



Construction SCS1200 Silicone Sealant

PRODUCT DESCRIPTION

BASIC USE

Construction SCS1200 silicone sealant is used to seal building joints to prevent the penetration of rain, air and noise. Construction SCS1200 silicone sealant effectively weatherproofs junctions of building materials and leads to effective structure continuity. Construction SCS1200 silicone sealant also is used for sealing curtain wall, mullion and other building construction joints, and for glazing steel and aluminum windows, painted and plastic coated wood windows, interior glass partitions and skylights.

Permanent, watertight bonds are made with this sealant, in combination with glass, ceramic, steel, granite, aluminum and many plastics, and painted surfaces.

Construction SCS1200 silicone sealant has resealed many structures successfully after failures by other sealants.

Construction SCS1200 silicone sealant has resealed many structures successfully in maintenance applications, for sealing around air conditioning, vents or other wall penetrations both indoors and outdoors. Many other maintenance applications are possible where long life, reliability and sealing properties are required.

TYPICAL PROPERTIES

Property	Value	Test Method
Hardness (Shore A)	28	ASTM D 2240-68
Ultimate Tensile Strength (at Maximum Elongation)	470 PSI	ASTM D 412-68
Peel Strength (Glass)	40 lb/inch (3.57 kg/cm)	TT-S-001543A (COM-NBS)
Staining	None	TT-S-001543A (COM-NBS)
Weathering (after 10,000 hours in Atlas Weatherometer)	No Change	ASTM C-793-75
UV Resistance	Excellent	ASTM C-793-75
Ozone Resistance	Excellent	ASTM D-1149-64
Dynamic Movement Capability	±25%	TT-S-001543A (COM-NBS)
		TT-S0991543A

Tack-Free Time	30 min.	(COM-NBS)
Curing Time	5-7 Days at 25°C (77°F), in 1/4" (6.4 mm) Section	
Sag, Slump	0.1" max.	TT-S-001543A (COM-NBS)

LIMITATIONS

Construction SCS1200 silicone sealant is not recommended for horizontal decks, patio, driveway or terrace joints where abrasion or physical abuse is encountered.

Glass-to-glass butt joints sealed with translucent Construction SCS1201 silicone sealant may develop bubbles during the curing period. These bubbles are usually caused by small amounts of air which are included during the packaging and/or application of the sealant. Standards of appearance should be established and agreed upon prior to the sealant installation. Use of pigmented sealant is recommended.

Construction SCS1200 silicone sealant is not recommended for use on submerged joints, especially where porous substrates permit water infiltration to the bond interface. However, effective aquarium applications are being accomplished. Consult GE Technical Centers for details.

Construction SCS1200 Silicone Sealant Should Not Be Applied:

- To concrete, marble, limestone, lead surfaces, zinc coated(galvanized) metal, and copper.
- To building materials which may bleed oils or solvent; these include, but are not limited to, impregnated wood and certain rubber gaskets or tapes, or failed sealants and caulking compounds.

WHEN SILICONE SEALANTS ARE USED IN REMEDIAL WORK, ALL OLD SEALANT MUST BE REMOVED

- In totally confined spaces, as the sealant requires atmospheric moisture for cure.
- To surfaces which will be painted, as painting over silicone sealant is generally not successful. Paint film does not stretch with extension of the sealant, and adhesion of paint to the sealant is not adequate.
- To surfaces with special reflective or protective coatings, such as mirrors, without approval of the manufacturer of the article.
- To reflecting, high gloss, or light colored surfaces where aesthetics are critical, until adequate on-site sealant, surface and ambient atmospheric tests simulating building design are conducted to ascertain material compatibility and migration to adjacent surfaces under actual use conditions.
- In bathroom areas - use Sanitary SCS1700 sealant.
- In structural glazing applications without prior consultation with GE Silicones, Waterford, NY.
- In assemblies, where two-part silicone sealed insulating glass or two-part structural glazing sealants have been used, unless prior approval has been obtained from GE Silicones.

