

Sikasil®-GP/-GP HT

General Purpose, Acetoxy Cure, Anti-Microbial, Silicone Sealant/Adhesive

Description Sikasil®-GP is a general purpose, one-component, non-sag, elastomeric, acetoxy and anti-microbial (mildew resistant) silicone sealant/adhesive suitable for interior and exterior applications. Sikasil®-GP is also available in a high temperature (HT) grade.

Where to Use

Construction

- Sealing and glazing of windows, doors and skylights.
- Conventional glazing.
- Sanitary sealing.
- Kitchens and bathrooms.
- Counter tops.
- HVAC and Plumbing.
- Roofing.

Industrial

- Heating and refrigeration units.
- Form-in-place gaskets.
- Sealing of truck, trailer and RV components.
- Marine cabins.
- Appliance trim.

Advantages

- May be applied with ease in all seasons and ideal for cold climates.
- Excellent gunability.
- Fast curing.
- Bonds to most substrates without priming including glass, aluminium, fibreglass, tile, plastic, ceramic, wood, steel and painted metals.
- Capable of accommodating ± 25% joint movement.
- Excellent flexibility for dynamic joint movement and dissimilar materials.
- Anti-microbial (mildew resistant)
- ANSI/NSF Standard 51 compliant for use in objects destined for contact with foodstuffs. Contact Sika Canada for guidance.
- Meets the requirements of ASTM C920, Type S, Grade NS, Class 25, Use NT, G, A, O.
- Meets CAN/CGSB 19.13-M87.
- Meets Federal Specification TT-S-01543A, Class A.

Technical Data

Packaging	295 mL (10 US fl. oz) cartridge, 24/case; 197 L (52 US gal.) drum			
Colour	Standard Grade: Almond, Aluminium, Black, Bronze, Clear/ Translucent, Metallic Aluminium, White HT Grade: Red			
Yield		Linear meters per litre		Linear feet per cartridge
	Width	Depth	Depth	Depth
	mm (in)	6 (1/4)	13 (1/2)	6 (1/4)
	6 (1/4)	24,8		24
	13 (1/2)	12,4	6,2	12
	19 (3/4)	8,3	4,1	8
				4
Shelf Life	24 months in original, unopened containers when stored at or below 32°C (90°F). A product skin may form in the container, remove before use.			
Application Temperature				
Product	-32 to 40°C (-25 to 40°F)			
Air & substrate	-26 to 49°C (-14 to 120°F)			
Service Temperature				
Standard Grade	-62.2 to 232°C (-80 to 450°F) permanent			
HT Grade	-62.2 to 260/288°C (-80 to 500/550°F) permanent/intermittent			
Properties at 25°C (77°F) and 50% R.H.				
Skin-Over Time	10 min			
Tack-Free Time ASTM C679	15 min			
Cure Rate	3 mm (1/8 in) / 24 hrs			
Movement Capability ASTM C719	± 25%			
Shore A Hardness ASTM C661	21 days			
	20 ± 5			



Tensile Properties ASTM D412 (at 21 days)		
Tensile strength	Standard Grade:	1.37 MPa (200 psi)
	HT Grade:	2.41 MPa (350 psi)
Elongation at break	Standard Grade:	350%
	HT Grade:	600%
100% Modulus		0.40 MPa (55 psi)
Peel Strength ASTM C794		3.6 kg/cm (20 pli)
Bond Durability on Glass ASTM C793 and Aluminium ASTM C719		± 25%
Accelerated Weathering (QUV)		
10 000 hours		No change
<i>Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.</i>		

How to Use

Joint Detailing

The number of joints and the joint width should be designed for a recommended joint movement of +/- 25% at time of installation.

The depth of the sealant should be 1/2 the width of the joint. The minimum sealant depth is 3 mm (1/8 in), the maximum is 1 mm (1/2 in).

To control the sealant depth, use a closed cell polyethylene, non-gassing polyolefin or open cell polyurethane backer rod. Closed cell backer rod should be 25% larger than joint width; do not compress more than 40%. Open cell should be compressed 40%. Do not use open cell rod in horizontal on grade joints.

If the joint depth does not allow for a backer rod, use polyethylene bond breaker tape to prevent three-sided adhesion.

Surface Preparation

All joint surfaces must be clean, sound, dry, and frost free. Joint walls must be free of oils, asphalt, tar, bituminous materials, grease, paints, coatings or sealers. Curing compounds, release agent residues, glazing compounds, and any other foreign matter must be removed.

