

PRODUCT DATA SHEET

SikaPower®-499

Crash resistant body shop adhesive

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Chemical base	Epoxy hybrid
Color (CQP001-1)	Lilac
Solid content (CQP576-1)	99 %
Density (uncured)	1.3 kg/l
Application temperature	50 — 60 °C
Viscosity η^* (DIN 54458)	flowability A4 at 45 °C 230 Pa.s
Levelling behavior G' (DIN 54458)	A2 at 45 °C 40 000 Pa
Curing conditions	standard 180 °C 30 minutes ^A minimum 160 °C 15 minutes ^A
Tensile lap-shear strength (CQP046-9, CQP580-6 / ISO 4587)	at 10 mm/minute 30 MPa ^{B/C}
Dynamic resistance to cleavage (CQP505-1, CQP580-6)	at 2 m/s 40 N/mm ^{B/D}
T-peel strength (CQP580-2, -6 / ISO 11339)	at 100 mm/minute 18 N/mm ^{B/D}
Tensile strength (CQP580-5, -6 / ISO 527)	at 2 mm/minute 30 MPa
Elongation at break (CQP580-5, -6 / ISO 527)	at 2 mm/minute 5 %
Young's - modulus (CQP580-5, -6 / ISO 527)	at 2 mm/minute 2 000 MPa
Glass transition temperature (CQP039-1 / ISO 6721)	peak 110 °C ^F
Shelf life	10 months ^E

CQP = Corporate Quality Procedure

C) bondline thickness 0.2 mm

F) tensile vibration, frequency 1 Hz, deformation stat./dyn 0.3/0.05 %, heating rate 1 K/min

A) substrate temperature

D) bondline thickness 0.3 mm

B) steel, HDG, H420, 1.2 mm

E) stored at temperature below 25 °C

DESCRIPTION

SikaPower®-499 is a one-part, epoxy based, warm-applied, heat-curing, impact modified, structural adhesive.

It is designed for sheet metal assembly work in the body shop and is cured with heat, e.g. in the paint oven.

PRODUCT BENEFITS

- High crash resistance
- Adheres well to oily substrates
- High wash-out resistance
- Can be spot-welded
- High strength
- Suitable to join different metals
- Distortion-free joining
- Solvents, PVC and isocyanate free

AREAS OF APPLICATION

SikaPower®-499 is suitable for structural bonding of different types of metal and specific plastic materials. It is designed for use in combination with spot-welding, riveting, clinching and other mechanical fastening techniques, and in some cases as a partial replacement for them. The bonding of oily substrates (standard anti-corrosion treatment and deep drawing oils, approx. 2 g/m²) is possible because of the oil uptake during the heat curing.

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

PRODUCT DATA SHEET

SikaPower®-499

Version 03.01 (03 - 2023), en_US

013006404998001000

CURE MECHANISM

SikaPower®-499 is cured by heat. The cure-rate depends on temperature and time of exposure. The most common heat sources are convection ovens. The maximum temperature must not exceed 210 °C for more than 10 minutes.

METHOD OF APPLICATION

SikaPower®-499 is typically applied in bead form with a diameter of 1 to 3 mm.

All parts of the application system in contact with the product must be heated. A phased temperature increase from 35 °C at the follower plate to 55 °C at the application nozzle is typically used. During longer breaks (e.g. overnight or weekends) suitable standby temperatures and switch-off times must be taken into account.

The time between application and curing must be as short as possible, since moisture uptake could cause formation of blisters during the heat curing process. However, moisture uptake can be prevented by pre-curing the assemblies or car bodies for 15 minutes at 160 °C (substrate temperature).

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

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

Pail	23 l
Drum	195 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.

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.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.** Sale of SIKA products are subject to the Terms and Conditions of Sale which are available at <https://usa.sika.com/en/group/SikaCorp/termsandconditions.html> or by calling +1 800-933-7452.

PRODUCT DATA SHEET

SikaPower®-499
Version 03.01 (03 - 2023), en_US
013006404998001000

Sika Corporation

30800 Stephenson Highway
Madison Heights, MI 48071
U.S.A.
Telephone: +1 248-577-0020
Email: tsmh@us.sika.com
www.sikausa.com