COMPOSITION AND MATERIALS

Construction SCS1200 silicone sealant is a one-part, ready-to-use silicone rubber. It flows easily in any weather, or in any climate, within which people may choose to live and work. Easily placed into a joint, the sealant "skins over" quickly and cures rapidly to silicone rubber on contact with moisture in the air.

PRIMERS

Recommended for maximum adhesion on most surfaces except glass. For additional information on primers, refer to GE publication #1502.

COLORS

Construction SCS1200 silicone sealant is available in five standard colors:

Sealant Designation	Color
SCS1201	Translucent
SCS1202	White
SCS1203	Black
SCS1209	Aluminum
SCS1297	Dark Bronze

PACKAGING

Packaged in plastic cartridges fitting an ordinary caulking gun. Plastic package is designed to resist moisture infiltration. The sealant can be dispensed by many air-operated guns and bulk-dispensing equipment. Do not exceed 45 psig. Bulk packaging is available upon request.

APPLICABLE STANDARDS

Contact GE Silicone Quality Assurance for details on certification to

- Fed. Spec. TT-S-001543A
- Fed. Spec. TT-S-00230C
- ASTM-C-920, Type-S, NS, Class 25 Construction 1200 silicone sealant is non-toxic as defined by the Federal Hazardous Substances Act.

TECHNICAL DATA

Construction SCS1200 silicone sealant resists the effects of ultraviolet light, rain, snow, ozone and temperature extremes. The sealants weatherability enables it to retain its design properties even after many years of exposure. Extensibility, tensile strength, hardness and adhesion do not change significantly with age or weather.

Total anticipated joint movement should not exceed 50% of the joint width, with no more than 25% in either extension or compression. Because of its recovery properties, the silicone sealant returns to its original shape and dimension, even after periods of tensile or compressive deformation.

Cured Construction SCS1200 silicone sealant will not harden with cold (down to -58°C) or soften with heat (up to +204°C).

See table 1 for values of typical properties.

USDA STATUS

General Electric has letters on file from the United States Department of Agriculture stating that Construction SCS1201, SCS1202, SCS1203, SCS1209, and SCS1297 silicone sealants are chemicals acceptable as sealants in establishments operating under the Federal meat and poultry products inspection program. The compounds must be used in a manner which prevent direct or indirect contamination of edible products. The final granting of authorization for the proposed use of such compounds is the responsibility of the States Department of Agriculture stating that Construction SCS1201, SCS1202, SCS1203, SCS1209, and SCS1297 silicone sealants are chemicals acceptable as sealants in establishments operating under the Federal meat and poultry products inspection program. The compounds must be used in a manner which prevent direct or indirect contamination of edible products.

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 upon request.

FDA STATUS

Construction SCS1201, SCS1202, SCS1203, and SCS1209 sealants can be used in incidental food contact where [FDA](#) regulations apply. For additional information, consult GE publication #4256.

NSF STATUS

NSF International lists SCS1200 adhesive sealants under NSF Standard No. F-51 "Plastic Materials and Components for Use in Food Equipment" as satisfactory to use on splash zone surfaces.

FIRE HAZARD CLASSIFICATION

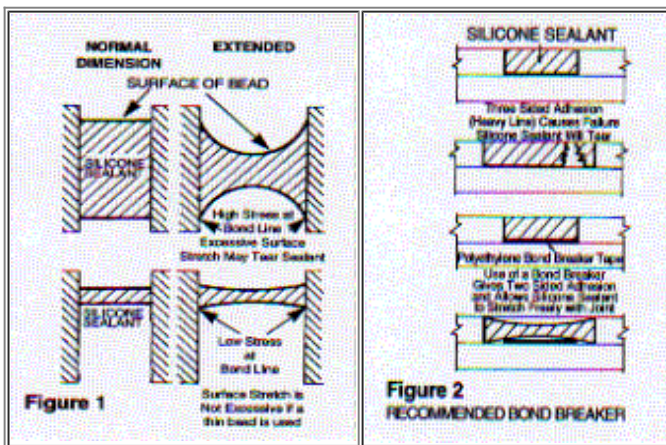
Construction SCS1200 silicone sealant has been tested according to Underwriters Laboratories, Inc. UL 723-79 "Test for Surface Burning Characteristics". Contact the local GE Technical Center for test results.

