

Sikaglaze® IG-4429 HM

Heat Mirror Insulating Glass Sealant

Technical Product Data (typical values) *Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

	Component A Sikaglaze® IG-4429 HM	Component B Sikaglaze® IG-4429 HM
Chemical Base	Polyol	Isocyanate
Color	Black	White
Mixed	Black	
Cure mechanism	Polyaddition	Polyaddition
Cure type	Oxime	Oxime
Density (uncured)	13.82 lbs./gal.	9.48 lbs. / gal.
Mixed	13.5 lbs. / gal	
Mixing Ratio	by volume	100 : 8
	By weight	100 : 5.5
Consistency	Non-sag	
Slump	Nil	
Tack free time ¹	60 minutes	
Extrusion Rate g/min @ 30 psi	140 g/min	
Curing speed	Cures overnight, see hardness data	
Roller Peel Strength of glass to film after 16 hr. RT cure (pli)		
	100% adhesive break, initial	16 min
	After 30 days exposure to UV/moisture	16 min
Hardness (Rex A)	16 Hours at Room Temp.	45
	7 Hours at Room Temp.	28
Lap shear strength (psi) 100% cohesive break (glass to glass)	250	
MTV rate (SIGMA Method)	14 g/m ² x 24 hrs.	
Moisture Vapor Permeance	(ASTM E- 395) metric perms	0.28
	Film thickness mils (in.)	60 mils (0.15 cm)
	Relative humidity %	100
	Outside Cup	0
	Temperature °F	100
Application Temperature	40° to 100°F (5 to 38°C)	
Application Life ¹ (minutes)	10-20	
Service temperature, maximum	170°F (76°C)	
Weathering REsistance	Excellent	
Shelf life (storage below 80°F (32°C))	Drum and Pail	6 months

¹ 77°F (25°C) / 50% r.h.

Description

Sikaglaze® IG-4429 HM is a high performance, two-part polyurethane sealant specifically developed for sealing insulating glass units against moisture, cold, heat, and contamination.

Sikaglaze® IG-4429 HM exhibits features engineered for use in the fabrication of glass units utilizing Heat Mirror® films. and provides outstanding resistance to weathering, ozone, and solar radiation

with excellent adhesion to glass and aluminum.

Product Benefits

- Engineered for use in Heat Mirror® film applications

Industry



- Resistant to weathering, ozone and UV radiation
- Excellent adhesion to glass and aluminum
- Meets ASTM E-774, ASTM E-2190 and Can/CGSB 12.8
- Non-sagging

Areas of Application

Sikaglaze® IG-4429 HM insulating glass sealant is designed to provide an enduring elastomeric secondary seal utilized in the manufacture of insulating glass units. The material is processed using bulk dispense metered mix 2-component dispensing equipment. This product is suitable for professional experienced users only. Tests with actual substrates and conditions must be performed to ensure adhesion and material compatibility. **THIS PRODUCT IS SUITABLE FOR PROFESSIONAL, EXPERIENCED USERS ONLY.**

Cure Mechanism

Sikaglaze® IG-4429 HM cures through chemical reaction between Component A, and Component B. Higher temperatures accelerate the curing whereas lower temperatures slow down the curing process. A minimum of 45 minutes of room temperature cure is recommended prior to accelerating cure with higher ambient (oven) temperatures. Consult Southwall Technologies HM manual and procedures for proper hold time depending on oven type and method used. Product should typically be at 40 durometer prior to oven cycle.

Chemical Resistance

Sikaglaze® IG-4429 HM is resistant to UV radiation, fresh water, seawater and proprietary aqueous cleaning agents; temporarily resistant to fuels, mineral oils, vegetable and animal fats and oils; no resistance to organic acids, concentrated mineral acids, caustic solutions and solvents.

The above information is offered for general guidance only. Advice on specific applications will be given on request. Contact Technical Service at (tsmh@sika-corp.com).

Method of Application

Surface preparation

Glass: To ensure proper adhesion, the surface of the glass should be cleaned thoroughly using standard glass washing equipment with a detergent based cleaner and hot water. The panels should be flushed thoroughly with softened or deionized warm water to remove all

traces of detergent and immediately blown dry with oil free high pressure air.

Metal: To ensure proper adhesion, the surfaces should be clean and free of any oils, greases or incompatible sealers, paints or coatings that may interfere with adhesion.

Mixing

Note: This is a two-component product that requires mixing for proper performance. Proper mixing and correct proportions of Component A:B are extremely important if optimum results are to be obtained. Mixing by experienced personnel at a central location is recommended.

