

SEALANTS

# CRL 95C SILICONE BUILDING SEALANT

## PRODUCT NAME

CRL 95C Silicone Building Sealant

## PRODUCT DESCRIPTION

A primerless non-structural glazing and weatherproofing sealant capable of taking joint movements of  $\pm 50\%$  in a well designed joint. The sealant cures to a durable, flexible, weather-resistant silicone rubber when exposed to atmospheric moisture.

CRL 95C Silicone Sealant is designed to tool easily. It does not contain plasticizers, UV absorbers or solvents. Its physical properties will remain stable over time and in severe weather conditions. The consistency is relatively unchanged over a wide temperature range, (-20 °F to 120°F), allowing the sealant to be applied in any season. See Table 1 and Table 2 for typical property values.

CRL 95C Silicone Sealant meets or exceeds the requirements of the following specifications:

- TTS-001543A (COM-NBS) for silicone building sealants.
- TTS-00230C (COM-NBS) for one component building sealants as Class A, Non-Sag.
- ASTM-C920 Standard Specification for Elastomer Joint Sealants as Type S, Grade NS, Class 50, Use NT, M, G, A and O. CAN/CG5B-19.13-M87.

CRL 95C Silicone Sealant has outstanding weather-bility properties. It is virtually unaffected by normal weathering conditions such as rain, sunlight, snow, sleet, ultraviolet radiation, ozone, atmospheric contamination and acid rain.

Properly installed 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 seal or adhesive bond.

CRL 95C Silicone Sealant is compatible with most laminated glass, reflective coated glass, Low-E Glass, insulating glass units, and acrylic and polycarbonate glazing sheets.

## BASIC USES

CRL 95C Silicone Building Sealant is designed for:

- Non-structural glazing of glass, metal and plastics.
- Sealing expansion and control joints in precast concrete panels and metal curtain walls; dynamic glazing systems; perimeter sealing of door and window framing and other building components. It forms a durable, flexible, watertight bond with most materials in any combination: stone, masonry, ceramics, marble, wood, steel, aluminum, and many plastics. In most cases no primer is required.

## LIMITATIONS

CRL 95C should not be used

- For structural glazing.
- Sealing horizontal decks, patios, driveway or terrace joints where abrasion or physical abuse is encountered.
- In sealing submerged joints.
- For exterior or interior sealing below the waterline in marine applications.
- In totally confined or air-free spaces.
- In designs that will be painted after application of the sealant. The sealant should be applied after painting is completed.
- To surfaces with special protective or cosmetic coatings without prior consultation of the manufacturer.
- To surfaces in direct contact with food.

## TECHNICAL DATA

The physical properties of CRL 95C Silicone Sealant are shown below in Tables 1 and 2.

TABLE 1 - PHYSICAL UNCURED PROPERTIES*	
Property/Test Method	Value
Tool/Work Time	.20-30 minutes
Tack Free Time (TT-S-001543A)	.2 hours
Curing Time @ 77°F (Varies w/relative humidity)	.14-21 days
Full Adhesion	.14-21 days
Flow, Sag, or Slump (TT-S-001543A)	.Nil

TABLE 2 - PHYSICAL CURED PROPERTIES*	
Property/Test Method	Value
Hardness Shore A (ASTM D-2240)	.25
Tensile Strength (ASTM D-412)	.300 psi
Peel Strength (TT-S-001543A)	.35 psi
Staining (TT-S-001543A)	.None
Ozone Resistance	.Excellent
Joint Movement Durability (After 14 days cure)	. $\pm 50\%$
Tear Strength (ASTM D-624)	.50 ppi
UV Resistance (ASTM C-793)	.Excellent
Temperature Resistance	-.50°F +300°F
Staining (granite, marble, limestone, brick, and concrete) (ASTM C-1248)	.None

\*Values given above are not intended to be used in specification preparation.

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**INSTALLATION**

Clean all joints and glazing areas by removal of foreign matter and contaminants such as oil, dust, grease, frost, water, surface dirt, old sealants or glazing compounds and any protective coating.