Porous substrates should be cleaned by mechanical methods, such as grinding, saw cutting, blast cleaning (sand or water), or wire brushing. Dust, loose particles, etc. should be blown out of joints with oil-free compressed air or vacuum cleaned to remove all material which may interfere with adhesion.

Non-porous substrates should be cleaned by using a solvent wipe method, applied by lint free and clean rags and allow the solvent to evaporate before installing the sealant. Xylene or an approved commercial solvent can be used, ensuring the solvent manufacturer's instructions are strictly followed. Soap or detergent and water cleaning treatments are not recommended. Cleaning of all surfaces should be done just prior to the sealant application.

Apply Sikasil®-GP only to suitably prepared and cleaned substrates. Long term adhesion and performance is dependant upon such.

Priming

Sikasil®-GP is designed to obtain adhesion without the use of a primer; however, certain substrates may require a primer. A field test is recommended to determine the adhesion of the sealant and/or primer and sealant combination, to confirm results and the suitability of the proposed application. Consult Sikasil® Primer Data Sheets or contact Sika Canada Technical Services for additional information on priming.

NOTE: Priming is never a substitute for proper surface cleaning and preparation.

Application

For Joint Sealant:

For best performance Sikasil®-GP should be gunned into joints when joint slot is at the mid-point of its designed expansion and contraction.

Do not open the product container until preparation and, where necessary, priming work has been completed.

When installing during time of large temperature fluctuations, such as spring or fall, and in joints designed for movement greater than ±12.5%, be aware that significant joint movement before cure, may cause aesthetic issues such as ripples in the sealant surface. Performance will not be affected.

Apply the sealant using a professional caulking gun or dispensing equipment. Place the nozzle deep into the joint and gun with a steady and even flow of sealant preceding the nozzle to avoid air entrapment. Also avoid overlapping of the sealant as this also entraps air. Extrude in one continuous operation with consistent positive pressure to force the material into the joint.



Tool the sealant at once after application and before a skin forms (approximately 10 minutes). Tool to a concave shape and ensure adequate pressure to achieve maximum adhesion with the joint walls. Dry tooling is recommended.

Note: Do not use spray water or other liquids when tooling.

As Bonding Adhesive:

Apply by caulking gun, dispensing equipment or trowel.

Use sufficient quantity of adhesive to one or both substrates to provide designed contact area.

If needed, use fasteners or temporary support to hold substrates until adhesive has cured.

Cure times vary with temperature, humidity and porosity of joined substrates.

Clean Up Clean all tools and equipment and remove excess sealant from substrates, all while the material is uncured, using a commercial solvent, such as xylene. Strictly follow the manufacturer's instructions for use and warnings. Once hardened, product can only be removed mechanically. Wash soiled hands and skin thoroughly in hot soapy water or use Sika® Hand Cleaner towels.

Limitations

- Not intended for structural glazing or for porous substrates such as concrete, stone, marble and granite.
- The minimum sealant depth is 3 mm (1/8 in), the maximum is 13 mm (1/2 in).
- Do not apply to surfaces sensitive to corrosion by acetic acid or vapours.
- Lower temperature and humidity will extend tack free and cure rates.
- Do not apply to damp or wet surfaces.
- Sealant may be applied in below freezing temperatures, but surfaces must be dry, frost free and clean. Sealant should be installed when the joint is at mid-range of its anticipated movement. Contact Sika Canada Technical Services for more information.
- Do not apply to surfaces that are to be painted, as the sealant surface will not hold paint.
- Do not apply to substrates that bleed oil, plasticizers or solvent.
- Do not allow the uncured material to come in contact with solvent or curing polyurethanes.
- Avoid contact with materials or surfaces impregnated with, or containing oil asphalt, tar, or bituminous materials.
- This material is not intended for long term immersion or for horizontal vehicular traffic.
- Test sensitive substrates, such as mirror backings for compatibility before use.
- Allow treated wood to age for at least six months before application of the sealant.

Health and Safety Information For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the **most recent Material Safety Data Sheet** containing physical, ecological, toxicological and other safety-related data.

KEEP OUT OF REACH OF CHILDREN
FOR INDUSTRIAL USE ONLY

The information, and in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions, within their shelf life. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any recommendations, or from any other advice offered. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users should always refer to the most recent issue of the Product Data Sheet for the product concerned, copies of which will be supplied on request or can be accessed in the Internet under www.sika.ca.



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Construction

