

Silicones

Technical Data Sheet FOR INDUSTRIAL USE ONLY

SCS2900 UltraPruf™ II

Weatherproofing Silicone Sealant

Product Description

UltraPruf II SCS2900 weatherproofing silicone sealant is a one-part, neutral cure, low modulus, matte finish and firm bodied weatherproofing silicone sealant that offers excellent adhesion, weatherability and elasticity.

Key Features and Typical Benefits

Performance

- Low-gloss finish, compliments and blends with other components.
- Improved viscosity for easy sealant placement and firm tooling consistency.
- ±50% joint movement capability, low stress on the bond.
- Good adhesion to anodized aluminum, carbon steel, glass, acrylic sheet, polycarbonate sheet and other building substrates.
- · Available in 7 standard colors and in custom colors.

Potential Applications

UltraPruf II SCS2900 series weatherproofing sealant is intended for use for perimeter seals around windows, curtain wall joints and other weatherseal applications between metals, masonry, concrete, glass, paints and plastic substrates.

UltraPruf II SCS2900 series weatherproofing sealant adheres to most common building substrates usually without priming. The low modulus property allows use in joints subject to ±50% movement. This characteristic is maintained over a wide temperature range after full cure.

Packaging

UltraPruf II SCS2900 weatherproofing silicone sealant is available in 10.1 fl.oz. (299ml) plastic caulking cartridges packaged in cartons of 24 units, and 19.9 fl.oz. (5915ml) sausages packaged in cartons of 12 units.

Colors

UltraPruf II SCS2900 weatherproofing silicone sealant is available in 7 standard colors. Use the following product designations:

Product D	<u>esignation</u>	Color
SCS 2902		 White
SCS 2903		 Black
SCS 2904		 Limestone
SCS 2909		 Aluminum Grey
SCS 2920		 Precast White
SCS 2960		 Light Grey
SCS 2997		 Bronze

Typical Physical Properties

Typical property values of UltraPruf II SCS2900 supplied and cured are set forth in the tables below. Assistance with specifications is available by contacting Momentive Performance Materials at 00.800.4321.1000.

Typical Properties

As Supplied	Value	Test Method
Shore A Hardness	23	ASTM C661
Ultimate Tensile Strength	230 psi (1.59 MPa)	ASTM D412
Ultimate Elongation	745%	ASTM D412
Tensile at Max Elongation	77 psi (0.54 MPa)	ASTM C1135
Specific Gravity	1.45	
Sag/Slump	2.5 mm max	ASTM C639
Peel Strength Aluminum-glass (21 day cure) 70°F (21°C) 50% R.H.	46 ppi (8.2 kN/m)	ASTM C794
Joint Movement Capability	±50%	ASTM C719
Ozone and U.V. Resistance	Excellent	ASTM C793
Staining on Concrete	None	ASTM C510
Tack Free Time	5-9 hours	ASTM C679
Cure Time (9mm deep) at 70°F (21°C) 50% R.H.	7 days	
Tooling Time	30 minutes	
Application Temperature Range ⁽¹⁾	+4 to 49°C	ADCT(3)-01
Performance Temperature Range ⁽²⁾	-48 to +149°C	ADCT(3)-13A

ote: (1) Broad application temperature range extends practical working time.
(2) Temperature range over which sealant is expected to maintain elasticity.
(3) Momentive Performance Materials Internal Test Methods.

Typical properties are average data and are not to be used as or to develop specifications.



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Installation

Surface Preparation

Clean all concrete, masonry and stone joints of all contaminants impurities. Concrete form release agents, water repellents, concrete laitance, all old sealants and other surface treatments and protective coatings are examples of materials which must be removed from the joint surfaces to obtain proper sealant adhesion. Porous substrates should be cleaned where necessary by grinding, saw cutting, blast cleaning (sand or water), mechanical abrading or combination of these methods to provide a sound, clean surface for sealant application. Dust, loose particles, etc., should be blown out of joints with oil-free compressed air or vacuum cleaned. Clean all metal, glass and plastic procedures. Detergent or soap and water treatments are not recommended. Protective films must be removed by a solvent recommended by the manufacturer of the substrate or other means which leave no residue. In all cases where used, solvents should be wiped dry with a clean cloth or lintless paper towels. Cleaning solvents should not be allowed to air dry or evaporate without wiping. Architectural coating, paints and plastics should be cleaned with a solvent approved by the manufacturer of the product.