Porous substrates should be cleaned where necessary by grinding, saw cutting, blast cleaning (sand or water), mechanical abrading or a combination of these methods which will be required to provide a sound, clean, and dry surface for sealant application. Dust, loose particles, etc., should be blown out of joints with oil-free compressed air or vacuum cleaned.

Metal, glass, and plastic surfaces should be cleaned by a solvent procedure or by mechanical means.

Detergent or soap and water cleaning treatments are not recommended. Protective films must be removed by a solvent recommended by the manufacturer of the component or other means which leave no residue. In all cases where used, solvents shall be applied with one clean cloth or lintless paper towel and the solvent wiped clean with a second cloth or towel. Cleaning solvents should not be allowed to air dry or evaporate without wiping. Architectural coatings, paints, and plastics shall be cleaned with a solvent approved by the manufacturer of that product.

Cleaning of all surfaces should be done on the same day in which the sealant is applied. **CAUTION: CLEANING SOLVENTS MAY BE FLAMMABLE AND ARE TOXIC.**

**PRIMING**

95C Silicone Sealant generally does not require priming. In view of the unpredictability of surface characteristics, it is always recommended that a test sample of sealant be applied on the surface to test adhesion.

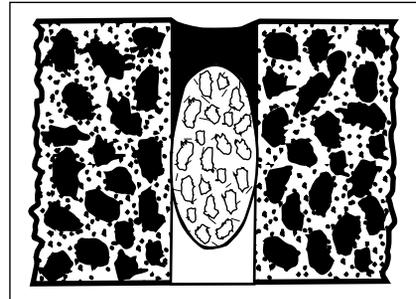
**MASKING**

All areas adjacent to joint can be masked to assure a neat appearance. The masking tape should not be allowed to touch the clean surfaces to which the silicone is to adhere. Soon after sealant application and before a skin forms, tooling should be completed in one continuous stroke. After tooling is completed, remove masking tape immediately.

**METHOD OF APPLICATION**

Weather Seal Joint Designs—The width of building expansion joints may vary because of seasonal and daily changes in temperature. Joint width should not be less than 1/4". The joint depth must allow a sealant thickness after installation of bond breaker material, of a minimum of 1/4" and maximum thickness of 1/2". For proper joint design the ratio of joint width to sealant depth should be two to one. Lap shear joints should have a bead width equal to, or greater than the anticipated movement. See Figure 1 for typical joint details.

**FIGURE 1 - TYPICAL JOINT DETAILS**



Depth should be not thicker than 1/2", nor thinner than 1/4"

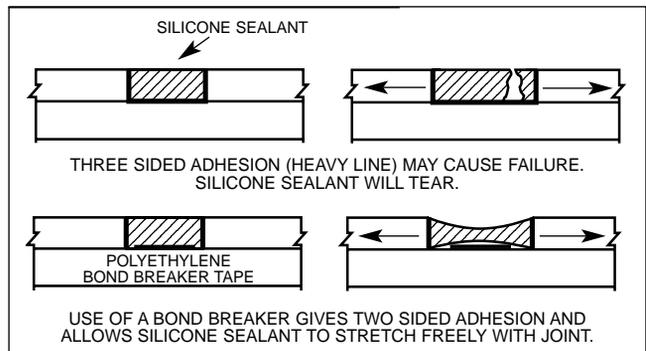
Excess sealant should be wiped clean from glass, metal and plastic surfaces while still uncured and followed with a commercial solvent such as xylol, toluol, or methyl ethyl ketone. Should sealant accidentally contact and begin to cure on adjacent porous surfaces, the excess sealant should be allowed to progress throughout the initial cure of setup. It should then be removed by abrasion or other mechanical means.

Small curtain wall panels and lights should allow a minimum width of 1/4" for the sealant bead. Larger panels and lites, or those in which a great deal of movement is expected, should allow a minimum width of 3/8" for the sealant bead. Glazing of plastic lights and panels fabricated from plastic require larger than usual joint dimensions due to the plastic's higher coefficient of thermal expansion.

Polyurethane or polyethylene foam rod is the recommended back-up material for deep joints, polyethylene tape for joints too shallow to allow foam rod. These materials allow a thin bead of silicone to be applied and assure two sided adhesion to maximize sealant extension and compression capability. See Figure 2 for use of a bond breaker.

