



TECHNICAL DATA SHEET

LOCTITE

**PL® S10™ POLYURETHANE
Concrete Crack Masonry Sealant**

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DESCRIPTION

Loctite® PL® S10™ Polyurethane Concrete Crack Masonry Sealant is a high quality one-component, texturized, moisture-curing gun grade sealant developed especially for forming permanent, water and weatherproof seals in all exterior gaps and joints in concrete and masonry. The textured appearance blends well with masonry substrates. PL S10 is non sagging and once cured is elastic and remains flexible to expand and contract with construction material movement. Loctite PL S10 Concrete Crack Polyurethane Masonry Sealant does not require a primer for concrete, brick, stone or masonry and resists deterioration from weather, stress or movement.

RECOMMENDED FOR:

Interior and exterior joints, horizontal and vertical joints, expansion joints, panel walls, precast units, concrete walls, foundations, brick and block walls, concrete driveways and sidewalks. Bonds to concrete, masonry, brick, stucco, aluminum, wood and many more substrates.

NOT RECOMMENDED FOR:

- Prolonged underwater applications or permanent water immersion
- Applications requiring temperature resistance greater than 200°F (93°C)
- Joint depths greater than ½" (13 mm) without the use of a backer rod
- Use with fillers impregnated with oil, asphalt, tar or any other migratory saturant
- Contact with oil-based caulking compounds, butyl caulking compounds, silicone sealants (uncured and cured), polysulfides; fillers impregnated with oil, asphalt or tar; alcohol-based materials or solvents
- Applications over freshly treated wood. Treated wood must have weathered for at least 6 months.
- Copper, stainless steel and galvanized steel typically require a primer. An adhesion test is recommended for any other questionable surface

FEATURES & BENEFITS:

Feature	Benefits
Textured appearance	Compliments rough surfaces like masonry and stucco
Flexible.....	Use on expansion joints, accepts joint movement of ± 25%
No primer required for most materials	Lowering installation costs
Easy to gun and tool	Speeding application and making neater joints
Weatherproof.....	Withstand harsh environments
Does not deteriorate.....	One-time application, resists age hardening
Paintable.....	Blends with surroundings
Low-VOC formula.....	Complies to stringent Federal & State Regulatory Requirements

Color	Item #	Package	Size
Grey	1618522	Paper Cartridge	10 fl oz (295 mL)
Grey	1618521	Paper Cartridge	10 fl oz (295 mL)
Grey	1675275	Paper Cartridge	10 fl oz (295 mL)

COVERAGE

For a 10 fl oz cartridge:

A ¼" (6 mm) diameter bead extrudes approximately 30.6 ft (9.35 m).

A 3/8" (9.5 mm) diameter bead extrudes approximately 13.6 ft. (4.1 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 one-half the width of the joint. The maximum depth is ½ inch (13 mm) and the minimum is ¼" (6 mm).

The maximum recommended joint width is 1.5 inches (38 mm). See table below.

Joint Width (inches)	Sealant Depth @ Midpoint (inches)
1/4 - 1/2	1/4
1/2 - 3/4	1/4 - 3/8
3/4 - 1	3/8 - 1/2
1 - 1.5	1/2

Joint Width (mm)	Sealant Depth @ Midpoint (mm)
6 - 13	6
13 - 19	6 - 10
19 - 25	10 - 13
25 - 38	13

In deep joints, the sealant depth must be controlled by Closed-Cell Backer-Rod or Soft Backer-Rod. Where the joint depth does not permit the use of backer-rod, a bond breaker (polyethylene strip) must be used to prevent three-sided adhesion.

To maintain the recommended sealant depth, install backer-rod by compressing and rolling it into the joint channel without stretching it lengthwise. Closed-Cell Backer-Rod should be approximately 1/8" (3 mm) larger in diameter than the width of the joint to allow for compression. Soft Backer-Rod should be approximately 25% larger in diameter than the joint width. Backer-rod becomes an integral part of the joint. The sealant does not adhere to it, and no separate bond breaker is required. Do not prime or puncture the backer-rod.

Surface Preparation:

Surfaces must be structurally sound, fully cured, dry, clean, free of dirt, moisture, loose particles, oil, grease, asphalt, tar, paint, wax, rust, waterproofing and curing or parting compounds, and membrane materials. Protect adjacent areas.

Masonry:

Concrete, stone, stucco and other masonry must be cleaned where necessary by grinding or wire brushing to expose a sound surface free of contamination and laitance. Concrete must be fully cured.

Wood and painted wood:

New and weathered wood must be clean and sound. Cut back weathered and treated surfaces and dry rot until clean, sound wood is reached. Scrape away paint to bare wood. Any coating that cannot be removed must be tested to verify adhesion of the sealant or to determine an appropriate primer. Loctite PL S10 will adhere to most new and old, dry, oil-free wood.

