

Sikaflex® -219 LM

High Performance, Low-Modulus Elastomeric Polyurethane Sealant

Technical Product Data (typical values)

Chemical base	1-C polyurethane
Color	White, Aluminum Gray, Log Home Tan, White, Black, Deep Bronze, Limestone, Almond, Redwood Tan
Cure mechanism	Moisture Cure
Density (uncured)	10.3 lb/gal
VOC (EPA method 24)	0.4 lb/gal (47.9 g/l)
Non-sag properties	Non-Sag
Application temperature	40°F - 100°F (4°C - 38°C)
Tack free time ¹	4 hours
Curing speed ¹	7-10 days full cure
Shore A-hardness (ASTM D 2240)	20
Tensile strength (ASTM D 412)	125 psi
Elongation at break (ASTM D 412)	700%
Movement accommodation factor	+100/-50%
Service temperature	-40°F - 190°F (-40°C - 88°C)
Shelf life (storage below 80°F (27°C))	12 months

¹) 73°F (23°C) / 50% r.h.

Description

Sikaflex®-219 LM is a one-component, low-modulus, high performance, moisture curing polyurethane sealant with excellent adhesion to aluminum, FRP, steel, wood, masonry and most plastics with proper surface preparation. Conforms to Federal Specification TT-S-00230C, Type II, Class A, ASTM C-920, Type S, Class 100/50, Grade NS, AAMA 808-3-92 verified. Exhibits excellent recovery making it ideal for sealing applications requiring high joint movement capability.

Product Benefits

- Cures to form a tough, durable, elastic material with excellent cut and tear resistance.
- Adheres, in most cases without a primer, to aluminum, siliconized polyester painted metals, and other metals, glass, wood, tiles, fiber reinforced plastics, and similar materials.
- Odorless, non-staining.
- May be painted.
- Excellent resistance to aging, weathering and road salt.
- Exhibits good adhesion to aluminum, FRP, steel, wood, GALVALUME®, ZINCALUME®, and aluminized steel without attacking the metal coating

- High joint movement capability of +100/-50
- AAMA 808-3-92 Verified for Exterior Perimeter Sealing Compounds.

Areas of Application

- Use for sealing fabrication details that are subject to structural movement.
- Sealing glass to wood, aluminum, anodized aluminum.
- Use between logs in log homes.
- An effective sealant for use in Exterior Insulation Finish Systems (EIFS).
- Sealing critical SSR endlaps, exterior joints around roof curb, roof joints, skylights, smoke vents,

Industry



air conditioning equipment, curtain wall joints, and installation and perimeter sealing of windows and doors.

- Sealing exterior lap joints of grain storage bins and sealing the base to the concrete pad.
- Sealing/bedding of mullions, panels and frames.
- Sealing of exposed and concealed joints of aluminum, steel, coated metals and wood.
- This product is suitable for experienced professional users only.
- Tests with actual substrates and conditions have to be performed to ensure adhesion and material compatibility.

Cure Mechanism

Moisture Cured

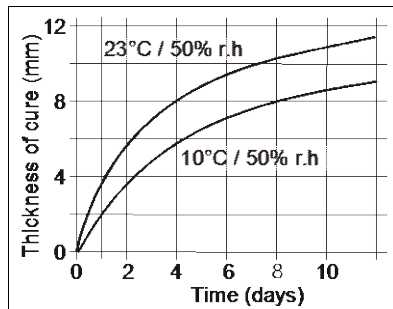


Diagram 1: Curing speed Sikaflex®-219LM

Chemical Resistance

Good resistance to water, various dilute acids and alkalis, vegetable oil, mineral oil, salt solution and kerosene. Not resistant to organic solvents, gasoline, paint thinner, strong acids and strong alkalis. Joint design may affect long term durability. The above information is offered for general guidance only. Advice on specific applications will be given on request. Contact the Service Department of Sika industry at tsmh@us.sika.com.

Method of Application

Surface preparation

Surfaces should be of sound quality, dry and free of oil, grease, dirt, dust corrosion and other contaminants that would otherwise impede adhesion. Make sure joint is frost free. Test adhesion before use over

treated lumber products. Due to new chemical treatments, primer may be required. Advice on specific applications is available from the Technical Service Department of Sika Industry at tsmh@us.sika.com.

Application

Recommended application temperatures: 40°F to 100°F. For cold weather application, store units at approximately 70°F; remove just prior to using. Cut tip to joint size. Puncture airtight seal. Install with hand or power operated gun. For best performance, product should be gunned into joint when joint slot is at mid-point of its designed expansion and contraction.

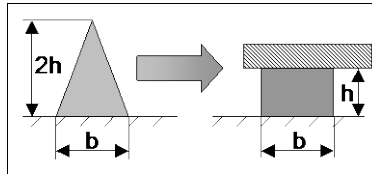


Figure 1: Recommended bead configuration

Tooling and finishing

Tooling and finishing must be carried out within the tack free time of the sealant. To facilitate tooling, wet pointing tool or finger with soap solution. Do not use alcohol or alcohol-containing products.

Removal

Uncured Sikaflex®-219 LM may be removed from tools and equipment with mineral spirits or another suitable solvent. Follow solvent manufacturer's instructions for use and warnings. Once cured, the material can only be removed mechanically. Hands and exposed skin should be washed immediately using a suitable industrial hand cleanser and water. Do not use solvents on skin!

Overpainting

Sikaflex®-219 LM can be overpainted after becoming tack free. The paint and paint process must be tested for compatibility by carrying out preliminary trials. It should be understood that the hardness and film thickness of the paint may impair the elasticity of the sealant and lead to cracking of the

paint over time despite positive compatibility tests.

Limitations

- Do not apply on frozen surface, or through standing water, or on wet surface.
- Do not apply over silicones or in the presence of curing silicones.
- Do not apply on surfaces where constant temperatures will exceed 190°F. Avoid exposure to high levels of chlorine (max 5 ppm). Allow one week cure time for total water immersion applications.
- Do not use in joints deeper than 1/2 inch, minimum depth 1/4 inch. Will not adhere to polyethylene, polypropylene or teflon.
- White color tends to yellow slightly when exposed to ultraviolet rays.
- Ultimate performance depends on proper joint design and proper application. With joint surfaces properly prepared and sealed, movement of +100/-50% can be tolerated.

WARNING: IRRITANT, SENSITIZER.

Contains Polyisocyanate Prepolymer (Mixture), 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.**

HMIS

Health	*2
Flammability	1
Reactivity	0
Personal Protection	C

First Aid Measures

Eyes – Hold eyelids apart and flush thoroughly with water for 15 minutes. **Skin** – Remove

Further information available at:
www.sikausa.com

Sika Corporation
Industry Division
30800 Stephenson Highway
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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

Copies of the following publications are available on our website www.sikausa.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

Health and Safety Information

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

Value Basis

All technical data stated in this Product Data Sheet are based on 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

Sikaflex® -219 LM cartridges and unipacs, properly stored in cool, dry conditions, have shelf lives of 12

months. Wear protective equipment (chemically resistant gloves / goggles / clothing) to prevent direct contact with skin and eyes. Use with adequate general and local exhaust ventilation. If ventilation is poor, use properly fitted NIOSH respirator. Wash thoroughly with soap and water after handling. Store in cool dry place away from sunlight between 40°F - 95°F (4°C - 35°C). A storage temperature below 80°F (27°C) is most highly recommended for maintaining optimum 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 or 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

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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.sikausa.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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