Cleaning of all surfaces should be done after one to two hours after the sealant is applied. CAUTION: SOLVENTS MAY BE FLAMMABLE AND/OR TOXIC. Refer to "Momentive Performance Materials¹ Silicones Surface Preparation for Sealant Adhesion Design Guide".

Priming

UltraPruf II SCS2900 weatherproofing silicone sealant has primerless adhesion characteristics to many common construction materials; however, some materials such as concrete, mill finish aluminum, galvanized steel and other materials with variable surface characteristics often require priming. In view of unpredictable surface characteristics, trial application should be made to check adhesion to the specific materials to be used on the project. SS4179 primer is recommended for concrete, some paints and plastic surfaces.

Masking

The use of masking tape is recommended where appropriate to ensure a neat job and to protect adjoining surfaces. Do not allow masking tape to touch clean surfaces to which the silicone sealant is to adhere. Masking tape should be removed immediately after the finish tooling of the UltraPruf II SCS2900 weatherproofing silicone sealant is accomplished and before the sealant begins to cure.

Application

Install back-up material or joint filler, setting blocks, spacer shims and tapes as specified. Apply UltraPruf II SCS2900 weatherproofing silicone sealant in a continuous operation, horizontally in one direction and vertically from the bottom to the top of the joint opening. A positive pressure adequate to properly fill and seal the joint width should be employed. Tool or strike the UltraPruf II SCS2900 weatherproofing silicone sealant with light pressure to spread the material against the backup material and the joint surfaces.

The light-weight consistency of UltraPruf II SCS2900 weatherproofing silicone sealant responds easily to light tooling pressure and facilitates void free placement. A tool with a concave profile is recommended to keep the UltraPruf II SCS2900 weatherproofing silicone sealant within the joint.

In glazing, tool the sealant at the sill so precipitation and cleaning solutions will not pool. UltraPruf II SCS2900 weatherproofing silicone sealant can be applied at outdoor temperatures as low as -35°F (-37°C) provided that surfaces are clean, dry and frost-free. Excess sealant should be cleaned from glass, metal and plastic surfaces while still incurred using a solvent. On porous surfaces the excess sealant should be allowed to progress through the initial cure or set-up. It should then be removed by abrasion or other mechanical means.

Applicable Standards

Contact Momentive Performance Materials Silicones' Quality Assurance for details of certification to:

- Fed. Spec. TT-S-001543A and TT-S-00230C.
- · ASTM C920, Type-S, NS Class 25.

Technical Data

UltraPruf II SCS2900 weatherproofing silicone sealant is basically unaffected by normal weathering conditions such as sunlight, ultraviolet radiation, rain, snow and temperature extremes. Its weatherability enables it to retain its properties after years of exposure. The sealant has resistance to detrimental effects caused by polluted atmospheres and many chemicals and chemical solutions. Joints formed with this sealant can be expected to extend and compress 100% of the installation width with no more than 50% in a single direction without affecting the sealant or adhesion. UltraPruf II SCS2900 weatherproofing silicone sealant is compatible with laminated glass, insulating glass units and acrylic and Lexan polycarbonate glazing sheet.



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Limitations

Customers must evaluate Momentive Performance Materials (MPM) products and make their own determination as to fitness of use in their particular applications.

UltraPruf II SCS2900 series sealant is not recommended for: horizontal joints exposed to foot or vehicular traffic or in horizontal joints where prolonged water immersion occurs.

UltraPruf II SCS2900 series weatherproofing sealant should not be applied on:

