

Product Data Sheet

Version 03/2011 (08/2013)

Sikasil® N-Plus

Neutral-Cure Silicone Assembly Sealant

Technical Data

	Pigmented	Translucent
Chemical Base	1-C Silicone	1-C Silicone
Colour	White, Black, Bronze, Medium Bronze, Limestone, Colonial White, Aluminium	Clear
Cure Mechanism	Moisture	Moisture
Cure Type	Oxime	Oxime
Density (uncured)	1.4 Kg/L approx	1 Kg/L approx
VOC	37 g/L	36 g/L
Non-sag Properties (ASTM C-639)	Non-Sag	Non-Sag
Slump	Nil	Nil
Skin Time (MNA Method)	15 minutes	20 minutes
Tack-Free Time ² (ASTM D-679)	30 minutes	30 minutes
Extrusion Rate ASTM C-1183 modified	230 g/min 3mm orifice @ 90 psi	360 g/min 3mm orifice @ 90 psi
Curing Speed (MNA Method)	3 mm - 24 hours	3 mm - 24 hours
Shrinkage	Nil	Nil
Shore A Hardness (ASTM C-661)	30 +/- 5	15 +/- 5
Tensile Strength (ASTM D-412)	300 psi/2.07 MPa	190 psi/1.31 MPa
Elongation at Break (ASTM D-412)	430%	430%
Bond Durability ASTM C-793 (glass/aluminium/concrete)	+/- 25%	+/- 25%
Movement Capability (ASTM C-719)	+/- 25%	+/- 25%
Application Temperature ¹ product substrate and air	-32°C to 40°C 5°C to 40°C	-32°C to 40°C 5°C to 40°C
Service Temperature	-62 to 176°C	-62 to 176°C
Shelf Life (Storage below 32°C)	12 months	12 months
¹ See "Application Limits" section for details; ² 25°C and 50% Relative Humidity		

Description

SikaSil® N-Plus is a general-purpose, one-component, non-sag, elastomeric, 100% RTV neutral-cure silicone sealant. It meets the requirements of ASTM C-920, Type S, Grade NS, Class 25, Use NT, T, M, G, A, O; TT-S-00230C, Type II, Class A; TT-S-001543A, Class A; CAN/CGSB-19.13-M87, AAMA 208.3 Type II, AAMA 803.3, AAMA 805.2, AAMA 808.3 and California Air Resources Board 2003 requirements for Volatile Organic Compound content. **Note:** The clear and white-coloured versions contain an anti-microbial ingredient for improved mildew resistance.

Product Benefits

- Extremely long service life and excellent weathering-resistance;
- Excellent flexibility for dynamic joint movement;
- Bonds to most substrates without priming;
- Ready-to-use -- no mixing required;
- AAMA-Certified component for window backbedding and glazing;
- Easy-to-use, regardless of the season.



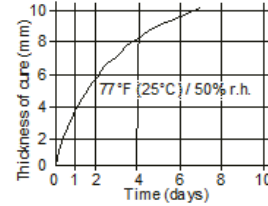
Areas of Application

- Window and door fabrication;
- Conventional glazing;
- Back-bedding and cap, toe and heel beads;
- Perimeter sealing of windows, doors and skylights;
- Expansion and control joints;
- HVAC and White Goods assembly;
- Kitchen and bathroom countertops/solid surfaces and sanitary seals;
- Marine cabins;
- Trucks, trailers, automobiles, RVs.

Typical Substrates: Glass, aluminium, tile, fibreglass, plastic, ceramic, masonry, concrete, brick and wood.

Cure Mechanism

Sikasil® N-Plus cures by reaction with atmospheric moisture. At low temperatures, the water content of the air is lower and the curing reaction proceeds more slowly.



Sikasil® N-Plus Curing Speed

Chemical Resistance

Sikasil® N-Plus is **resistant** to UV radiation, fresh-water, sea-water and proprietary aqueous cleaning agents; **temporarily resistant** to fuels, mineral oils, vegetable and animal fats and oils; and **not resistant** to organic acids, concentrated mineral acids, caustic solutions and solvents. The above information is offered for general guidance only. Please consult Sika Canada Inc.'s Technical Services for advice on specific applications.

