



Silfast 502

2-Part Structural Glazing Sealant/Adhesive and Weatherseal

Technical Data Sheet

DESCRIPTION

BONDAFLEX Sil 502 is a versatile, structural glazing and weatherseal, two-component, non-sag, elastomeric, neutral cure silicone sealant/adhesive. Meets the requirements of ASTM C-920, Type M, Grade NS, Class 25/25, Use NT, M, G, A, O; ASTM C-1184 Structural Silicone Sealant; TT-S-00230C, Type II, Class A; CAN/CGSB-19.13-M87, and California Air Resources Board 2003 requirements for Volatile Organic Compound content.

WHERE TO USE

Construction Application

- Structural glazing*
- Conventional glazing
- Perimeter sealing of windows, doors and skylights
- Unitized curtainwall assembly and field installation

Structure

- Buildings
- Schools
- Prisons

Location

- Vertical and horizontal
- Interior and exterior
- Above grade

Substrate

- Glass, aluminum, (anodized, painted and powder coated), tile, fiberglass, vinyl and natural stone.

*Requires Technical Service Approval

FEATURES

- Versatile medium modulus
- Unaffected by most atmospheric conditions
- Joint movement $\pm 25\%$
- Excellent adhesion
- Two-component 1:1 mix ratio
- Fast Curing
- Excellent gunnability & curing in all temperatures

BENEFITS

Structural glazing and weatherseal applications with one product
 Extremely long service life
 Excellent flexibility for dynamic joint movement, impact & seismic stresses
 Bonds to most substrates without priming including many Kynar® and anodized aluminum finishes
 Easy to use, less variability with pumping equipment, lower material waste, reduced cost
 Fast assembly, increased productivity
 All season ease of application

TYPICAL PROPERTIES

Cured (7 days @ 77°F (25°C) and 50% RH)

		TEST METHOD
Movement Capability, %	± 25	ASTM C-719
100% Modulus, psi (MPa)	60 (0.41)	ASTM D-412
Hardness, Shore A (Full Cure)	16	ASTM C-661
Tensile Strength, psi (MPa)	200 (1.38)	ASTM D-412
Elongation at Break, min %	450	ASTM D-412
Peel Strength, pli	40-55	ASTM C-794
Accelerated Weathering 10,000 hrs.	No change	QUV Weatherometer

Uncured

Working Time, minutes	15-20	MNA CTM
Swap Time, minutes	30-40	ASTM C-679
Cure Rate (depth)	2 inch/24 hrs.	MNA CTM
Extrusion Rate g/min 1/8" orifice @ 90 psi	190	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:	2.80 % by wt.	
Service Temperature	-80°F to 350°F	

PACKAGING

- 300 ml sausage packs
- 4.5 gal (17 L) pail kits
- 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 one year. A product skin may form in pails and drums, remove prior to use.

COLORS

Black & custom colors. Ask your local Representative for more information.

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, non-gassing polyolefin or open cell polyurethane 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%. Open cell should be compressed 40%.
5. Do not use open cell rod in horizontal on grade joint or with E.I.F.S.

STRUCTURAL JOINT DESIGN

1. Technical Services should be contacted to review structural site calculation for all structural silicone glazing application.
2. Obtain lite size, wind load and other project details for support and approval.

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 cloth wipe method using xylene or an approved commercial solvent. Allow solvent to evaporate prior to sealant application.

PRIMING

BONDAFLEX Silfast 502 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**, **BONDAFLEX Sil 2300** or **BONDAFLEX MP 1500** 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.

CLEAN UP

Remove excess sealant from substrate while uncured using a 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.
- Do not allow sealant to come in contact with curing polyurethane sealants during cure.
- Not intended for water 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 when substrate temperatures are below -20°F or above 130°F.
- Not recommended for structural glazing applications without prior approval: contact May National Associates for technical recommendations.
- Not recommended for horizontal vehicular traffic.
- 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 damp or wet substrates.
- Lower temperature and humidity will extend tack free and cure rates.

- Allow treated wood to age six months before application.
- Brass and copper may be discolored. Test apply prior to application.
- 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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