



SCS1000 Contractors

Silicone Sealant

Product Description

SCS1000 Contractors silicone sealant is a one-component acetoxy silicone material that provides excellent weatherability and elasticity for general purpose sealing and bonding. SCS1000 silicone sealant is a paste material, which cures into a flexible rubber when exposed to atmospheric moisture.

Key Features and Typical Benefits

Performance

- **Silicone Durability**—Cured silicone provides excellent longterm resistance to natural weathering, humidity and high & low temperatures with negligible change in elasticity.
- **±25% Movement Capacity**—Can accommodate 25% movement in both extension and compression and has excellent recovery after cycling.
- **Thermal Stability**—Once properly cured, the material remains fully elastic over a range of -45°F (-48°C) to 350°F (204°C).
- **Low VOC**—Significantly lower than the U.S. Green Building Council's Leadership in Energy and Environmental Design (L.E.E.D.) program's requirements.

Application

- **Fast Cure Time**—Tack free in 30 minutes and full cure of many common bead sizes in 24-48 hours.
- **Durable Adhesion**—Able to bond to many common substrates and finishes, including: glass, ceramic tiles, porcelain, painted surfaces, some plastics, cultured marble, polished granites and marbles and many composite materials including fiberglass.
- **Gunnability**—The uncured silicone can be easily gunned and tooled under hot or cold conditions.
- **Workability**—Non-sag paste makes application possible on horizontal, vertical or overhead surfaces.

Potential Applications

SCS1000 sealant is a candidate for use:

- In general purpose sealing & glazing applications.
- As a formed-in-place rubber gasket seal on a variety of materials and for sealing of: sheet metal, skylights, HVAC componentry, glass block, metal/plastic signs, marine hardware.
- For bedding and grouting of bathroom and kitchen tiles.
- As a seal around bathroom fixtures and countertops, air dryers and drains. For increased mold and mildew resistance, consider SCS1700 Sanitary.

Packaging

Contractors SCS1000 sealant is available in 10.1 fl. oz. (299 ml) cartridges with either removable or fixed nozzles. Cases contain 24 cartridges.

Colors

Contractors SCS1000 sealant series is available in 4 standard colors and translucent:

<u>Grade</u>	<u>Color</u>
SCS1001	Translucent
SCS1002	White
SCS1003	Black
SCS1009	Aluminum (metallic)
SCS1097	Bronze

Typical Physical Properties

Typical property values of SCS1000 silicone sealant as supplied and cured are set forth in the table below. Typical product data values should not be used as specifications.

Typical Properties – Supplied

Property	Value ⁽¹⁾	Test Method
Consistency	Paste	N/A
Polymer	100% silicone	N/A
VOC	20 g/l	WPSTM C1454
Work Life (tooling time)	5-10 minutes	N/A
Tack Free Time (@ 73°F (23°C), 50% RH)	15-30 minutes	ASTM C679

Typical Properties – Cured

(after cure of 21 days at 73°F (23°C) & 50% Relative Humidity)

Property	Value ⁽¹⁾	Test Method
Ultimate Tensile Strength	300 psi (2.1 MPa)	ASTM D412
Ultimate Elongation	433%	ASTM D412
Cure Time (1/4" or 6 mm deep section) @ 73°F (23°C) 50% RH	24 hours	N/A
Hardness, Durometer (Type A Indentor)	27	ASTM D2240
Service Temperature Range (after cure)	-55°F to +350°F (-48°C to 177°C)	N/A

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

Installation

In all cases it is important to confirm the acceptability of each sealant-substrate combination with an adhesion test prior to proceeding with use. Some materials with variable surface characteristics may require the use of a primer to help obtain durable long-term adhesion. See Construction Primers datasheet.

Surface Preparation

- Surfaces must be clean, dry and sound prior to application of the sealant. All contaminants, impurities, or other adhesion inhibitors (such as moisture/frost, oils, old sealants, soaps and other surface treatments, etc.) must be removed from the surfaces to which the sealant is intended to adhere.
- For cleaning, a solvent-dampened clean rag usually produces the desired result. Isopropyl Alcohol (IPA) is a commonly-used solvent and has proven useful for most substrates. When handling solvents, refer to manufacturer's MSDS for information on handling, safety and personal protective equipment.

Masking

The use of masking tape is recommended where appropriate to ensure a neat job and to protect adjoining surfaces from over-application of sealant. Masking tape should be removed immediately after tooling the sealant and before the sealant begins to skin over (tooling time).