Application Limits

- Not intended for structural glazing;
- Do not allow the uncured material to come in contact with solvents or curing polyurethanes during cure;
- Lower temperature and humidity will extend Tack-Free and Cure Rates;
- Do not apply to damp or wet surfaces;
- Do not apply to surfaces that will be painted;
- May be applied below freezing temperatures if substrates are completely dry, frost free and clean. Contact Sika Canada Technical Services for more information;
- Not recommended for horizontal traffic;
- Not recommended for absorptive surfaces such as natural stone, particularly limestone or marble where staining may occur. Test before use;
- Do not apply to substrates that bleed oil, plasticizers or solvent;
- This material is not intended for long-term immersion in water;
- Test sensitive substrates, such as mirror backings, for compatibility before use;
- Brass and copper may discolour; test prior to application;
- Allow treated wood to age for at least six months before application of the sealant.

Surface Preparation

All surfaces must be clean, sound, dry, frost-free and free of any oils, grease or incompatible sealers, paints or coatings that may interfere with adhesion.

Porous substrates should be cleaned by mechanical methods to expose a sound surface, free of contamination.

Non-porous substrates should be cleaned using isopropyl alcohol, xylene or approved, clean, pure, undiluted industrial-grade solvent; allow the solvent to evaporate before installing the sealant. Strictly follow the solvent manufacturer's instructions on safe handling.

Priming

Sikasil® N-Plus is designed to obtain adhesion without the use of a primer; however, certain substrates may require priming. Consequently, prior testing of the sealant with and without priming is required to determine which method is appropriate. For assistance and advice regarding primer selection, contact Sika Technical Services.



Application	<p>This product is suitable for bulk-dispensing straight from drums or pails by means of a pneumatic or hydraulic pump system. For recommendation on selecting and setting up a suitable pump system, please contact our Technical Services.</p> <p>Make sure joint design is correct. Use masking tape, if desired, to protect adjacent areas from contamination. Do not break cartridge seal until just before use. Surfaces should be dried before the sealant is applied. Apply sealant to dry, clean surfaces using an air-operated or hand-operated cartridge gun. Normally, sealant skins in 8 minutes, dries to the touch in 1 hour and bonds in 24 hours.</p> <p>Expansion Joints: Apply the sealant using a professional caulking gun or dispensing equipment. Do not open product container until preparation work has been completed. Apply sealant using consistent, positive pressure to force sealant into the joint.</p> <p>Adhesive Joints: Apply using professional caulking gun, dispensing equipment or trowel. Apply sufficient quantity of adhesive to one or both substrates to provide designed contact-area. Surfaces may be adjusted up to one hour after application without loss of adhesive strength.</p>
Tooling and Finishing	<p>In the case of expansion joints, tool to a concave shape and ensure adequate pressure to achieve maximum adhesion to the joint walls. In all cases, dry tooling is recommended. Tool joint, if necessary, in one continuous stroke and remove masking tape immediately after sealant is applied (within 5 minutes) and before a skin begins to form. NOTE: DO NOT use soap, water, oil or tooling agent! Remove masking tape immediately after tooling is completed.</p>
Removal	<p>Clean all tools and equipment and remove excess sealant from substrates, while the material is uncured, using a commercial solvent, such as isopropyl alcohol or 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. Do not use solvents on skin!</p>
Over-Painting	<p>Sikasil® N-Plus cannot be over-painted.</p>
Further Information	<p>Copy of the following publication is available upon request: <i>Material Safety Data Sheet</i>.</p>
Packaging	<p>24 x 295 ml Cartridges per Case; 20 x 600 ml Sausages per Case; 197 Litre Drums (White, Clear and Black only).</p>
Value Bases	<p>All technical data stated in this Product Data Sheet are laboratory test-based. Current measured values may vary due to factors beyond our influence.</p>
Health and Safety Information	<p>For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the current Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data for the appropriate type of substance. Product Data Sheets and Material Safety Data Sheets are available on our website at: www.sika.ca or via your local Technical Sales Representative.</p>

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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