- Concrete surfaces which contain residual form oil or other bond breaking contaminants that may interfere with sealant adhesion.
- Building materials which might bleed oils or solvents; these include, but are not limited to, impregnated wood and certain vulcanized rubber gaskets or tapes, or failed sealants and caulking compounds.
- Areas where atmospheric contaminants might change the appearance of light colored sealants. Silicone sealant is weather-resistant and resists chalking, degradation and erosion. As a result, environmental contaminants tend to cling to the sealant and the sealant surface may take on the color of the contaminant. Darker color of the contaminant. Darker colors should be used to minimize this effect.
- Reflecting, high-gloss or light-colored surfaces where aesthetics are critical, until adequate on-site sealant, surface and ambient atmospheric test simulating building design are conducted to ascertain material compatibility and migration to adjacent surfaces under actual use conditions.
- Unpredictably absorptive surfaces such as marble or limestone, unless a standard of appearance has been agreed upon by the seller and the purchaser as a result of testing for stain or discoloration.
- Totally confined spaces, as the sealant requires atmospheric moisture for completion of cure and generation of properties.
- Surfaces which will be painted as painting over rubber, is not recommended. The paint film does not stretch with the extension of rubber and the adhesion of the paint to the sealant is not adequate.
- Surfaces with special or protective coatings, such as Teflon, polypropylene or polyethylene without the approval of the manufacturer of the article, plastic or material.
- Unprepared or wet surfaces. Do not use water for tooling and do not apply to wet or damp surfaces.
- Surfaces where adhesion has not been verified by on-site testing under actual use conditions.
- · Structural glazing applications as the adhesive bead.
- Applications where FDA or USDA compliance is required.

UltraPruf II SCS2900 Weatherproofing Sealant Typical Properties⁽¹⁾

ASTM C-794 Peel Adhesion 14 days 73°F/50% RH and 7 days water immersion	Lbs. F/in. Cohesion % (kN/m)
Stainless Steel (primed†)	30 lbs. f/in
Mill Finish Aluminum (primed†)	30 lbs. f/in
Anodized Aluminum	30 lbs. f/in 100% Cohesion
Carbon Steel	30 lbs. f/in 100% Cohesion
Concrete (primed†)	30 lbs. f/in 100% Cohesion
Glass	30 lbs. f/in 100% Cohesion
Acrylic Sheet	30 lbs. f/in 100% Cohesion
Lexan(3) Polycarbonate Sheet	30 lbs. f/in 100% Cohesion
PVC Sheet (primed†)	30 lbs. f/in 100% Cohesion
Polyester Fiberglass Sheet	30 lbs. f/in 100% Cohesion
Kynar 500 ⁽²⁾ Resin Based Paints (primed†)	30 lbs. f/in 100% Cohesion

- (1) Values are not intended for use as specifications
- (2) Registered trademark Pennwalt Corp.
- (3) Lexan is a registered trademark of SABIC Innovative Plastics IP.
- † SS4179 Prime

Joint Design and Dimensions

Curtainwall expansion joints should be designed to allow installation and retention of the bond-breaking back-up material during the installation and subsequent curing of UltraPruf II SCS2900 weatherproofing silicone sealant. Refer to "Momentive Performance Materials Silicones Joint Design and Sealant Selection Design Guide".

Consult with Momentive Performance Materials Silicones for recommendations on large or unusual application.

Availability

Products may be ordered from Momentive Performance Materials Silicones sales office nearest you or where appropriate, an authorized Momentive Performance Materials Silicones' product distributor. For cost information, contact a local distributor or nearest Momentive Performance Materials Silicones Technical Center.

Patent Status

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute the permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.



Technical Data Sheet

Product Safety, Handling and Storage

Customers considering the use of this product should review the latest Material Safety Data Sheet and label for product safety information, handling instructions, personal protective equipment if necessary, and any special storage conditions required. Material Safety Data Sheets are available at www.gesilicones.com or, upon request, from any MPM representative. Use of other materials in conjunction with MPM sealants products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

Customer Service Centers

For additional information, please contact our Customer Service Team

AMERICAS	+1 800 295 2392 Toll Free* +1 704 805 6946 Direct Number
LATIN AMERICA	BRAZIL +55 11 4534 9650 Direct Number MEXICO +52 55 2169 7670 Direct Number *All American countries
EMEAI – EUROPE, MIDDLE EAST, AFRICA & INDIA	EUROPE +390510924300 Direct Number INDIA, MIDDLE EAST & AFRICA +91 44 71212207 Direct Number* *All Middle Eastern countries, Africa, India, Pakistan, Bangladesh, Sri Lanka
ASIA PACIFIC	CHINA 800 820 0202 Toll Free +86 21 3860 4892 Direct Number JAPAN +81 3 5544 3111 Direct Number KOREA +82 2 6201 4600 Direct Number SOUTH EAST ASIA, AUSTRALIA & NEW ZEALAND +60 3 9206 1543 Direct Number* *All East Asia countries (Malaysia, Singapore, Thailand, Indonesia, Vietnam, Philippines, Cambodia, Myanmar / other countries located in Pacific region)
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