



# TECHNICAL DATA SHEET



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## DESCRIPTION:

PL® Premium Polyurethane Construction Adhesive is a one component, polyurethane based, moisture-curing adhesive. It is VOC compliant and contains no chlorinated solvents or water. PL® Premium provides superior adhesion to most common construction materials. It can be used for interior or exterior projects and is three times as strong as conventional solvent based construction adhesives. It is also waterproof, paintable and cures even in cold temperatures. Ideal for sub floor installations.

## RECOMMENDED FOR:

Bonds most common construction materials such as wood, treated wood, hardwood flooring, concrete, stone, marble, slate, masonry, brick, foam insulation of all sorts, carpets, metal, lead, cement-based products, ceramic, fiberglass, drywall and mirrors.

## NOT RECOMMENDED FOR:

- Plastic Tub Surrounds
- Water submersion applications
- Polystyrene, polyethylene or polypropylene.
- Certain materials such as rubbers and plastics may have bonding difficulties. Test before use.

## FEATURES & BENEFITS:

Feature	Benefits
Low VOC content.....	Meets stringent state & federal regulatory requirements
Waterproof.....	Great for interior or exterior applications
Meets and exceeds APA AFG-01 specs.....	Can be applied directly to dry, wet or frozen lumber
Low odor.....	No strong solvent odor; Great for interior use
Strong and versatile.....	Permanently bonds together almost any substrate
High strength.....	Stronger than many substrates it joins together; Up to 3 times the strength of conventional adhesives
Broad Service Temperature.....	Suitable for use in hot and cold environments

Item #	Packaging	Size
828471 (P73948125)	Paper Cartridge	10.2 fl. oz. (302 mL)
828472 (P73948145)	Paper Cartridge	28 fl. oz. (828 mL)
828470 (P73948051)	Pail	5 gallon (18.9 L)

## COVERAGE:

### For a 10.2 fl. oz. cartridge:

A ¼" (6 mm) bead extrudes approximately 32 ft (9.5 m).

A 3/8" (9.5 mm) bead extrudes approximately 14 ft. (4.26 m).

### For a 28 fl. oz. cartridge:

A ¼" (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).

### For a 5 gallon pail:

Note: These numbers are guidelines only as coverages will vary with substrate absorption and trowel size.

Using a 1/16" (1.6 mm) v-notched trowel: Approximately 153 – 198 ft<sup>2</sup> / gal | (3 to 4 m<sup>2</sup> / L).

Using a 1/8" (3.2 mm) v-notched trowel: Approximately 189 ft<sup>2</sup> / gal | (3.7 m<sup>2</sup> / L).

Using a 3/16" (5 mm) v-notched trowel: Approximately 64 ft<sup>2</sup> / gal (1.3 m<sup>2</sup> / L).

## DIRECTIONS:

### Tools Typically Required:

Utility knife, caulking gun, trowel, tool to puncture cartridge seal, plant mister bottle containing water.

### Safety Precautions:

Wear gloves. Cured adhesive on bare skin will not come off immediately with washing and will cause skin to darken. Cured adhesive and discoloration will come off in about 3 days.

### Preparation:

Use above 40°F (4°C). Surfaces must be clean, dry and free of frost, grease, dust and other contaminants. Pre-fit all materials and protect finished surfaces. If using cartridge format, cut nozzle at a 45° angle to desired bead size and puncture inner seal. Be very careful not to allow PL® Premium to cure on a finished surface.

### Application:

Apply adhesive to one surface of the material being bonded. Press the surfaces firmly together. Materials may be repositioned within 45 minutes after applying the adhesive. If bonding two non-porous surfaces (such as foam, metal and fiberglass), add water in the form of a very light or atomized spray from a plant mister bottle to the extruded adhesive. The repositioning time will then be reduced to less than 30 minutes. Use mechanical support for 24 hours while the adhesive cures.

### Clean-up:

Clean tools and uncured adhesive residue immediately with mineral spirits in a well-ventilated area to the outdoors. Remove cured adhesive by carefully scraping with a sharp-edged tool.

