

Sikaflex® -255 FC

High Strength, Elastic Adhesive

Technical Product Data (typical values)

Chemical base		1-C polyurethane
Color		Black
Cure mechanism		Moisture Curing
Density (uncured)		10.1 lb/gal
VOC (EPA method 24)		0.53 lb/gal (64.1 g/l)
Non-sag properties		Excellent
Application temperature	product	50°-95°F (10°-35°C)
Tack free time ¹		30 min
Curing speed		(see diagram 1)
Shrinkage		3% approx.
Shore A-hardness (ASTM D 2240)		52-57
Tensile strength (ASTM D 412)		870 psi
Elongation at break (ASTM D 412)		400%
Tensile lap-shear strength (ASTM D 1002)		580 psi
Volume resistivity (ASTM D 257-99)		1X10 ⁷ Wcm appx.
Service temperature	permanent	-40°-194°F (-40°-90°C)
Shelf life (storage below 80°F (27°C))	Cartridges/Unipacs	9 months
	Drums	6 months

¹⁾ 73°F (23°C) / 50% r.h.

Description

Sikaflex®-255 FC is a fast curing, flexible, high-performance one-component, polyurethane based adhesive for bonding glass, panels and other structures to a variety of substrates. Sikaflex®-255 FC begins to cure and exhibit excellent green strength as soon as the product is extruded or the cartridge is opened. Sikaflex®-255 FC is not for use in the replacement of automotive windshields. Sikaflex®-255 FC is manufactured in accordance with ISO 9001/14001 Quality Assurance Systems and the Responsible Care Program.

Product Benefits

- One-component
- Low odor
- Bonds and seals at the same time
- Short tack free and curing time
- Very high thixotropy for good gap filling properties
- Adhesion to a wide range of substrates
- Non-staining curing process
- Non-corrosive
- Initial load bearing capacity
- Overpaintable with many coatings (Consult Sika)
- Increases torsional stiffness of final assembly
- Shock/Impact resistant
- Vibration and sound damping properties

Areas of Application

- Sikaflex®-255 FC is suitable for use on glass as well as metal panels (primed and painted). Sikaflex®-255 FC offers extremely high initial bond strength. Its fast rate of cure results in rapid strength development and shorter service times.
- Bonding trim, molding and all kinds of styling elements
 - Structural bonding of large parts, including sheet metal, composites and glass
 - Used to replace rivets and other mechanical fasteners
 - This product is suitable only for experienced professional users.
 - Tests with actual substrates and conditions have to be performed to

Industry



ensure adhesion and material compatibility.

Cure Mechanism

Sikaflex[®]-255 FC cures by reaction with atmospheric moisture. At low temperatures, the water content of the air is lower and the curing reaction proceeds somewhat slower (see diagram).

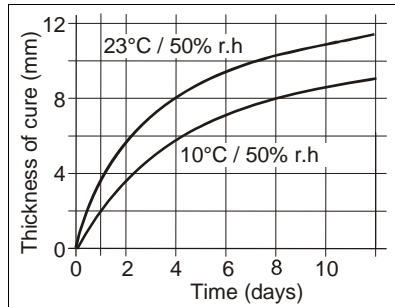


Diagram 1: Curing speed Sikaflex[®]-255 FC

Chemical Resistance

Sikaflex[®]-255 FC is resistant to fresh water, seawater, dilute acids and caustic solutions; temporarily resistant to fuels, mineral oils, vegetable and animal oils; not resistant to organic acids, alcohol, concentrated mineral acids and caustic solutions or solvents. The above information is offered for general guidance only. Advice on specific applications will be given on request. Contact the Technical Service Department of Sika Industry at 888-832-7452.

Method of Application

Surface preparation

Surfaces must be clean, dry and free from all traces of grease, oil and dust. The surfaces must be treated with a cleaning or activating agent and/or primed with the appropriate primer. See Sika Surface Preparation Guidelines or contact the Technical Service Department of Sika Industry at 888-832-7452.

Application

Cartridges: Pierce cartridge nozzle opening. **Unipacs:** Place unipac in the application gun and snip off the

closure clip. Cut tip of nozzle to appropriate size. For satisfactory results the adhesive must be applied with a piston type manual, air or battery cartridge gun. To ensure uniform thickness of adhesive bead, we recommend that the adhesive is applied in the form of a triangular bead (see illustration). Do not apply below 50°F (10°C) or above 95°F (35°C). The optimum temperature for substrate and adhesive is between 59°F (15°C) and 77°F (25°C). **Bulk:** For advice on selecting and using a suitable pump system, please contact the System Engineering Department of Sika Industry at 248-577-0020.

