PL® Concrete Self-Leveling Polyurethane Sealant

DESCRIPTION

LOCTITE® PL® Concrete Self-Leveling Polyurethane Sealant is a professional grade, 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 which makes it ideally suited for applications exposed to pedestrian and vehicular traffic.

Available As:

Item #	Package	Size	Color
1618150	Paper Cartridge	10 fl. oz. (295 mL)	Concrete Gray
1618172	Paper Cartridge	28 fl. oz. (825 mL)	Concrete Gray

FEATURES & BENEFITS

- Self-levelling formula
- Flexible – Withstands joint movement
- Weatherproof – Withstands a wide range of weather conditions
- Paintable after full cure
- Low VOC formulation

RECOMMENDED FOR

LOCTITE PL Concrete Self-Leveling Polyurethane Sealant can be used for repairing driveways, garage floors, sidewalks, and concrete floors and decks.

LIMITATIONS

- Vertical surface repair (use on horizontal surfaces only)
- Prolonged underwater applications or permanent water immersion
- Use in areas of high chlorine concentration such as around swimming pools
- 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
- Applications requiring temperature resistance greater than 180°F (82°C)
- Use with fillers impregnated with oil, asphalt, tar, or any other migratory saturate.
- Contact with oil-based caulking compounds, butyl caulking compounds, silicone sealants (uncured and cured), polysulfides; alcohol-based materials or solvents
- Pressure treated lumber must be well seasoned for at least 6 months in weather exposure.
- Exterior applications when rain is expected before sealant reaches initial cure
- Aircraft runway or tarmac use
- High temperatures or humidity may cause uncured material to bubble

COVERAGE

For a 10-fl. oz. (295 ml) cartridge:	
▪ A 1/4” (6 mm) bead extrudes approximately 30.9 ft. (9.4 m)	▪ A 3/8” (9.5 mm) bead extrudes approximately 13.8 ft. (4.2 m)
For a 28-fl. oz. (825 ml) cartridge:	
▪ A 1/4” (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)

TECHNICAL DATA

Typical Uncured Physical Properties:	
Color:	Concrete Gray **
Appearance:	Thick liquid
Base:	Polyurethane Formaldehyde / Asbestos free
Flash Point:	185°F (85°C)
Density:	11.3 lb./ US gallon
VOC Content:	< 2% by weight CARB (36 g/L) SCAQMD
Shelf Life:	12 months from date of manufacture (unopened)
Lot Code Explanation:	HE**9038**R302

9 = Last Digit of Year of Manufacture
038 = Day of Manufacture based on 365 days per year
For example: 9038 = February 7, 2019

Typical Application Properties	
Application Temperature:	The adhesive should be above 40°F (4°C) and below 120°F (49°C). (For best results, apply between 60°F and 100°F)
Odor:	Mild
Skin Time:	24 hours* @ 78°F (25°C) and 50% relative humidity (Based on sealant bead ½" wide by ¼" depth)
Cure Time:	Approximately 7 days* @ 78°F (25°C) and 50% relative humidity (Based on sealant bead ½" wide by ¼" depth)
Clean Up:	Clean up uncured sealant residue with mineral spirits. Scrape away cured sealant using a sharp-edged tool.

* Time is dependent upon temperature, humidity, porosity of substrate and amount of adhesive used
** There is no industry color standard for concrete and masonry. Color is subjective. User should test for color acceptance prior to start of project.

Typical Cured Performance Properties

Color:	Concrete Gray	Low Temperature Flexibility:	Pass (-15°F)
Cured form:	Non-flammable, rubbery solid	Shrinkage:	Nil
Service Temperature:	-40°F (-40°C) to 180°F (82°C)	Movement Capability (ASTM 719):	± 25%
Water Resistance:	Yes	Shore A Hardness (ASTM D661):	25
Artificial Weathering: (ASTM G26)	No elastomeric property changes (Xenon Arc 1000 hours)	Tensile Strength (ASTM D412):	325 - 375 psi
		Elongation at Break (ASTM D412):	800%
** Paintable:	Yes, Once fully cured (7 days*)		

** Based on accepted industry standards and practices, using rigid paints and/or coatings over flexible sealants can result in a loss of adhesion of the applied paint and/or coating, due to the potential movement of the sealant.

Applicable Specifications:
- ASTM C920, Type S, Grade P, Class 25, Use T, M, NT and A
- Federal Specification TT-S-00230C, Type I, Class A

DIRECTIONS

Tools Typically Required:
Utility knife, caulking gun and tool to puncture cartridge seal.

Safety Precautions:
Wear gloves to avoid skin contact. Sealant may temporarily stain skin.

Joint Preparation:
The number of joints and the joint width should be designed for a maximum of ± 25% joint movement from the initial joint width. The depth of the sealant joint should be ½ the width of the joint. The maximum depth is ⅜ inch (10 mm) and the minimum is ¼" (6 mm). The maximum recommended joint width is 1.5 inches (38 mm).

DIRECTIONS

Recommended Joint Width to Depth Ratio

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 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) and below 90° F (32°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. Colder temperatures will slow cure time.

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:
For best performance and results 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. Substrates such as copper, stainless, galvanized steel, or architectural coatings, paints, and plastics typically require the use of a primer. LOCTITE does not provide primers however, possible primers are MasterSeal P 173 or MasterSeal P 176 available through industrial outlets only.

Apply an appropriate primer full strength with a brush or clean cloth following instructions. 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. Priming and sealing must be done on the same working 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 ½" (31 mm) and the minimum is ¼" (6 mm). Sealant skins within 24 hours, is functional within 3 days and reaches full cure in about 1 week. Avoid surface temperatures greater than 90°F (32°C) during application. High temperatures and humidity may cause sealant to bubble.

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 & DISPOSAL

NOT DAMAGED BY FREEZING. Store in unopened container in a cool, dry area away from heat and direct sunshine, under standard conditions. Standard storage conditions are defined as 72 ± 4ºF (22 ± 2ºC) and <50% relative humidity. 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! 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: Cancer and Reproductive Harm – www.P65Warnings.ca.gov.

Refer to the Safety Data Sheet (SDS) 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. Henkel recommends purchasers/users should test the products to determine acceptable quality and suitability for the intended use. All adhesive/sealant applications should be tested under simulated or actual end use conditions to ensure the adhesive/sealant meets or exceeds all required project specifications. Since assembly conditions may be critical to adhesive/sealant performance, it is also recommended that testing be performed on specimens assembled under simulated or actual production conditions. 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.

LIMITED WARRANTY

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