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# TECHNICAL DATA SHEET

## PL® POLYURETHANE
**Concrete Crack & Masonry Sealant**

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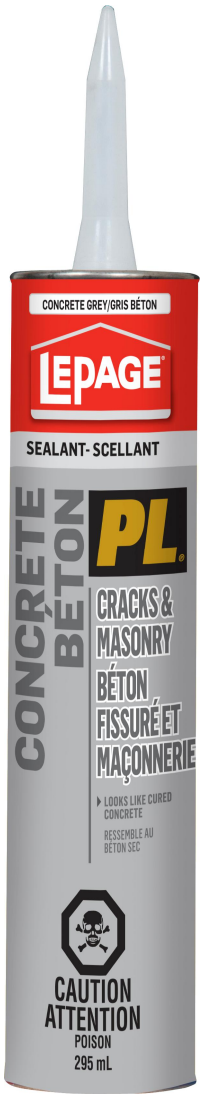


| Colour | Item # | Package | Size |
|---|---|---|---|
| Grey | 394143 | Paper Cartridge | 300 mL |

## DESCRIPTION:

LePage® PL® 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. It is non sagging and once cured is elastic and remains flexible to expand and contract with construction material movement. LePage PL Polyurethane Concrete Crack & 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 93°C (200°F)
- Joint depths greater than 13 mm (½") 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…… | Qualifies for LEED® points |

## COVERAGE

For a 300 mL cartridge:

A 6 mm (¼") diameter bead extrudes approximately 9.35 m (30.6 ft).
A 9.5 mm (3/8") diameter bead extrudes approximately 4.1 m (13.6 ft).

## 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 ± 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 13 mm (½ inch) and the minimum is 6 mm (¼").
The maximum recommended joint width is 38 mm (1.5 inches). 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 3 mm (1/8") 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. LePage PL Polyurethane Concrete Crack & Masonry Sealant 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 LePage PL Polyurethane Concrete Crack & Masonry Sealant. 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 4°C (40°F). 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.

**Priming:**
While LePage PL Polyurethane Concrete Crack & Masonry Sealant 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 LePage PL Polyurethane Concrete Crack & Masonry Sealant 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 13 mm (½") without the use of a backer rod. The depth of the sealant should be half the width of the joint. The maximum depth is 13 mm (½" ) and the minimum is 6 mm (¼").

Dry tooling is recommended within 5 minutes of extrusion. Tooling results in the correct bead shape, a neat joint, and maximum adhesion. 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.

**Curing Time:**
The cure of LePage PL Polyurethane Concrete Crack & Masonry Sealant varies with temperature and humidity. The following times assume 24°C (75°F), 50% relative humidity, and a joint 13 mm (½") wide by 6 mm (¼") deep.

Skins over: overnight or within 24 hours
Full cure: approximately 7 days.

**Clean-up**
Clean tools and uncured sealant residue immediately with mineral spirits. Cured sealant may be carefully cut away with a sharp-edged tool.

## STORAGE AND DISPOSAL

Store in original, tightly sealed container away from heat and direct sunshine. Elevated temperatures will reduce shelf life. Not damaged by freezing. 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

**CAUTION. POISON. FUMES MAY BE HARMFUL. MAY CAUSE SKIN AND RESPIRATORY SENSITIZATION.** Do not use if you have chronic lung or breathing problems or if you have ever had a reaction to isocyanates. Do not swallow. Do not breathe fumes. Use only in a well-ventilated area. Wear gloves. Wear appropriate respiratory protection for prolonged use. **KEEP OUT OF REACH OF CHILDREN. FIRST AID TREATMENT:** Contains petroleum distillates. If swallowed, call Poison Control Centre or doctor immediately. Do not induce vomiting. If breathed in, move person into fresh air.

**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:

| | |
|---|---|
| Colour: | Grey |
| Appearance: | Non-slumping paste |
| Base: | One-component moisture-cure polyurethane containing fibers for a textured appearance |
| Odor: | Mild |
| Flash Point: ASTM D 3278 | 89°C (192.2°F) |
| Specific Gravity: | 1.2 |
| % Solids: | Approximately 92% by weight |
| VOC Content: | 3.0% by weight |
| Shelf Life: | 12 months from date of manufacture (Unopened) |

### Typical Application Properties

| | |
|---|---|
| Application Temperature: | Apply and cure between 4°C (40°F) and 49°C (120°F) |
| Tack-Free Time: ASTM C 679 | 24 hours @ 24°C (75°F) and 50% relative humidity |
| Cure Time: | Approximately 7 days @ 24°C (75°F) and 50% relative humidity |
| | Cure time is dependent upon temperature, humidity, porosity of substrate and depth of joint. |
| Rheology, Vertical Sag: ASTM C 639 | 0.76 - 2.4 mm (1/32" - 3/32") @ 49°C (120°F) |

| | |
|---|---|
| Lot Code Explanation: | 3L**0028**HP11 |
| (Lot code is stamped on the bottom plunger of the cartridge) | 0 = Last Digit of Year of Manufacture<br>028 = Day of Manufacture based on 365 days per year<br><br>For example:<br>0028 = January 28, 2010 |

## Typical Cured Performance Properties

| | |
|---|---|
| Color: | Grey<br>Note: UV exposure may cause sealant to discolor but will not affect performance |
| Cured Form: | Non-flammable, rubbery solid |
| Weight Loss, after heat aging, % (ASTM C 792): | < 8% |
| Shrinkage | None |
| Cracking and Chalking after heat aging | None |
| Tack-free time, hrs (ASTM C 679) maximum 72 hours | Passes |
| Service Temperature: | -40°C (-40°F) to 82°C (180°F) |
| Movement Capability: (ASTM C 719) | ± 25 % |
| Ultimate Elongation at Break (ASTM D 412): | 530 - 560% |
| Adhesion in Peel: (ASTM C 794) Minimum 5 pli) | 3.5 – 4.4 N/mm (20 – 25 pli) |
| Water Resistance: | Yes |
| Stain and Color Change (ASTM C5 10) | Passes (no visible stain) |
| Artificial weathering Xenon Arc, 3000 hours Atlas 6500 | No elastomeric property change |
| Paintable: | Yes, once fully cured (at least 7 days). |
| Tensile Strength: (ASTM D 412) | 1.7 – 1.9 MPa (240 – 280 psi) |
| Tear Strength: (ASTM D 1004) | 9.6 – 11.4 N/mm (55 – 65 pli) |
| Hardness, Shore A: (ASTM C 661) | 30 - 32 |
| Specifications: | ▪ ASTM C 920, Type S, Grade NS, Class 25, Use NT, M, A and O<br>▪ Federal Specification TT-S-00230C, Type II, Class A<br>▪ Meets CAN/CGSB-19.13-M87<br>▪ Qualifies for LEED® points |