



# Sil 100 HT

High Temperature  
Acetoxy Silicone  
Sealant/Adhesive

## Technical Data Sheet

### DESCRIPTION

**BONDAFLEX Sil 100 HT** is a general purpose, one-component, non-sag, elastomeric, 100% RTV acetoxy silicone sealant designed for high temperature applications. Meets the requirements of ASTM C-920, Type S, Grade NS, Class 25, Use NT, G, A, O; TT-S-00230C, Type II, Class A; CAN/CGSB-19.13-M87, recognized under UL QMFZ2, MIL-A-46106A, FDA Regulation 21 CFR 177.2600 for incidental food contact, NSF Standard 51 for direct food contact and California Air Resources Board 2003 requirements for Volatile Organic Compound content. Maintains elastomeric properties up to 600°F.

### FEATURES

- Unaffected by most atmospheric conditions
- Joint movement  $\pm 25\%$
- Excellent adhesion
- One-component
- Fast curing
- Excellent gunnability in all temperatures
- Superior gunning and tooling
- Maintains elastic properties between -80 to 600°F

### BENEFITS

- Extremely long service life
- Excellent flexibility for dynamic joint movement
- Bonds to most substrates without priming
- Ready to use, labor cost reduction
- More productivity
- All season ease of application
- Speed and ease of application
- Versatile for many heating and cooling applications

### WHERE TO USE

#### Construction Application

- Perimeter sealing of windows, doors and skylights
- Non-structural glazing
- Countertops
- Sanitary seals
- Kitchen and bath
- HVAC
- Plumbing
- Roofing

#### Industrial Application

- Heating and refrigeration units
- Form in place gaskets
- Sealing trucks, trailers and RVs
- Marine cabins
- Appliance trim

#### Structure

- Buildings/schools
- Stadiums
- Prisons

#### Location

- Horizontal and vertical
- Interior and exterior
- Above grade

#### Substrate

- Glass, aluminum, tile, fiberglass, plastic, ceramic and wood

### TYPICAL PROPERTIES

Cured 7 days @ 77°F (25°C) and 50% RH

PROPERTY	VALUE	TEST METHOD
Movement Capability, %	$\pm 25$	ASTM C-719
100% Modulus, psi (MPa)	55 (0.38)	ASTM D-412
Hardness, Shore A	20 $\pm$ 5	ASTM C-661
Tensile Strength, psi (MPa)	200 (1.37)	ASTM D-412
Elongation at Break, %	525	ASTM D-412
Peel Strength, pli	20	ASTM C-794
Bond Durability on glass and aluminum	$\pm 25\%$	ASTM C-719

PROPERTY	VALUE	TEST METHOD
Accelerated Weathering 10,000 hrs	No Change	QUV Weatherometer

#### Uncured

Skin Over Time	10 min.	MNA Method
Tack-Free	15 min.	ASTM C-679
Cure Rate	1/8 inch/24 hrs.	MNA Method
Extrusion Rate g/min 1/8" orifice @ 90 psi	560	ASTM C-1183 modified
Slump of Sealants	nil	ASTM D-2202
Rheological, Vertical @ 120°F (49°C)	non-sag	ASTM C-639
Volatile Organic Content	3.50% by wt. 36 g/L 0.30 lbs/gal	
Service Temperature	-80°F to 500°F 600°F intermittent -62.2°C to 260°C 315.5°C intermittent	

*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

Red and Black.

## 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 1/4 inch (6mm).
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%.

## 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 HT** 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

- Do not allow sealant to come in contact with solvent during cure.
- 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.
- Maximum depth of sealant must not exceed 1/2 inch; minimum depth 1/4 inch.
- Black will discolor to a brown/black at high temperatures.

- Do not apply to surfaces that will be painted.
- Do not apply to substrates that bleed oil, plasticizers or solvent.
- Do not apply to damp or wet substrates.
- 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.
- Do not use in vehicular traffic applications.
- 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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