Install backup material or joint filler, setting blocks, spacer shims and tapes as specified. Apply CRL 95C Silicone Sealant in a continuous operation using a positive pressure adequate to properly fill and seal the joint. Tool or strike the sealant with light pressure to spread the sealant against the backup material and the joint surfaces. A tool with a concave profile is recommended to keep the sealant within the joint.

**FIGURE 2 - BOND BREAKER**



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**PRECAUTIONS**

CRL 95C may cause eye irritation. Avoid eye contact. Avoid prolonged or repeated skin contact. **KEEP OUT OF REACH OF CHILDREN.**

During cure this sealant evolves methanol. Provide adequate ventilation to prevent methanol vapors above 200 ppm. If airborne concentration exceeds 200 ppm, use air-supplied or self contained breathing apparatus.

Ingestion of large amounts of sealant can cause blindness.

May cause irritation. May be harmful if swallowed. Avoid getting in eyes, on skin, on clothing. Do not breathe vapors. Keep out of reach of children. Wash thoroughly after handling. Use only as directed.

To safely use this product, read and abide by Material Safety Data Sheet.

**SHELF LIFE**

When stored at or below 80°F (27°), CRL 95C Silicone Sealant has a shelf life of twelve months from date of shipment from the manufacturing plant.

**MAINTENANCE**

No maintenance should be needed. If 95C Silicone Sealant becomes damaged, replace damaged portion. Clean surfaces in damaged areas, and repair with fresh silicone sealant.

**PACKAGING**

CRL 95C Silicone Sealant is available in 10.3 fluid ounce high-density polyethylene plastic cartridges, two gallon and 4.5 gallon containers.

**COLORS**

CRL 95C is available in the following standard colors: Precast White, Limestone, Black, Gray, and Bronze. Custom colors are available upon request.

**SEALANT COVERAGE**

LINEAR FEET (Linear Feet Per 10.3 Fl. Oz. Cartridge)							
Depth, Inches	Joint Width, Inches						
	1/8"	1/4"	3/8"	1/2"	3/4"	1"	
1/8"	96	48	32	24	16	12	
1/4"	48	24	16	12	8	6	
3/8"	32	16	11	8	5	4	

LINEAR FEET (Linear Feet Per Gallon)							
Depth, Inches	Joint Width, Inches						
	1/8"	1/4"	3/8"	1/2"	3/4"	1"	
1/8"	1232	616	411	307	205	154	
1/4"		307	205	154	103	77	
3/8"			137	103	68	51	

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**TECHNICAL SERVICE**

Complete technical information and literature is available from C.R. Laurence Co., Inc. 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, expressed or implied, for any use or application for which such advice is furnished.

**LIMITED WARRANTY NOTICE**

CRL and its manufacturer warrant our products to be of good quality and will replace or, at our election, refund the purchase price of any products proved defective. Satisfactory results depend not only upon quality products but also upon many factors beyond our control in the application process. Therefore, except for such replacement or refund CRL and its manufacturers make no warranty or guarantee, expressed or implied, including warranties of fitness or merchantability, respecting its products. CRL and its manufacturers shall have no other liability with respect thereto. User shall determine the suitability of the product for his intended use and assume all risks and liability in connection therewith. Any authorized change in the printed recommendations concerning the use of our products must bear the signature of the CRL Product Manager.

**COOPERATIVE TESTING**

Materials submitted for testing should be sent to:  
 C.R. Laurence Co., Inc.  
 Technical Sales Department  
 PO Box 58923  
 Los Angeles, CA 90058-0923

This program is intended to eliminate potential field problems by pretesting CRL construction sealants with samples of the building materials on which the sealant will be applied. The test will aid in determining the proper surface preparation method, effective solvents for cleaning and whether priming is necessary to achieve optimum adhesion. Following this procedure will remove many of the unknown variables which affect field success.

Test samples of substrates should be identified as to manufacturer, origin, designed use, building project, person and firm originating the request. Appropriate sketches or drawings showing the intended use can be helpful.

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