



TECHNICAL DATA SHEET



PL® S20™ POLYURETHANE Self-Leveling Concrete Crack Masonry Sealant

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DESCRIPTION

PL® S20™ Polyurethane Self-Leveling Concrete Crack Masonry Sealant is a professional grade sealant for concrete. It is a one component, polyurethane, self-leveling sealant for contraction/expansion joints and cracks in concrete floors and decks. It cures in place to form a highly resilient and abrasion resistant seal, which resists deterioration caused by weather, stress, movement, traffic and water. Its abrasion and tear resistance makes it ideally suited for applications exposed to pedestrian and vehicular traffic

RECOMMENDED FOR:

REPAIRING:

- Driveways
- Garage Floors
- Concrete Floors and Decks
- Sidewalks

NOT RECOMMENDED FOR:

- Vertical surface repair (use on horizontal surfaces only)
- Underwater applications or permanent water immersion
- Use in areas of high chlorine concentration such as around swimming pools
- Applications requiring temperature resistance greater than 180°F (82°C)
- Joint depths greater than 3/8" (9.5 mm) without the use of a backer rod. In joints deeper than 3/8" (9.5 mm) the sealant may bubble if applied too deep or if substrate is not absolutely dry
- Use with fillers impregnated with oil, asphalt, tar or any other migratory saturant
- Contact with oil-based caulking compounds, butyl caulking compounds and silicone sealants (Uncured and cured)
- Exterior applications when rain is expected before sealant reaches initial cure
- Aircraft runway or tarmac use

FEATURES & BENEFITS:

Feature	Benefits
Self-Leveling formula.....	No tooling required
Low VOC formulation.....	Complies to stringent Federal & State Regulatory requirements
Flexible.....	Use on expansion joints; Withstands joint movement without distortion or failure
Weatherproof.....	Withstands a wide range of weather conditions; Virtually unaffected by extreme temperature changes
Paintable.....	Blends in with surroundings for a professional finish

Color	Item #	Package	Size
Grey	1618149	Paper Cartridge	10 fl oz
Grey	1618150	Paper Cartridge	10 fl oz
Grey	1618172	Paper Cartridge	28 fl oz
Grey	1655967	Paper Cartridge	28 fl oz

COVERAGE

For a 10 fl. oz. cartridge:

A ¼" (6 mm) bead extrudes approximately 32 ft. (9.5 m).
A 3/8" (9.5 mm) bead extrudes approximately 14 ft. (4.26 m).

For a 28 fl. oz. cartridge:

A ¼" (6 mm) bead extrudes approximately 85.8 ft (26.1 m).
A 3/8" (9.5 mm) bead extrudes approximately 38.1 ft (11.6 m).

DIRECTIONS:

Tools Typically Required:

Utility knife, caulking gun and tool to puncture cartridge seal.

Safety Precautions:

Wear gloves. Sealant may temporarily stain skin.

Joint Preparation:

The number of joints and the joint width should be designed for a maximum of $\pm 25\%$ joint movement from the initial joint width. The depth of the sealant joint should be $\frac{1}{2}$ the width of the joint. The maximum depth is $\frac{3}{8}$ inch (10 mm) and the minimum is $\frac{1}{4}$ " (6 mm). The maximum recommended joint width is 1.5 inches (38 mm).

In deep joints, the sealant depth must be controlled by Closed-Cell Backer-Rod or Expansion Joint Filler. Other caulks should not be used as fillers. Do not prime Backer-Rod or Expansion Joint filler. Do not puncture Backer-rod as it may cause bubbling. For joints subject to puncture (i.e. by either high heels or umbrella points), use of a stiffer or higher density back up material is required. Cork or rigid non-impregnated cane-fiber joint fillers are suitable. Make sure that the backing material is tight to the sides of the joint to prevent loss of sealant through the bottom. Note: Do not use other caulks or sand as a bottom bed in a joint.

Caulking and sealing should be performed when temperatures are above 40° F (4°C). Application to moist surfaces will adversely affect adhesion. Application may proceed as low as 20° F (-7° C) only if substrates are clean and completely free of moisture or frost.

Surface Preparation:

Surfaces must be structurally sound, dry and free of all loose aggregate, paint, oil, grease, asphalt, release agents, wax and mastic compounds prior to the application of the sealant.

New Concrete:

Remove all loose material, assuring that joining surfaces are clean, dry and structurally sound. Surfaces in contact with form release agents should be cleaned by sandblasting. Fresh concrete must be fully cured. Laitance must be removed by abrading.

Old Concrete:

For joints previously sealed, remove all joint sealing material by mechanical means. If joint surfaces have absorbed oils, sufficient concrete must be removed to ensure a clean surface.

General Preparation:

Use above 40°F (4°C). In cool or cold weather, store container where temperature is about 75°F (25°C) for at least 24 hours before using. Cut nozzle at a 45° angle to desired bead size and puncture inner seal.

Priming:

Priming is not required for most application however, joints subject to periodic water immersion must be primed. On surfaces other than concrete, a test application should be conducted to verify adhesion.