JOINT DESIGN

Standard Glazing and Expansion Joints.

PRINCIPLES OF JOINT DESIGN

Figure 1 illustrates why a thin bead of silicone sealant will accommodate more movement than a thick bead. Obviously, the thin bead is the most desirable. Silicone sealants should be no thicker than 3/8" and no thinner than 1/8". Figure 2 illustrates a second principle. The use of a bond breaker prevents three-sided adhesion. Figure 3 shows how proper back-up material incorporates both of these desirable features. Polyethylene foam rod is the recommended back-up. Other types are not recommended due to the possibility of staining and three-sided adhesion. If the joint is too shallow to allow foam rod, use a bond breaker tape.



The width of building expansion joints varies because of seasonal and daily changes in temperature. The movement of a sealant bead installed during the hottest season varies because of seasonal and daily changes in temperature. The movement of a sealant bead installed during the hottest season is almost entirely extended and when installed during the coldest season is almost entirely compressed.

The designed joint width must be at least four times the total anticipated movement to accommodate temperature variations. For example, if the total anticipated movement in a joint in which Construction SCS1200 silicone sealant is to be installed is 1/4" the designed joint width must be 1" if the total anticipated movement is to be accommodated entirely in one direction.

STRUCTURAL GLAZING

GE Silicones, Waterford, NY must be consulted prior to use of Construction SCS1200 silicone sealant in structural glazing applications.

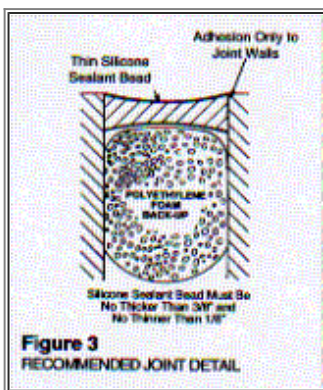
DEFINITION

Structural glazing encompasses all applications in which a cured adhesive bead of silicone sealant replaces the conventional exterior stop on two or four sides of the perimeter of the lite. The silicone in the application provides edge support for the lite under various live and dead load conditions.

GE Silicones will provide sealant recommendations when the following items have been selected and furnished by a design professional.

Supplied to GE

- Architectural drawings for review.
- Final shop drawing for review.
- Manufacturer and part number of construction materials contacting silicone construction sealant.
- Design loads.



Supplied by GE to Architect/ General Contractor:

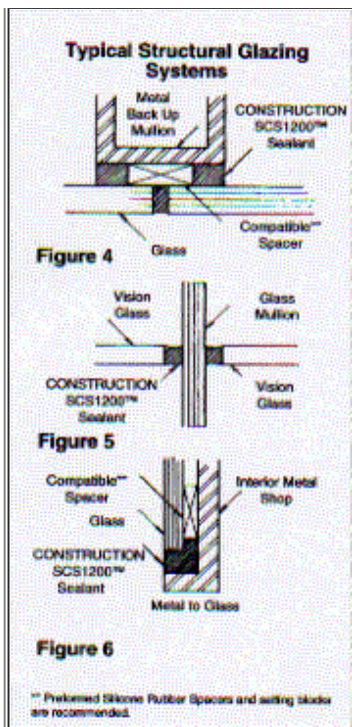
- Design shall be limited to 20 psi load on silicone sealant which represents a 6:1 safety factor.
- Review and comment on architectural and shop drawings.
- Recommended primers for various substrates.
- Compatibility of materials with silicone.
- Short term adhesion data per ASTM-C-794 test method.

GE Does Not Supply:

- Design of joint.
- Shop or architectural drawing.
- Structural data.
- Design joint movement data as related to expansion, contraction or seismic movement.
- Long term performance data.

