

PRODUCT DATA SHEET

SikaPower®-510 G MBX

High toughness body shop adhesive, suitable for mixed material bonding

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Chemical base	Epoxy hybrid
Color (CQP001-1)	Blue
Solid content (CQP576-1)	99 %
Density (uncured)	1.2 kg/l
Application temperature	35 — 55 °C
Viscosity η^* (DIN 54458)	flowability A4 at 45 °C 150 Pa.s
Levelling behavior G' (DIN 54458)	A2 at 45 °C 15 000 Pa
Curing conditions	standard 180 °C 30 minutes ^A minimum 165 °C 15 minutes ^A
Tensile lap-shear strength (CQP046-9, CQP580-6 / ISO 4587)	at 10 mm/minute 20 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 20 N/mm ^{B/D}
Tensile strength (CQP580-5, -6 / ISO 527)	at 2 mm/minute 13 MPa
Elongation at break (CQP580-5, -6 / ISO 527)	at 2 mm/minute 90 %
Young's - modulus (CQP580-5, -6 / ISO 527)	at 2 mm/minute 250 MPa
Glass transition temperature (CQP039-1 / ISO 6721)	peak 90 °C ^F
Shelf life	3 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®-510 G MBX is a one-part, epoxy-based, cold pumpable, 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
- Wash-out resistant
- Can be spot-welded
- High strength
- Suitable to join different metals
- Distortion-free joining
- Solvents, PVC and isocyanate free
- Contains fine glass beads for layer thickness control

AREAS OF APPLICATION

SikaPower®-510 G MBX 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.

The glass beads contained in the adhesive provide a uniform layer thickness in the gap and help reduce excessive material squeeze out.

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.

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CURE MECHANISM

SikaPower®-510 G MBX 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 200 °C for more than 10 minutes.

METHOD OF APPLICATION

SikaPower®-510 G MBX is typically applied in bead form with a diameter of 1 to 3 mm.

The follower plate and the hoses do not necessarily have to be heated. Typically, the last hose, the dosing unit and the application nozzle are heated to 45 °C +/- 10 °C so as to favor constant application properties. 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).

SikaPower®-510 G MBX can be processed with hand-, pneumatic- or electric driven piston guns as well as dispensing equipment.

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

Cartridge	300 ml
Pail	4 gal
Drum	47 gal 51 gal

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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