

PRODUCT DATA SHEET

Sikaflex®-220+

Windshield Adhesive

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Chemical base	1 component polyurethane
Color (CQP001-1)	Black
Cure mechanism	Moisture-curing
Density (uncured)	1.2 kg/l
Non-sag properties	Excellent
Application temperature	Product 5 – 43 °C (40 – 110 °F) Ambient 5 – 43 °C (40 – 110 °F) Substrate 5 – 54 °C (40 – 130 °F)
Skin time (CQP019-1)	40 minutes ^A
Open time (CQP526-1)	30 minutes ^A
Shore A hardness (CQP023-1 / ISO 48-4)	50
Tensile strength (CQP036-1 / ISO 527)	7 MPa (1 000 psi)
Elongation at break (CQP036-1 / ISO 527)	400 %
Tear propagation resistance (CQP045-1 / ISO 34)	11 N/mm (63 pli)
Tensile lap-shear strength (CQP046-1 / ISO 4587)	5 MPa (725 psi)
Minimum Drive Away Time (cars) according FMVSS 212 (CQP511-1)	See Table 1
Service temperature (CQP509-1 / CQP513-1)	-40 – 93 °C (-40 – 200 °F)
Shelf life	9 months ^B

CQP = Corporate Quality Procedure

^A) 23 °C (73 °F) / 50 % r.h.^B) Stored below 25 °C (77 °F)
DESCRIPTION

Sikaflex®-220+ is a one component, cold-applied, high viscosity polyurethane adhesive designed for use in replacing direct glazed automotive glass parts. When used as directed, Sikaflex®-220+ is an appropriate adhesive for use in auto glass replacement applications.

PRODUCT BENEFITS

- Cost effective
- One step pre-treatment for glass
- Short cut-off string
- Easy to apply

AREAS OF APPLICATION

Sikaflex®-220+ has been specifically designed for the Automotive Glass Replacement business. It is ideal for mobile and in-shop installations.

This product is to be used by professional, experienced users only. Related process information in this PDS is specifically for Automotive Glass Replacement. For other applications, tests with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.

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012001212200001000

CURE MECHANISM

Sikaflex®-220+ cures by reaction with atmospheric moisture. At low temperatures the water content of the air is generally lower and the reaction proceeds more slowly. More information can be found in the Minimum Drive Away Time table that follows.

R e l . Hum.	Temperature (°F)			
	> 40	> 50	> 72	95 - 110
> 90%	16	12	8	8
> 70%	16	12	8	8
> 40%	NR	16	8	8
> 20%	NR	NR	16	8
> 0%	NR	NR	NR	NR

Table 1: Minimum Drive Away Time (hours)

CHEMICAL RESISTANCE

Sikaflex®-220+ is generally resistant to fresh water, seawater, diluted acids and diluted caustic solutions; temporarily resistant to fuels, mineral oils, vegetable and animal fats and oils; not resistant to organic acids, glycolic alcohol, concentrated mineral acids and caustic solutions or solvents.

METHOD OF APPLICATION

Surface Preparation

Surfaces must be clean, sound, dry and free from all traces of traditional and non-traditional contamination. All corrosion must be removed and all bare metal scrapes and scratches must be prepared in accordance with Sika's Corrosion Treatment recommendations. For preparation of all bonding surfaces it is required to read and understand the instructions given in the Sika AGR Technician Training Manual. Windshields without ceramic coating need proper UV protection.

Application

Cut off the tip of the nozzle in accordance with the vehicle manufacturer's recommendations and screw onto the cartridge or the unipack adapter.

It is recommended to apply the adhesive with a piston-type application gun. To ensure a uniform thickness of adhesive bead, we recommend that the adhesive be applied in the form of a triangular bead (see fig. 1).

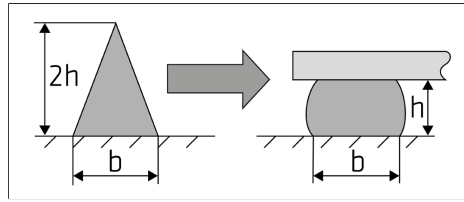


Figure 1: Compressing adhesive bead to final size

Removal

Uncured Sikaflex®-220+ may be removed from tools and equipment with Sika® Remover-208 or another suitable solvent, such as mineral spirits. 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.

Application Limits

- Avoid contact with alcohol and alcohol containing solvents during cure.
- Do not apply over silicones or in the presence of curing silicones.
- Glass parts must always be installed within the open time. The open time is significantly shorter in hot and humid climates. Never install any glass part after the product has built a skin.
- Always use in conjunction with Sika® Aktivator PRO, Sika® Primer-207, or Sika® Primer-207 AGR.

FURTHER INFORMATION

Please contact your local Sika Technical Services Department to request advice on specific applications. Copies of the following publications are available on our website www.sikaindustry.com:

- Safety Data Sheets
- Product Data Sheets
- Sika AGR Technician Training Manual

PACKAGING INFORMATION

Cartridge	300 ml
Unipack	600 ml

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.

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