



Product Data Sheet
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Sikasil WS-290 FPS

Sikasil® WS-290 FPS

Ultra low modulus, neutral cure, field pigmentable silicone sealant

Description	Sikasil WS-290 FPS is a field pigmentable, low to no bleed low modulus, one-component plus color pack, non-sag elastomeric, neutral cure silicone sealant a durable, flexible building sealant Sikasil WS-290 FPS performs exceptionally well under dynamic conditions due to its ultra-low modulus, high extension/compression, recovery properties and strong adhesion to most building materials. Sikasil WS-290 FPS accommodates long-term movement of +100-50% in properly designed joints and is particularly well suited for use in Exterior Insulation Finish Systems (EIFS). Meets the requirements of ASTM C-920, Type S, Grade NS, Class 100/50, Use NT, M, G, A, O; TT-S-00230C, Type II, Class A; TT-S-001543A, Class A; CAN/CGSB-19.13-M87, AAMA 808.3.
Where to Use	Sikasil WS-290 FPS silicone sealant is designed primarily for sealing expansion and control joints in precast concrete panels, architectural stones, metal curtainwalls, perimeter sealing of doors and windows, Exterior Insulation Finish Systems (EIFS) and numerous other areas requiring a high-performance sealant. It adheres tenaciously to concrete, natural stones, masonry, steel, fluoropolymer painted and powder coated aluminum, wood, vinyl and many other plastics, generally without need for a primer, and performs equally well in new or remedial construction.
Packaging	1.5 gallon white base. Silicone color packs sold separately.
How to Use	
Surface Preparation	The substrate must be clean, dry, frost free, sound and free of any oils, greases or incompatible sealers, paints or coatings that may interfere with adhesion. POROUS SUBSTRATES – clean by mechanical methods to expose a sound surface free of contamination and laitance. NON-POROUS SUBSTRATES – for cleaning non-porous substrates, use two rag wipe method using xylene or an approved commercial solvent. Allow solvent to evaporate prior to sealant application.
Priming	Sikasil WS-290 FPS is designed to obtain adhesion without the use of a primer; however, certain substrates may require a primer. Test by applying the sealant and/or primer sealant combination to confirm results and proposed application methods. Refer to Technical Data Sheet for Sikasil 2100 primer and contact Technical Service for additional information.

Typical Data

RESULTS MAY DIFFER BASED UPON STATISTICAL VARIATIONS DEPENDING UPON MIXING METHODS AND EQUIPMENT, TEMPERATURE, APPLICATION METHODS, TEST METHODS, ACTUAL SITE CONDITIONS AND CURING CONDITIONS.

Shelf Life	12 months in original unopened cartridges.
Storage Conditions	Store in unopened containers at temperatures lower than 80°F (27°C).
Colors	White, Colonial White, Aluminum, Limestone, Black, Bronze, Medium Bronze. Custom colors available on request.
VOC Content	29 g/L

Uncured Properties at 77°F (25°C), 50% R.H.

Tool Time (Initial Skin)	30 minutes (higher temperatures and/or humidity will shorten this time)
Cure Time	7-14 days
Flow, Sag, Slump	no sag
Full Adhesion	7-14 days
Tack Free Time	50 min.

Cured Properties after 7 days at 77°F (25°C), 50% R.H.

Dynamic Movement Capability (ASTM C-719)	+100%, -50%
Elongation (ASTM D-412)	1200%
Shore A Hardness (ASTM C-661)	12
Ozone/UV Resistance (weatherometer)	Excellent
Peel Strength (ASTM C-794)	20-40 pli
Staining, Color Change (ASTM C-510)	none
Staining on Porous Substrates (ASTM C-1248)	no staining
100% Modulus (ASTM D-412)	42 psi (0.29 MPa)
Service Temperature Range	-80°F to 350°F
Tensile Strength (ASTM D-412)	165 psi (1.14 MPa)

Construction

Application	The number of joints and the joint width should be designed for a maximum of +100 and -50% movement of joint width at time of installation. The depth of the sealant should be 1/2 the width of the joint. The maximum depth is 1/2 inch (13 mm) and the minimum is 1/4 inch (6 mm). To control joint depth, use closed cell polyethylene, non-gassing polyolefin or open cell polyurethane backer rod. If joint depth does not allow for backer rod, use polyethylene bond breaker tape to prevent three-sided adhesion. 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 joint or with E.I.F.S. When installing during time of large temperature swings such as spring or fall, and in joints designed for movement greater than $\pm 25\%$, be aware of the significant joint movement before cure, may cause aesthetic issues such as ripples in the sealant surface. Performance will not be affected. Ready to use, apply using professional caulking gun. Do not open product container until preparation work has been completed. Apply sealant using consistent, positive pressure to force sealant into the joint. Tool sealant to create a concave joint shape and maximum adhesion. Dry tooling is recommended. DO NOT use soapy water or other liquids when tooling.
Tooling & Finishing	All joints should be masked to ensure a neat appearance and prevent sealant applied outside the joint. Place nozzle of the gun into bottom of joint and fill entire joint making complete contact with joint sides. Keep the nozzle in the sealant, continue with a steady flow of sealant preceding the nozzle to avoid air entrapment. Tool the sealant slightly concave using dry-tooling techniques. Do not tool with soap or detergent and water solutions.
Limitations	<ul style="list-style-type: none"> ■ Do not allow sealant to come in contact with solvent during cure. ■ Do not allow sealant to come in contact with curing polyurethane sealants during cure. ■ Not intended for immersion. ■ Sealant may be applied below freezing temperatures if substrates are completely dry, frost free and clean. Contact Technical Service for more information. ■ Do not apply when substrate temperatures are below -20°F or above 130°F. ■ Not intended for structural glazing. ■ Not recommended for horizontal vehicular traffic. ■ Do not apply to surfaces that will be painted as sealant surface will not hold paint. ■ Do not apply to damp or wet substrates. ■ Lower temperature and humidity will extend tack free and cure rates. ■ Allow treated wood to age six months before application. ■ Brass and copper may be discolored. Test apply prior to application. ■ Test sensitive substrates, such as mirror backings, for compatibility before use.
CAUTION	WARNING: IRRITANT, SENSITIZER. Contains Methyl ethyl ketoxime (CAS: 96-29-7), Oximino Silane (Trade Secret). Direct eye contact may cause irritation. Eye contact may cause conjunctivitis, corneal damage, or severe chemical burns. May cause skin irritation and sensitization. May be absorbed through the skin. May cause irritation to respiratory system. May cause drowsiness. Maybe harmful if swallowed. If heated, silicones can form formaldehyde vapors. Formaldehyde is a potential cancer hazard, a known skin and respiratory sensitizer, and an irritant to the eyes, nose, throat, skin, and digestive system. Product contains oximes, possible skin sensitizers.
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.
First Aid	Remove to fresh air. Remove from skin and immediately flush with water for 15 minutes. Get medical attention if irritation develops or ill effects persist. Treat according to person's condition and specifics of exposure.
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.

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