEFITS

- High fatigue and impact resistance
- Long open time at high temperature and humidity
- Cures at room temperature
- Accelerated curing and higher mechanical strength with heat
- Good adhesion to fiber-reinforced plastics
- Does not contain solvents or PVC

AREAS OF APPLICATION

SikaPower®-1200 is suitable for fast assembly bonding of highly stressed components, especially if high strength and high fatigue properties are required.

This product is suitable for professional experienced users only. Tests with actual substrates and conditions have to be performed ensuring adhesion and material compatibility.

CURE MECHANISM

SikaPower®-1200 cures by chemical reaction of the two components at room temperature. Higher temperatures speed up the curing process and lower temperatures slow down the curing process. The final glass transition temperature, as well as the tensile and shear strengths, may be increased with higher curing temperature.

CHEMICAL RESISTANCE

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

METHOD OF APPLICATION

Surface Preparation

SikaPower®-1200 adheres usually well to fiber-reinforced plastics if applied subsequently after the removal of the protective peel ply.

Surfaces must be clean, dry and free from grease, oil and dust. Surface treatment may be required depending on the specific nature of the substrates. All pre-treatment steps must be confirmed by preliminary tests on original substrates considering specific conditions in the assembly process.

Application

SikaPower®-1200 is dispensed from dual cartridges with adequate manual or pneumatic guns. Extrude adhesive without mixer to equalize the filling levels. Attach the mixer and dispose of the first few cm of the bead before the application.

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

Removal

Uncured SikaPower®-1200 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 cleaning towels or a suitable industrial hand cleaner and water.

Do not use solvents on skin.

STORAGE CONDITIONS

SikaPower®-1200 has to be stored between 10 °C and 35 °C 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

PACKAGING INFORMATION

SikaPower®-1200 (A)

Drum	220 kg
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SikaPower®-1040 (B)

Drum	240 kg
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SikaPower®-1200 (A+B)

Cartridge	400 ml
Mixer: Sulzer MixPac™ MFH 10-24T	

Cartridge	450 ml
Mixer: Sulzer MixPac™ MGQ 08-24T	

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.

PRODUCT DATA SHEET

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Sika Limited (Vietnam)

Nhon Trach 1 Industrial Zone,
Nhon Trach Dist., Dong Nai Province,
Vietnam
Tel: (84-251) 3560 700
Fax: (84-251) 3560 699
sikavietnam@vn.sika.com
vnm.sika.com