Apply primer in a thin, uniform film, avoiding build-up of excess primer. Also avoid applying primer beyond joint faces. To minimize the contamination of adjacent surfaces, apply masking tape before priming and remove before the sealant has begun to thicken and set. Allow approximately 15-30 minutes drying time for primer to become tack free before applying sealant. Priming and sealing must be done on the same work day.

Application:

Apply sealant with a steady pressure, forcing into the joint. Fill joints from the bottom; avoid bridging of the joint, which may form air bubbles. Sealant will self-level to form a clean joint surface. Protect open containers from heat and /or direct sunlight. Do not use in joints deeper than 3/8" (9.5 mm) without the use of a backer rod. The depth of the sealant should be half the width of the joint. The maximum depth is $\frac{1}{2}$ " (31 mm) and the minimum is $\frac{1}{4}$ " (6 mm). Sealant skins within 24 hours, is functional within 3 days and reaches full cure in about 1 week.

Clean-up

Clean tools and any uncured sealant residue immediately with mineral spirits in a well-ventilated area to the outdoors. Cured sealant may be carefully cut away with a sharp-edged tool.

STORAGE AND DISPOSAL

NOT DAMAGED BY FREEZING. Store in original, tightly closed container away from heat and direct sunshine. Elevated temperatures will reduce shelf life. In cool or cold weather, store container at room temperature for at least 24 hours before using. Use an approved hazardous waste facility for disposal.

PRECAUTIONS

WARNING! MAY BE HARMFUL IF INHALED. EYE, SKIN AND RESPIRATORY IRRITANT. MAY CAUSE SKIN AND RESPIRATORY SENSITIZATION.

WARNING: Contains mineral sprits and toluene diisocyanate (TDI). Individuals with lung or breathing problems or prior sensitization to isocyanates should not use this product. Avoid breathing vapors. Vapors may cause headaches, dizziness and nausea. Open windows and doors to ensure cross ventilation during application and until all odors are gone. Avoid contact with eyes and skin. Prolonged or repeated exposure may cause dermal or respiratory sensitization, effects may be permanent. Gloves recommended. **FIRST AID:** If swallowed, call a physician or Poison Control Center immediately. Do not induce vomiting. For eye contact flush with water for 15 minutes, call a physician. For skin contact, wash thoroughly with soap and water. If inhaled, move to fresh air. If symptoms persist, get immediate medical attention. **INTENTIONAL MISUSE BY DELIBERATELY INHALING CONTENTS MAY BE HARMFUL OR FATAL. DO NOT TAKE INTERNALLY. KEEP OUT OF THE REACH OF CHILDREN**

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Refer to the Material Safety Data Sheet (MSDS) for further information

DISCLAIMER

The information and recommendations contained herein are based on our research and are believed to be accurate, but no warranty, express or implied, is made or should be inferred. Purchasers should test the products to determine acceptable quality and suitability for their own intended use. Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute a permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.

TECHNICAL DATA

Typical Uncured Physical Properties		Typical Application Properties	
<u>Color:</u>	Limestone	<u>Application Temperature:</u>	Apply and cure between 40°F (4°C) and 120°F (49°C)
<u>Appearance:</u>	Thick liquid	<u>Tack-Free Time:</u>	24 hours @ 75°F (24°C) and 50% Relative Humidity (ASTM C 679)
<u>Base:</u>	Polyurethane	<u>Full Cure Time:</u>	3-7 days @ 75°F (24°C) and 50% Relative Humidity
<u>Odor:</u>	Slight		Cure time is dependent upon temperature, humidity, porosity of substrate and depth of joint.
<u>Flash Point:</u>	178.7°F (81.5°C)		
<u>Specific Gravity:</u>	0.97		
<u>VOC Content:</u>	29 g/L		
<u>Shelf Life:</u>	12 months from date of manufacture (unopened)		
<u>Lot Code Explanation:</u>	XX1AUG013		
(Lot code stamped on bottom plunger of cartridge)	XX = Process ID denoting mixers or packaging lines 1 = Sequential number of batches AUG = Month 01 = Day 3 = Year For example: August 1, 2013		

Typical Cured Performance Properties

<u>Color:</u>	Gray
<u>Cured Form:</u>	Non-flammable, rubbery solid
<u>Service Temperature:</u>	-40°F (-40°C) to 180°F (82°C)
<u>Shrinkage:</u>	None
<u>Water Resistance:</u>	Yes
<u>Paintable:</u>	Yes, once fully cured (at least 7 days).
<u>Ultimate Elongation at Break</u> (ASTM D 412)	640-740%
<u>Hardness, Shore A:</u> (ASTM C 661)	21-27
<u>Tensile Strength:</u> (ASTM D 412)	220-250 psi (1.5-1.8 MPa)
<u>Artificial Weathering:</u> Xenon Arc, 1000 hours (ASTM G 26)	Excellent
<u>Low Temperature Flexibility:</u> (ASTM C 793)	-15° F(-26° C)
<u>Specifications:</u>	<ul style="list-style-type: none">▪ ASTM C 920, Type S, Grade NS, Class 25, Use and M▪ Meets CAN/CGSB-19.13-M87 Classification C-1-40-B-N and C-1-25-B-N, No. 81028▪ Federal Specification TT-S-00230C, Type I, Class A▪ Corps of Engineers CRD-C-541