



Sil 728 RCS

Two Part, Self-Leveling, Rapid Cure, Ultra Low Modulus, Horizontal Application, Neutral Cure Silicone Sealant

Technical Data Sheet

DESCRIPTION

BONDAFLEX Sil 728 Rapid Cure System is a self-leveling, two-component, very rapid cure, ultra low modulus elastomeric, neutral cure silicone sealant. Exceeds the requirements of ASTM C-920, Type M, Grade P, Class 100/50, Use T, M, G, A, O; meets TT-S-00227E, Type I, California Air Resources Board 2003 requirements for Volatile Organic Compound content and various AASHTO reports and state DOT approvals.

WHERE TO USE

Construction Application

- Horizontal Expansion joints
- Highway and bridge joints
- Saw cut joints – new and remedial
- Plaza decks
- Roofing applications - pitch pans, seam seals, penetrations
- Parking Decks
- Glass block walks, entrances, stairs
- End dams and splices in curtainwall, window and glazing systems

Structure

- Highways
- Bridges
- Airports
- Transit terminals
- Parking garages
- Plazas
- Stadiums
- Driveways

Location

- Horizontal
- Interior and exterior
- Above grade or on grade

Substrate

- Concrete, asphalt, steel, glass, aluminum, tile, fiberglass, plastic, ceramic, masonry, brick, stone, granite and wood

FEATURES

- Self-leveling
- Ultra low modulus
- Joint movement +100 / -50%
- Excellent adhesion
- Fast curing, two-part
- Unaffected by most atmospheric conditions
- Excellent flowability in all temperatures
- Seals irregular surfaces
- Resistant to road salts
- Jet fuel resistant

BENEFITS

- No tooling, less labor
- Excellent flexibility for extreme high and low temperature conditions
- Excellent flexibility for dynamic joint movement
- Bonds to most substrates without priming
- Open to traffic in one hour
- Extremely long service life
- All season ease of application
- Good contact/adhesion with hard to reach areas
- Ideal for cold climates
- Excellent for use on runways and tarmacs

TYPICAL PROPERTIES

		TEST METHOD
<u>Cured 7 days @ 77°F (25°C) and 50% RH</u>		
Movement Capability, % and Bond Durability, % (glass, aluminum and concrete)	+100 / -50	ASTM C-719
100% Modulus, psi (MPa)	20 (0.14)	ASTM D-412
Hardness, Shore OO	50 ± 5	ASTM C-661
Tensile Strength, psi (MPa)	70 (0.48)	ASTM D-412
Elongation at Break, %	>1000	ASTM D-412
Joint Elongation, %	725	ASTM D-5329(a)(b)
Joint modulus, psi (100% elongation)	5	ASTM D-5329(a)(b)
Peel Strength, pli (glass, aluminum and concrete)	30	ASTM C-794
Accelerated Weathering 10,000 hrs.	No change	QUV Weatherometer
Jet Fuel Resistance	Passes	ASTM G-3569
<u>Uncured</u>		
Skin-Over Time	10 min.	MNA Method
Tack-Free Time	20 min.	ASTM C-679
Cure Rate	90% in one hour	MNA Method
Extrusion Rate g/min 1/8" orifice @ 50 psi	50	ASTM C-1183 modified, Type S
Specific Gravity	1.25-1.35	01475
Rheological, Vertical @ 120°F (49°C)	Self-leveling	ASTM C-639
Volatile Organic Content	4.00 % by wt. 50 g/L 0.42 lbs/gal	
Service Temperature	-80° to 350°F -62.2° to 176.6°C	

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

PACKAGING

- 600 ml part A and part B sausage packs
- 2 gal unit (7.57 L) – 2 pails each containing 1 gal (3.79 L)
- 9 gal unit (34.11 L) – 2 pails each containing 4.5 gal (17 L)
- 104 gal unit (394.16 L) – 2 drums each containing 52 gal (197.08 L)

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

Charcoal Gray (when Part A, dark gray and Part B, white are mixed). Custom colors are available upon request – ask your local Representative for more information.

EXPANSION JOINT DESIGN

1. The number of joints and the joint width may be designed for high movement capability. For joints one to three inches in width, the sealant will accept movements +100 and -50% and for three to four inches in width, the sealant will accept movements of $\pm 50\%$ 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 1/4 inch (13mm) -and the minimum is 3/8 inch (9mm). For joints greater than one inch (25.4mm), do not exceed 1/4 inch (13mm) in depth.
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. Never use open cell rod in on grade horizontal 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 728 RCS 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. **BONDAFLEX Sil 728 RCS** is a two (2) part system and requires mixing. Do not mix material until preparation work has been completed.
2. Manual mixing-transfer the Part B into the Part A and mix thoroughly using a slow speed paddle mixer designed for mixing two part sealants. Mix for no more than one (1) minute making sure that you scrape the sides as you mix. The paddle must be kept below the surface at all times during mixing to avoid trapping air in the sealant. Apply using a professional bulk-caulking gun.
3. Preferred-Use - automatic static mixing and dispensing equipment.
4. Apply sealant using consistent, positive pressure to force sealant into the joint.
5. Apply the sealant so that it is recessed 1/8 inch (3mm) below the surface. For parking deck joints, recess 1/4 inch (6mm). For highway joints, recess 1/4 inch (13mm). **BONDAFLEX Sil 728 RCS** is self-leveling - no tooling is needed. Should tooling be required, DO NOT use soapy water or other liquids. Consult full application guide for further information.

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 immersion.
- Sealant may be applied below freezing temperatures if substrates are completely dry, frost free and clean. Contact Technical Service for more information.
- Contact Technical Service prior to using in joints over three inches (76mm) wide.
- Not intended for structural glazing.
- Not recommended for absorptive surfaces such as limestone or marble where staining may occur.
- 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 discolor. 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.

May National Associates, Inc.
995 Towbin Ave.
Lakewood, NJ 08701

Ph: 800-641-0234
Fax: 973-473-4222
www.bondaflex.com

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