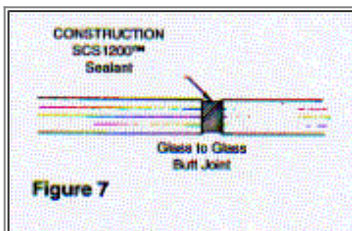
Note: Where non-acid, neutral-cure sealants are specified, use 1 part SSG4000 or 2 part SSG4400 ULTRAGLAZE sealants.





BUTT GLAZING

Butt glazing applications are those in which the sealant is used as a permanent weather seal between two adjoining lites of glass. The sealant does not provide support against deflection and the glass thickness must be adequate to withstand the expected deflection due to wind and thermal loading, with two-sided support. In butt glazing applications, the sealant bead may be as deep as the glass thickness and the maximum 3/8" joint depth recommendation does not apply. See Figure 7



INSTALLATION

PREPARATORY WORK

CLEANING

Sealant bonding surfaces should be sound, clean, dry and free of contamination. Protective coatings, oils and greases are forms of contaminants.

PRIMING

When required, GE Silicones primers must be applied according to manufacturer's printed instructions.

MASKING

Areas adjacent to joints should be masked, preferably before priming, if it is necessary to obtain a neat sealant line.

METHOD OF APPLICATION

Construction SCS1200 silicone sealant can be applied directly from plastic caulking cartridges; no mixing, heating or refrigeration is required. The sealant can be applied at outdoor temperatures as low as -37°C, provided only that surfaces are dry and frost-free. It does not sag or slump when applied to vertical services, even in hot weather.

Apply sealant with hand gun or pressure equipment following the manufacturer's printed instructions. Maximum recommended air gun pressure using cartridges is 45 psig. Immediately after application, joints should be tooled and masking tape should be removed. Excess silicone should be cleaned off non-porous surfaces while in the uncured state with a commercial solvent such as xylene. CAUTION - Solvents are flammable and toxic. On porous surfaces excess silicone sealant should be allowed to cure and then be removed by abrasion or other mechanical means.

PRECAUTIONS

Material Safety Data Sheets are available upon request from GE Silicones. Similar information for solvents and other chemicals used with GE products may be obtained from your suppliers.

When solvents are used, proper safety precautions must be observed. All solvents must be used only in well ventilated areas. Exposure to high vapor concentrations must be avoided. When flammable solvents are used, storage, mixing, and use must be in areas away from heat, sparks, flame or other sources or ignition.

STORAGE AND SHELF LIFE

Store below 27°C in a dry area. Shelf life is 2 years from date of shipment from GE Silicones when stored in the original, unopened container. Use entire contents immediately after opening.

MAINTENANCE

Maintenance is not normally required, however, since Construction SCS1200 silicone sealant will adhere to itself, replacement of damaged portions is easily accomplished. Clean surfaces in damaged area with appropriate solvent and repair with fresh Construction SCS1200 silicone sealant.

TECHNICAL SERVICES

Complete technical information and literature is available from GE Silicones Technical Centers. Laboratory facilities and application engineering are available upon request from GE Silicones. Any technical advice furnished by the Company, or any representative of the Company, concerning any use or application of any sealant is believed to be reliable but the Company makes no warranty, express or implied, of any use or application for which such advice is furnished.

GOVERNMENT REQUIREMENT

Prior to considering use of a GE Silicones' product in fulfilling any government requirement, please contact the Government and Trade Compliance office at 413-4348-4624.

AVAILABILITY AND COST

Availability: Construction SCS1200 silicone sealant is available from Construction Materials Distributors throughout the United States and Canada. For information, consult the nearest GE Technical Center.

Cost: Contact local distributor or nearest GE Technical Center.

FILING SYSTEMS

- Electronic SPEC-DATA®
- SPEC-DATA® II
- Sweet's Architectural File 07920/GEN
- GE Silicone Technical Centers

CDS4893 (6/99)

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- stocking orders for literature - product line selector guides - industry brochures & catalogs			
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