## STORAGE AND DISPOSAL

Not damaged by freezing. After completion of work, seal cartridge nozzle tightly with aluminum foil. Wrap the foil tightly around the nozzle and seal it with tape. Applying petroleum jelly around the opening before sealing with aluminum foil can create a more airtight seal. Product cures with exposure to moisture. Use an approved hazardous waste facility for disposal.

## LABEL PRECAUTIONS

**WARNING!** Contains hydrotreated light petroleum distillate, Methylene bisphenyl diisocyanate, talc, silicon dioxide. May cause eye irritation. May cause dermatitis and allergic responses. Repeated or prolonged contact with skin may cause sensitization. Avoid contact with skin, eyes and clothing. Inhalation of vapors may cause irritation and intoxication with headaches, dizziness and nausea. Avoid breathing of vapors. Open all doors and windows to ensure fresh air entry during application and until all odors are gone. Ingestion may cause irritation. **KEEP OUT OF REACH OF CHILDREN.**

**FIRST AID:** In case of skin contact, wash off quickly with plenty of water, then soap and water. If in eyes, flush thoroughly with plenty of water for 15 minutes, seek medical attention. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs, seek immediate medical attention.

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>	Tan	<u>Application Temperature:</u>	Apply above 40°F (4°C)
<u>Appearance:</u>	Thick paste	<u>Open Time:</u>	30 minutes
<u>Base:</u>	Polyurethane	<u>Dry Time:</u>	24 to 48 hours @ 25°C (78°F) and 50% RH Cure time is dependent upon temperature, humidity, porosity of substrate and amount of adhesive used.
<u>Viscosity:</u>	550,000 cps @ 5 rpm @ 75°F (24°C)	<u>Odor:</u>	Minimal
<u>Flash Point:</u>	250°F (121°C)	<u>Clamping Time:</u>	24 hours
<u>Specific Gravity:</u>	1.26	<u>Clean Up:</u>	Clean up uncured adhesive residue with mineral spirits. Scrape away cured adhesive using a sharp-edged tool.
<u>Weight:</u>	10.8 lbs/gal	<u>Shrinkage:</u>	None, the adhesive expands.
<u>Solids Content:</u>	90% by weight		
<u>VOC Content:</u>	45 g/L (4% by weight)		

**Typical Cured Performance Properties**

<u>Color:</u>	Tan	<u>Water Resistance:</u>	Yes
<u>Cured form:</u>	Non-flammable, rubbery solid	<u>Specifications:</u>	<ul style="list-style-type: none"> <li>▪ APA AFG-01</li> <li>▪ ASTM D 3498</li> <li>▪ ASTM C 557</li> <li>▪ FHA Bulletin UM-60</li> </ul>
<u>Service Temperature:</u>		<u>Bond Strength:</u>	See charts below
Long Term:	0°F (-18°C) to 160°F (71°C)		
Short Term:	0°F (-18°C) to 250°F (121°C)		

**American Plywood Association AFG-01 Test Results**

APA AFG-01	Shear Strength		Compliance Status
	Average (pounds)*	Minimum Requirements (pounds)*	
<b><u>Test A (Wet Lumber)</u></b>			
On Douglas Fir	785	225	Passed
On Southern Pine	593	225	
<b><u>Test B (Frozen Lumber)</u></b>			
On Douglas Fir	837	150	Passed
On Southern Pine	762	150	
<b><u>Test C (Dry Lumber)</u></b>			
On Douglas Fir	890	225	Passed
<b><u>Moisture Resistance</u></b>			
On Douglas Fir (No delamination)	911	225	Passed
<b><u>Oxidation Resistance</u></b>	Pass	100% - No sign of fracture when bent.	Passed

\* Bond area = 1.5 in<sup>2</sup>

**Additional Bond Strength Data**

<b>Substrates</b>	<b>Shear Strength (psi)</b>	
	<b>24 hours</b>	<b>7 days</b>
Plywood to Douglas Fir	541	858
Plywood to Treated Lumber	861	1000
Metal to Douglas Fir	313	313
Foam to Foam	37*	37*
OSB to OSB (wet)	354	544
Wet Douglas Fir to Metal	217	313
Frozen Douglas Fir to Frozen Douglas Fir	360	828
Plywood to F.R.P	100	222

\*Resulted in foam failure