Metal:

Remove scale, rust, and coatings from metal to expose a bright white surface. Remove protective coatings as well as any chemical residue or film. Aluminum window frames are frequently coated with a clear lacquer that must be removed prior to the application of Loctite PL S10. Any coating that cannot be removed must be tested to verify adhesion of the sealant or to determine an appropriate primer. Remove any other protective coatings or finishes that could interfere with adhesion. Copper, stainless steel, and galvanized steel must always be primed. An adhesion test is recommended for any other questionable substrate.

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:

While Loctite PL S10 is generally considered a non-priming sealant, special circumstances or substrates (Copper, galvanized and stainless steel) may require a primer. It is the user's responsibility to check the adhesion of the cured sealant on a test joint before applying to the entire project. Where incidental water immersion may occur, priming is required.

Apply primer full strength with a brush or clean, lint-free cloth. A light, uniform coating is sufficient for most surfaces. Porous surfaces, may require more primer, but do not over apply. Allow primer to dry prior to sealant application. Depending on temperature and humidity, the primer will be tack free in 15 to 120 minutes and ready for sealant. Priming and sealing must be done on the same working day.

Application:

Henkel Loctite PL S10 comes ready to use. Apply by professional caulking gun. Do not open product container until preparatory work has been completed. Protect open containers from heat and /or direct sunlight.

Fill joints from the deepest point to the surface by holding a properly sized nozzle against the back of the joint. Do not use in joints deeper than ½" (13 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 ½" (13 mm) and the minimum is ¼" (6 mm).

Dry tooling is recommended within 5 minutes of extrusion. DO NOT use soapy water when tooling as this may cause the surface to discolor. If tooling with solvent is necessary, use clean mineral spirits. Tooling results in the correct bead shape, a neat joint, and maximum adhesion.

Clean-up

Immediately after use, clean equipment with mineral spirits or xylene. Use proper precautions when handling solvents. Remove cured sealant by cutting with a sharp-edged tool. Remove thin films by abrading.

Curing Time:

The cure of Loctite PL S10 varies with temperature and humidity. The following times assume 75° F (24° C), 50% relative humidity, and a joint ½" (13 mm) wide by ¼" (6 mm) deep.

Skins over: overnight or within 24 hours

Full cure: approximately 7 days.

STORAGE AND DISPOSAL

NOT DAMAGED BY FREEZING. Store in unopened containers in a cool, dry area 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.

LABEL PRECAUTIONS

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

WARNING: Contains mineral spirits 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>	Gray	<u>Application Temperature:</u>	Apply and cure between 40°F (4°C) and 120°F (49°C)
<u>Appearance:</u>	Non-slumping paste	<u>Tack-Free Time:</u> (ASTM C 679)	24 hours @ 75°F (24°C) and 50% relative humidity
<u>Base:</u>	One-component moisture-cure polyurethane containing fibers for a textured appearance	<u>Cure Time:</u>	Approximately 7 days @ 75°F (24°C) and 50% relative humidity
<u>Odor:</u>	Mild		Cure time is dependent upon temperature, humidity, porosity of substrate and depth of joint.
<u>Flash Point:</u> ASTM D3278	192.2°F (89°C)		
<u>Specific Gravity:</u>	1.2	<u>Rheology, Vertical Sag:</u> (ASTM C 639)	1/32" – 3/32" @ 120°F (49°C)
<u>Solids Content:</u>	Approximately 92% by weight		
<u>VOC Content:</u>	3.0 % by weight		
<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>	Grey Note: UV exposure may cause sealant to discolor but will not affect performance
<u>Cured Form:</u>	Non-flammable, rubbery solid
<u>Weight Loss, after heat aging, %</u> (ASTM C792):	< 8%
<u>Shrinkage</u>	None
<u>Cracking and Chalking</u> after heat aging	None
<u>Tack-free time, hrs</u> (ASTM C679) maximum 72 hours	Passes
<u>Service Temperature:</u>	-40°F (-40°C) to 180°F (82°C)
<u>Movement Capability:</u> (ASTM C 719)	± 25 %
<u>Ultimate Elongation at Break</u> (ASTM D412):	530 - 560%
<u>Adhesion in Peel:</u> (ASTM C 794) (Minimum 5 pli)	20 – 25 pli
<u>Water Resistance:</u>	Yes

<u>Stain and Color Change</u> (ASTM C510)	Passes (no visible stain)
<u>Artificial weathering</u> Xenon Arc, 3000 hours Atlas 6500	No elastomeric property change
<u>Paintable:</u>	Yes, once fully cured (at least 7 days).
<u>Tensile Strength:</u> (ASTM D 412)	240 – 280 psi (1.7 – 1.9 MPa)
<u>Tear Strength:</u> (ASTM D 1004)	55 – 65 pli
<u>Hardness, Shore A:</u> (ASTM C 661)	30 - 32
<u>Specifications:</u>	<ul style="list-style-type: none">▪ ASTM C 920, Type S, Grade NS, Class 25, Use NT, M, A and O▪ Federal Specification TT-S-00230C, Type II, Class A▪ Meets CAN/CGSB-19.13-M87