Various types of mechanical mixers can be used for mixing and dispensing Sikaglaze® IG-4429 HM insulating glass sealant. Continuous flow type mixers such as the Graco 987 can be used to mix and dispense Sikaglaze® IG-4429 HM insulating glass sealant. When using these mechanical mixers, automatic metering devices must be adjusted to deliver base compound with accelerator in a ratio of 100:8 by volume (100:5.5 by weight).

Important: Be sure to properly re-mix curing agent (Part B) by rolling pails and / or stirring thoroughly before use as some normal separation and settling may occur during storage. Consult Sika IG Technical Application manual for further handling and quality control instructions.

Caution: Mechanical mixing machines must be checked periodically during service to assure proper calibration and adjustments.

Application

This product is suitable for bulk dispensing straight from drums or pails by means of a pneumatic or hydraulic pump system. For advice on selecting and setting up a suitable pump system please contact Sika Technical Service at (tsmh@sika-corp.com).

Application life is the period of time that the compound remains at a consistency suitable for application. Application life is based upon standard conditions at 75°F and 50% relative humidity.

Tool sealant to properly wet the substrates and entirely fill the secondary sealant joint cavity. The length of the cure depends upon the application life, temperature, and relative humidity. Low humidity will extend the cure time.

Tooling and finishing

Tool the sealant to properly wet the substrates and entirely fill the entire secondary seal cavity.

Removal

Uncured sealant may be removed from tools and equipment with solvents such as isopropyl alcohol or xylene, if cleaned before sealant has begun to cure. Strictly follow solvent manufacturer's instructions for use and warning statements. Once cured, the material can only be removed mechanically. Hands and exposed skin should be washed with soap and water immediately after use. **DO NOT USE SOLVENTS ON SKIN!**

Limitations

Sikaglaze® IG-4429 HM insulating glass sealant is not intended for use in units manufactured for structural glazing applications. Units manufactured with Sikaglaze® IG-4429 HM must be fabricated and glazed in accordance with recognized industry standards. Sikasil® IG-4429 HM is intended for use in typical residential or commercial applications. Use of Sikaglaze® IG-4429 HM in units to be exposed to severe conditions, such as extreme heat or moisture, should be reviewed by Sika Technical Services. Use of Sikaglaze® IG-4429 HM on coated glass (i.e. soft coat Low E) should be tested for adhesion and compatibility. Contact your glass supplier for specific recommendations.

Sikaglaze® IG-4429 HM insulating glass sealant is compounded to be compatible with many commercial glazing materials, however compatibility of this product to others should always be verified through suppliers of products or through testing programs. Glazing materials such as sealants, tapes, gaskets, and setting blocks should meet recognized industry standards such as those published by FGMA, SIGMA, ASTM, or NWWDA.

Part A

CAUTION: IRRITANT. Contains Limestone (CAS: 1317-65-3), Calcium Carbonate (CAS: 471-34-1), Di-L-Nonyl Phthalate (CAS: 68515-45-7), Hydroxy Terminated 1,3-Butadiene Homopolymer (CAS: 69102-90-5), Stearic Acid (CAS: 57-11-4). May cause eye and skin irritation. Causes respiratory irritation. Harmful if swallowed. **WARNING: This product contains a chemical known to the State of California to cause cancer.**

Part B

CAUTION: IRRITANT. Contains Diphenylmethane Diisocyanate (CAS:

Further information available at:
www.sikausa.com

Sika Corporation Industry Products
30800 Stephenson Highway
Madison Heights, MI 48071
MADE IN USA



26447-40-5), Di-L-Nonyl Phthalate (CAS: 68515-45-7), 1,2-Benzenedicarboxylic acid, modified phenylmethyl ester (CAS: 016883-83-3), Diphenylmethane, Diisocyanate Homopolymer (CAS: 039310-05-9), Carbon Black (CAS: 1333-86-4) May cause skin irritation. Causes respiratory and eye irritation. Harmful if swallowed. **WARNING: This product contains a chemical known to the State of California to cause cancer.**

HMIS

	Part A	Part B
Health	2	2
Flammability	1	1
Reactivity	0	1
Personal Protection	G	G

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

Copies of the following publications are available on our website www.sikausa.com or by contacting (tsmh@sika-corp.com)

- Material Safety Data Sheet
- Product Data Sheet

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
- FOR PROFESSIONAL USE ONLY

Packaging Information

Pail	4.5 gal pail
Drum	50 gal drum

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 launder before reuse. **Storage:** When stored in the original, unopened containers at or below 80°F (32°C), shelf life is 6 months. Slight changes in the application properties may occur in storage, but these changes should not affect the performance properties of the cured material.

Clean Up

Use personal protective equipment (chemical resistant gloves/ goggles/ clothing). Without direct contact, sweep up spilled or excess product and place in suitable sealed container. Dispose of excess product and container in accordance with applicable local, state, and federal 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**

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Further information available at:
www.sikausa.com

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