Sealant Application

- Apply sealant in a continuous operation applying a positive pressure adequate to properly fill and seal the seam, cavity or joint.
- Tool or strike the sealant with an appropriate tool applying light pressure to spread the material against the joint surfaces for a neat application.
- Sealant application is not recommended when the temperature is below 40°F (4°C) or if frost or moisture is present on the surfaces to be sealed.
- Application of SCS1000 sealant is not recommended to surfaces above 120°F (49°C).

Method of Application

SCS1000 sealant is easily dispensed directly from cartridges using standard caulking guns or air operated guns. Maximum recommended pressure for air operated guns is 45 psi (0.02 bar). Mixing, heating and refrigeration are not required.

Sealant Application

- Begin by installing backup material for joint or joint filler, setting blocks, spacer shims and tapes as needed.
- In a continuous operation, apply the sealant horizontally in one direction and vertically from the bottom to the top of the joint opening.
- Apply the sealant with a positive pressure by pushing the bead ahead of the nozzle and making sure that the entire cavity is filled sans air pockets or voids.
- Tooling should be done neatly, forcing the sealant into contact with the sides of the joint or cavity, thus helping to eliminate any internal voids and assuring good substrate contact.
- Sealant should only be applied to surfaces that are clean, dry and free of dust.

Installation—continued

Tooling

- Tool or strike the sealant with a concave tool applying light pressure to spread the material against the back-up material and the joint surfaces to ensure a void-free application.
- On sill applications, tool the sealant to shed water and to eliminate ponding.
- Tooling agents such as water, soap, or detergent solutions are not recommended.

Cleaning of Excess Sealant

- For glass, metal, and plastic surfaces, uncured excess material can be removed using a solvent. Use care when using solvents on plastic materials as some solvents can soften some plastics.
- For glass, metal, and plastic surfaces, cured excess material can be removed using a blade by scraping or cutting.
- If excess material unintentionally contacts the surfaces of porous materials, the sealant is best allowed to progress through the initial cure or set-up and then mechanically removed by abrasion or other suitable means.

Applicable Standards

SCS1000 sealant meets the requirements of the following specifications: ASTM: C920, U.S. Federal: TT-S-001543A, TT-S-00230C.

USDA: MPM has on file documentation from USDA which states that SCS1001, SCS1002, SCS1003 and SCS1009 sealants are chemically acceptable for use on surfaces in official establishments operating under the Federal Meat and Poultry Inspection Program. SCS1097 (Bronze) does not meet USDA acceptance criteria. For further information, contact MPM Product Regulatory Compliance. The final granting of authorization for the proposed use of such compounds is the responsibility of the inspector in charge of the official plant. Technical assistance will be provided by the Product Safety Branch of USDA upon request.

FDA: The following SCS1000 sealants/colors are compositionally in compliance with 21 CFR 177.2600, "Rubber articles intended for repeated use", 21 CFR 175.105 "Adhesives" and 21 CFR 175.300 "Resinous and Polymeric Coatings": SCS1001, SCS1002, SCS1003, SCS1009 and SCS1097. The use of these adhesive sealants is subject to the following conditions:

- The adhesive sealant is applied in accordance with Good Manufacturing Practice at a thickness not to exceed 6mm ($\frac{1}{4}$ inch) from an exposed edge.
- As a continuous film between joints acting as a functional barrier between the food and the substrate (area underneath the joint).

- The adhesive sealant must be cured for a minimum of 14 days at or above 23°C (73°F) and 50% Relative Humidity.
- The operating temperature of the adhesive sealant after cure must not exceed 177°C (350°F). The above sealants mentioned should be evaluated to determine bond strength for each specific substrate and application. If enhanced adhesion is desired, the evaluation of a primer is recommended. Only SS4179 primer may be used in repeated contact with food under 21 CFR 175.300. "Resinous and Polymeric Coatings" may be used.

NSF: SCS1001, SCS1002, SCS1003 and SCS1009 sealants are listed under NSF/ANSI STANDARD 51 "Food Equipment Materials".

Technical Services

Additional technical information, literature, laboratory testing and application engineering may be available upon request from MPM. Any technical advice furnished by MPM or any representative of MPM concerning any use or application of any MPM product is believed to be reliable but MPM makes no warranty, expressed or implied, of suitability for use in any application for which such advice is furnished.

Limitations

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

SCS1000 sealant is not recommended:

- For use underwater or in when in continuous contact with water.
- When paintability is desired or necessary. Consider SCS7000 Paintable.
- In Structural Silicone Glazing (SSG) Applications.
- On mirrors.
- On wet, damp, frozen or contaminated surfaces.
- On masonry, sawn stone surfaces, lead, copper or brass.

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.

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.ge.com/silicones 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.

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