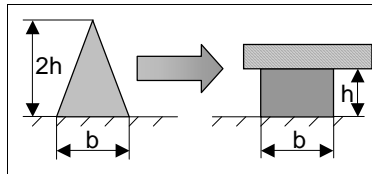


Figure 1: Recommended bead configuration

Tooling and finishing

To facilitate tooling, wet finger or best available tool with Sika[®]-Slick or light soapy water. Do not use alcohol as a tooling agent.

Removal

Uncured Sikaflex[®]-255 FC may be removed with Sika[®] Remover 208 or Mineral Spirits. Do not use solvents containing alcohol as a cleaning agent. Cured Sikaflex[®]-255 FC may only be removed mechanically.

Overpainting

If overpainting is desired, the paint and paint process compatibility must be tested before use. Contact Sika Technical Services Department in all cases at 888-832-7452.

Limitations

- For best results, use opened cartridges the same day.
- When applying sealant, avoid air entrapment.
- Do not use on polyethylene, polypropylene, silicone, PTFE, and certain plasticized resins (consult

our Technical Services Department for advice).

- When working in low temperature conditions, allow cartridge to reach room temperature.
- Always use a piston type cartridge gun (hand operated or pneumatic) to apply adhesive.
- Avoid contact with alcohol and solvents containing alcohol during application and curing.

WARNING: IRRITANT, SENSITIZER

Contains Polyisocyanate Prepolymer (Mixture), Isophorone Diisocyanate (CAS 4098-71-9), Methylene Bisphenyl Isocyanate (CAS 101-68-8) and Xylene (CAS 1330-20-7). Causes eye irritation. May cause skin/respiratory irritation. May cause skin and/or respiratory sensitization after prolonged contact. May be harmful if swallowed. Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain, liver, kidney and nervous system damage. Headaches and dizziness may result. **Deliberate misuse by inhalation of vapors may be harmful or fatal. Strictly follow all usage, handling and storage instructions.**

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Health	*2
Flammability	1
Reactivity	0
Personal Protection	C

First Aid

Eyes – Hold eyelids apart and flush thoroughly with water for 15 minutes. **Skin** – Remove contaminated clothing. Wash skin thoroughly for 15 minutes with soap and water. **Inhalation** – Remove to fresh air. **Ingestion** – Do not induce vomiting. Dilute with water. Contact physician. **In all cases contact a physician immediately if symptoms persist.**

Further information available at:
www.sikaindustry.com

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Further Information

Copies of the following publications are available on our website www.sikaindustry.com:

- Material Safety Data Sheets
- Product Data Sheet
- Sika Primer Chart
- General guidelines for bonding and sealing with Sika products

In case of emergency call:

Chemtrec: 800-424-9300

International: 703-527-3887

For further information and advice regarding transportation, handling, storage and disposal of chemical products, users should refer to the actual Material Safety Data Sheets containing physical, ecological, toxicological and other safety related data. It is highly recommended to read the actual Material Safety Data Sheet before using the product.

- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- KEEP CONTAINER TIGHTLY CLOSED

Packaging Information

Cartridge	300 ml
Unipac	600 ml
Drum	200L/52.8 Gal.

Value Basis

All technical data stated on this Product Data Sheet are based on the results of laboratory tests only. Actual measured data in the field may vary due to site specific conditions which are not known to Sika and beyond our control.

Handling and Storage

Avoid direct contact. Wear personal protective equipment (chemical resistant goggles/gloves/clothing) to prevent direct contact with skin and eyes. Use only in well ventilated areas. Open doors and windows during use. Use a properly fitted NIOSH respirator if ventilation is

poor. Wash thoroughly with soap and water after use. Remove contaminated clothing and laundry before reuse.

Storage temperatures not in excess of 80°F will help ensure maximum product shelf life.

Clean Up

Use personal protective equipment (chemical resistant gloves/ goggles /clothing). Without direct contact, remove spilled or excess product and place in suitable sealed container. Dispose of excess product and container in accordance with applicable environmental regulations.

Limited Material Warranty

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 shelf life. User determines suitability of product for intended use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor. **NO OTHER WARRANTIES IMPLIED OR EXPRESS 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.**

Legal Notes/Disclaimer

All information provided by Sika Corporation ("Sika") concerning Sika products, including but not limited to, any recommendations and advice relating to the application and use of Sika products, is given in good faith

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Sika reserves the right to change the properties of its products without notice. All sales of Sika product(s) are subject to its current terms and conditions of sale which are available at www.sikacorp.com or by calling 201-933-8800.

Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's most current Product Data Sheet, product label and Material Safety Data Sheet which are available at www.sikaindustry.com. Nothing contained in any Sika materials relieves the user of the obligation to read and follow the warnings and instruction for each Sika product as set forth in the current Product Data Sheet, product label and Material Safety Data Sheet prior to product use.

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