



Sil 100 GC

Glass Clear
Acetoxy Silicone
Sealant/Adhesive

Technical Data Sheet

DESCRIPTION

BONDAFLEX Sil 100 GC is a glass clear, monolithic, general purpose, one-component, non-sag, elastomeric, 100% RTV acetoxy silicone sealant. Specially formulated for monolithic glass-to-glass weatherseals and general assembly applications where a long lasting perfectly optically clear seal is required. Meets the physical requirements of ASTM C-920, Type S, Grade NS, Class 25, Use NT, G, A, O; TT-S-01543A, Class A and California Air Resources Board 2003 requirements for Volatile Organic Compound content. Maintains elastomeric properties up to 450°F.

FEATURES

- Glass Clear
- One-component
- Joint movement $\pm 25\%$
- Excellent adhesion
- Quick curing
- Seal integrity under extremes
- Superior gunning and tooling

BENEFITS

- Improved clarity over typical translucent silicones
- Ready to use, labor cost reduction
- Excellent flexibility for dynamic joint movement and dissimilar materials
- Bonds to most substrates without priming
- Move assembled or sealed parts quickly
- Wide service temperature durability
- Speed and ease of application

WHERE TO USE

Construction Application

- Conventional glazing
- Butt glazing monolithic glass
- Interior glass partitions
- Sealing glass block systems
- Display cases
- Kitchen and bath
- Residential countertops
- Frameless shower doors

Industrial Application

- Sealing trucks, trailers and RVs
- Marine cabins
- Appliance trim

Structure

- Buildings/schools
- Prisons
- Store fronts

Location

- Horizontal and vertical
- Interior and exterior
- Above grade

Substrate

- Glass, aluminum, tile, fiberglass, plastic, ceramic, wood, steel and painted metals

TYPICAL PROPERTIES

Cured 7 days @ 77°F (25°C) and 50% RH

TYPICAL PROPERTIES		TEST METHOD
Movement Capability, %	± 25	ASTM C-719
100% Modulus, psi (MPa)	100 (0.68)	ASTM D-412
Hardness, Shore A	25 \pm 5	ASTM C-661
Tensile Strength, psi (MPa)	460 (3.16)	ASTM D-412
Elongation at Break, %	400	ASTM D-412
Peel Strength, pli	30	ASTM C-794
Bond Durability on glass and aluminum	$\pm 25\%$	ASTM C-719
Accelerated Weathering 10,000 hrs.	No change	QUV Weatherometer
<u>Uncured</u>		
Skin-Over Time	10 min.	MNA Method
Tack-Free Time	25 min.	ASTM C-679
Cure Rate	1/8 inch/24 hrs.	MNA Method
Extrusion Rate g/min 1/8" orifice @ 90 psi	195	ASTM C-1183 modified
Slump of Sealants	nil	ASTM D-2202
Volatile Organic Content	3.50 % by wt. 36 g/L 0.30 lbs/gal	
Service Temperature	-80°F to 450°F -62.2°C to 232.2°C	

Test results are averages obtained under laboratory conditions. Reasonable variations can be expected.

PACKAGING

- 10.1 fl. oz. (300 ml) disposable cartridges
- 4.5 gal (17 L) in a 5 gal pail
- 52 gal (197 L) in 55 gal drum

Special packaging available upon request – ask your local Representative for more information.

STORAGE/SHELF LIFE

When stored in the original, unopened containers at or below 90°F (32°C), shelf life is two years. A product skin may form in pails and drums, remove prior to use.

COLORS

Ultra glass clear.

EXPANSION JOINT DESIGN

1. The number of joints and the joint width should be designed for a maximum of $\pm 25\%$ movement of joint width at time of installation.
2. The depth of the sealant should be 1/2 the width of the joint. The maximum depth is 1/2 inch (13mm) and the minimum is 1/8 inch (3mm). Movements should be calculated and joint size adjusted if needed.
3. To control joint depth, use closed cell polyethylene or non-gassing polyolefin backer rod. If joint depth does not allow for backer rod, use polyethylene bond breaker tape to prevent three-sided adhesion.
4. Closed cell backer rod should be 25% larger than joint width; do not compress more than 40%.
5. When used in butt glazing applications, note that some bubbles may form in deep joints.

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

BONDAFLEX Sil 100 GC 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 primers **BONDAFLEX Sil 2000**, **BONDAFLEX Sil 2100** or **BONDAFLEX Sil 2300** and contact Technical Service for additional information.

APPLICATION

Expansion Joint

1. Ready to use, apply using professional caulking gun. Do not open product container until preparation work has been completed.
2. Apply sealant using consistent, positive pressure to force sealant into the joint.
3. 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.

Adhesive Joint

1. Apply by caulking gun, dispensing equipment or trowel.
2. Use sufficient quantity of adhesive to one or both substrates to provide designed contact area.
3. Surfaces may be moved up to one hour after application without loss of adhesive strength.
4. If needed, use fastener to hold substrates until adhesive has cured.
5. Cure times vary with temperature, humidity and porosity of joined substrates.

CLEAN UP

Remove excess sealant from substrate while still uncured with commercial solvent, such as xylene. Cured sealant may be removed by mechanical means.

LIMITATIONS

- Please note that bubbles can form during cure particularly in large joints. This is normal so perform a mock up before proceeding to observe and review esthetics.
- Do not apply to damp or wet substrates.
- Do not allow sealant to come in contact with solvent during cure.

- Do not use on laminated glass without testing and approval. Intended for monolithic glass applications only.
- Do not use in vehicular traffic applications.
- Not intended for long-term 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 to surfaces that will be painted, as sealant is not paintable.
- Do not apply to substrates that bleed oil, plasticizers or solvent.
- Do not apply to surfaces sensitive to corrosion by acetic acid or vapors.
- Lower temperature and humidity will extend tack free and cure rates.
- Allow treated wood to age six months before application.
- Not intended for structural glazing.
- Test sensitive substrates, such as mirror backings for compatibility before use.

FIRST AID

In case of eye contact, flush thoroughly with water for at least 15 minutes. **SEEK IMMEDIATE MEDICAL ATTENTION.** In case of skin contact, wash affected areas with soap and water. If irritation persists, **SEEK MEDICAL ATTENTION.** Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs or if swallowed, **SEEK IMMEDIATE MEDICAL ATTENTION.** Refer to Material Safety Data Sheet (MSDS) for further information.

PRECAUTIONS

KEEP OUT OF THE REACH OF CHILDREN. Use only with adequate ventilation. Keep container closed. Prevent contact with skin, eyes and clothing. Wash thoroughly after handling. **DO NOT** take internally. Use impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable federal, state and local regulations.

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