PL® Concrete Non-Sag Polyurethane Sealant

DESCRIPTION

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

Available as:

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

FEATURES & BENEFITS

- Textured appearance for better blending with other masonry surfaces
- Flexible and Durable. Can accommodates joint movement up to ± 25%
- Weatherproof; can be used outdoors and in high humidity environments
- Paintable after full cure
- Polyurethane formula resists deterioration
- Non-shrinking

RECOMMENDED FOR

LOCTITE PL Concrete Non-Sag Polyurethane Sealant can be used 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.

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
- Copper, stainless steel, and galvanized steel typically require a primer. An adhesion test is recommended for any other questionable surface

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	
Color:	Limestone**	Application Temperature:	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)
Appearance:	Thixotropic solid	Odor:	Mild
Base:	Polyurethane Formaldehyde / Asbestos free	Sag:	1/16" at 120°F
Flash Point:	Non-Flammable	Skin Time:	24 hours* @ 78°F (25°C) and 50% relative humidity
Density:	9.6 lb./ US gallon		(Based on sealant bead ½" wide by ¼" depth)
VOC Content:	< 3% by weight (33 g/L) CARB SCAQMD	Cure Time:	Approximately 7 days* @ 78°F (25°C) and 50% relative humidity (Based on sealant bead ½" wide by ¼" depth)
Shelf Life:	12 months from date of manufacture (unopened)	Clean Up:	Clean up uncured sealant residue with mineral spirits. Scrape away cured sealant using a sharp-edged tool.
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		

*****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:	Limestone**	Tear Strength (ASTM D1004):	50 pli
Cured form:	Non-flammable, rubbery solid	Weight Loss (ASTM C679):	< 10% after heat aging
Shrinkage:	Nil	Shore A Hardness (ASTM D661):	25 – 30
Water Resistance:	Yes	Tack-Free Time (ASTM C679):	Passes (maximum 72 hours)
Service Temperature:	-40°F (-40°C) to 180°F (82°C)	Tensile Strength (ASTM D1004):	215 psi
Movement Capability:	± 25% (ASTM 719)	Elongation at Break (ASTM D412):	735%
Paintable: **	Yes, Once fully cured (7 days*)	Stain & Color Change (ASTM C510):	No visible change
**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		Adhesion in Peel (ASTM C792):	22 pli
		Artificial Weathering (ASTM G26):	No elastomeric property changes (Xenon Arc 1000 hours)
Applicable Specifications:	▪ ASTM C920, Type S, Grade NS, Class 25, Use T, M, and A ▪ Federal Specification TT-S-00230C, Type II, Class A		

******UV exposure may cause the sealant to discolor but will not affect performance

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 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. 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 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. 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 25°C (75°F) 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.

Priming:
Priming is not required for most applications 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 and 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 and they 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.

Application:
Apply sealant with a steady pressure, forcing bead into the joint. Fill joints from the bottom; avoid bridging of the joint, which may form air bubbles. Tool sealant as necessary to maintain proper joint design. 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.

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 ± 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! 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: 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.

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Henkel Corporation - Professional & Consumer Adhesives Headquarters - Rocky Hill, CT 06067
www.henkelna.com