



## PL<sup>®</sup> Roof and Flashing Polyurethane Sealant

### DESCRIPTION

Loctite PL<sup>®</sup> Roof & Flashing Polyurethane Sealant is a premium quality, commercial-grade sealant developed specifically for roof and flashing repairs that forms permanent water and weatherproof seals in all exterior gaps and joints. This sealant is elastic and remains flexible to expand and contract with construction material movement to protect and retain the original seal. It provides properties of non-sag, permanent flexibility, and corrosion resistance. It exhibits outstanding durability and tear resistance. It usually requires no primer and resists deterioration from weather, stress, or movement. It is UV and ozone resistant and does not soften in the sun.

#### Available as:

Item #	Package	Size	Color
1618181	Paper Cartridge	10 fl. oz. (295 mL)	Black
1618148			
1675273			

### FEATURES & BENEFITS

- High UV Resistance
- Flexible and Durable
- Weatherproof
- Paintable after full cure
- Low VOC

### RECOMMENDED FOR

Loctite PL Roof and Flashing Polyurethane Sealant seals roof flashing around chimneys and roof edging. It's also suitable for shingle tabbing and for covering roofing nails. It bonds asphalt, aluminum, fiberglass, metal, brick, wood, concrete, stucco and many more substrates.

### LIMITATIONS

- Prolonged underwater applications or permanent water immersion
- Applications requiring temperature resistance greater than 180°F (82°C)
- Joint depths greater than ½" (13 mm) without the use of a backer rod
- Use with fillers impregnated with oil, asphalt, tar, alcohol-based materials, solvents, and any other migratory saturate
- Contact with oil-based caulking compounds, butyl caulking compounds, silicone sealants (uncured and cured), and polysulfides
- Pressure treated lumber must be well seasoned for at least 6 months in weather exposure
- SBS modified roofing underlayments or modified bitumen torched roofing membranes

### 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)

## TECHNICAL DATA

Typical Uncured Physical Properties		Typical Application Properties	
<u>Color:</u>	Black	<u>Application Temperature:</u>	The adhesive should be above 40°F (4°C) and below 100°F (37°C) (For best results, use when surface temperatures are between 60°F and 90°F)
<u>Appearance:</u>	Thixotropic solid	<u>Odor:</u>	Mild
<u>Base:</u>	Polyurethane Formaldehyde / Asbestos free	<u>Sag:</u>	No Sag
<u>Flash Point:</u>	Non-Flammable	<u>Skin Time:</u>	24 hours* @ 78°F (25°C) and 50% relative humidity (Based on sealant bead ½" wide by ¼" depth)
<u>Density:</u>	10.1 lb/US gallon	<u>Cure Time:</u>	Approximately 7 days* @ 78°F (25°C) and 50% relative humidity (Based on sealant bead ½" wide by ¼" depth)
<u>VOC Content:</u>	< 3% by weight (CARB) 35 g/L (SCAQMD)	<u>Clean Up:</u>	Clean up uncured sealant residue with mineral spirits. Scrape away cured sealant using a sharp-edged tool.
<u>Shelf Life:</u>	12 months from date of manufacture (unopened)		
<u>Lot Code Explanation:</u>	HE9038R302 9 = Last Digit of Year of Manufacture 038 = Day of Manufacture based on 365 days per year For example: 9038 = February 7, 2019		

\*Time is dependent upon temperature, humidity, porosity of substrate and amount of adhesive used.

Typical Cured Performance Properties			
<u>Color:</u>	Black	<u>Tear Strength</u> (ASTM D1004):	50 pli
<u>Cured form:</u>	Non-flammable, rubbery solid	<u>Weight Loss</u> (ASTM C792):	3% after heat aging
<u>Shrinkage:</u>	Nil	<u>Shore A Hardness</u> (ASTM D661):	25 – 30
<u>Water Resistance:</u>	Yes	<u>Tack-Free Time</u> (ASTM C679):	Passes (maximum 72 hours)
<u>Service Temperature:</u>	-40°F (-40°C) to 180°F (82°C)	<u>Tensile Strength</u> (ASTM D412):	350 psi
<u>Movement Capability:</u>	± 35% (ASTM C719)	<u>Elongation at Break</u> (ASTM D412):	800%
<u>Paintable:</u> **	Yes, Once fully cured (7 days*)	<u>Stain &amp; Color Change</u> (ASTM C510):	No visible change
<u>Water Immersion:</u>	Passes 10 weeks with movement cycling (ASTM C1247, 122°F (50°C))	<u>Artificial Weathering</u> (ASTM G26):	No Surface Cracking (Xenon Arc 3,000 hours)
		<u>Adhesion in Peel</u> (ASTM C794):	30 pli
<u>Specifications:</u>	<ul style="list-style-type: none"> <li>• ASTM C920, Type S, Grade NS, Class 35, Use NT, M, A, T, and I</li> <li>• Federal Specification TTS-00230C, Type II, Class A</li> <li>• Meets CAN/CGSB-19.13-M87, Classification MCG-2-25-A-N, No. 81026</li> </ul>		
**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			

## 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.

### 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. Protect open containers from heat and /or direct sunlight.

It is the user's responsibility to check the adhesion of the cured sealant on a test joint before applying to the entire project.

### 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.

### 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. If joint surfaces have absorbed oils, sufficient concrete must be removed to ensure a clean surface. Concrete must be fully cured.

### Wood and painted wood:

Cut back weathered and treated surfaces and dry rot until clean, sound wood is reached. PL S30 will adhere to most new and old dry, oil-free wood. Scrape away paint to bare wood.

### Metal:

Scale, rust, and coatings must be removed to expose bright metal. Protective coatings should be removed with a solvent as well as any chemical residue or film.

### Joint Preparation:

The number of joints and the joint width should be designed for a maximum of ± 35% 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 ½" (13 mm) and the minimum is ¼ inch (6mm). The maximum recommended joint width is 1.5 inches (38 mm).

### Recommended Joint Width to Sealant 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. 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. Cork or rigid non-impregnated cane-fiber joint fillers are suitable. Make sure 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.

For best results, 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.

### Priming:

Priming is not required for most applications however, joints subject to periodic water immersion must be primed. Substrates such as copper, stainless and galvanized steel, or Kynar coatings typically require the use of a primer. Loctite does not provide primers however, possible primers are MasterSeal P 173 or MasterSeal P 176 and are 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.

**DIRECTIONS****Application:**

Apply sealant with steady pressure, forcing bead into the joint. Fill joints from the bottom; avoid bridging of the joint, which may form air bubbles. 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). For roof tile applications, apply a bead of Loctite PL Roof and Flashing Polyurethane Sealant sufficient to make a bond between two tiles on the upper surface of the down slope tile. Install the upslope tile and press into the sealant bead to ensure good contact between the sealant and both tiles.

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. 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. Solvents have little or no effect on cured sealant.

**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 ± 4°F (22 ± 2°C) 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 are 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](http://www.P65Warnings.ca.gov).**

**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. 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.

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