BUILDING TRUST

PRODUCT DATA SHEET

SikaPower®-550 G

Crash toughened body shop adhesive

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Chemical base		Epoxy hybrid
Color (CQP001-1)		Green
Solid content (CQP576-1)		99 %
Density (uncured)		1.3 kg/l
Application temperature		45 — 55 °C
Viscosity η* (DIN 54458)	flowability A4 at 45 °C	110 Pa.s
Levelling behavior G' (DIN 54458)	A2 at 45 °C	15 000 Pa
Curing conditions	standard 180 °C minimum 160 °C	30 minutes [A] 15 minutes [A]
Tensile lap-shear strength (CQP046-9 / ISO 4587)	at 10 mm/minute	30 MPa [B/C]
Dynamic resistance to cleavage (CQP505-1, CQP580-6)	at 2 m/s	27 N/mm [B/D]
T-peel strength (CQP580-2, -6 / ISO 11339)	at 100 mm/minute	15 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	8 %
Young's modulus (CQP580-5, -6 / ISO 527)	at 2 mm/minute	2 000 MPa
Glass transition temperature (CQP039-1 / ISO 6721)	peak	120 °C [F]
Shelf life		3 months [E]

CQP = Corporate Quality Procedure
[A] substrate temperature
[B] steel, HDG, H420, 1.2 mm
[C] bondline thickness 0.2 mm
[D] bondline thickness 0.3 mm
[E] stored at temperature below 25 °C
[F] tensile vibration, frecuency 1 Hz, deformation stat./dyn 0.3/0.05 %, heating rate 1 K/min

DESCRIPTION

SikaPower®-550 G is a one-part, epoxy-based, cold pumpable, warm-applied, heat curing, crash toughened, 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

- Crash toughened
- Adheres well to oily substrates
- Wash-out resistant
- Can be spot-welded
- High strength
- Suitable to join different metals
- Solvents, PVC and isocyanate free
- Contains fine glass beads for layer thickness control

AREAS OF APPLICATION

SikaPower®-550 G 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, up to 3 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.

CURE MECHANISM

SikaPower®-550 G 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®-550 G is typically applied in bead form.

The follower plate, pump and hoses do not necessarily have to be heated if the ambient temperature is 18 °C or higher. The last hose and dispenser are typically heated to 40 - 55 °C. Depending on the equipment, especially at low ambient temperatures, application tests are recommended.

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 precuring the assemblies or car bodies for 15 minues at 160 °C (substrate temperature).

For advice on selecting and setting up a suitable pump system and related process parameters, contact your Sika sales representative.

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	4 gal (US)
Drum	47 gal (US)

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.

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