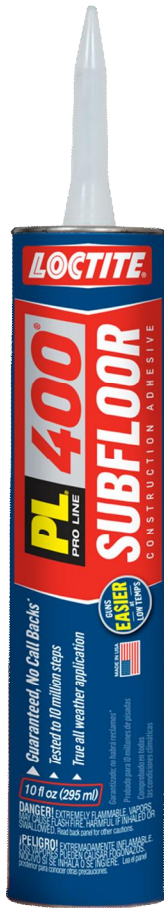




# TECHNICAL DATA SHEET



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## DESCRIPTION

Loctite® PL® 400 Subfloor Construction Adhesive provides a powerful, permanent bond and is formulated for all heavy duty interior or exterior subfloor construction. Cold weather formula for easier extrusion and excellent adhesion in all weather conditions. Bonds dry, wet, frozen and treated lumber to most building materials. Offers fast set and superior strength and development. Low VOC formulation meets stringent State and Federal VOC regulations.

## RECOMMENDED FOR:

PL® 400 can be used in most interior and exterior construction projects either on the job or the production line. It bonds all wood to wood assemblies dry, wet or frozen. Primarily designed for on-site bonding of subfloor and plywood decking to joists during cold weather. PL® 400 is suitable for use in drywall, plaster, metal, masonry, concrete, wood, brick, ceramic tile, slate, treated lumber and most other projects requiring an adhesive. Ideal for use in prefab or modular construction.

## NOT RECOMMENDED FOR:

- Polyethylene (PE), polypropylene (PP), polytetrafluoroethylene (PTFE) and acrylic
- Unlined expanded or extruded polystyrene plastic foams or tub surrounds
- Permanent water immersion
- Applications requiring temperature resistance greater than 150°F or below -20°F

## FEATURES & BENEFITS:

Feature	Benefits
True All Weather Application.....	Use in temperatures from 1.4°F to 120°F
Cold Weather Gunnable.....	No "roll-up" on frozen lumber
Meets and exceeds APA AFG-01 specs.....	Can be applied directly to dry, wet or frozen lumber
Bonds to most building materials.....	Provides a strong, durable bond to multiple surfaces
Gap filling.....	Will bridge minor gaps when bonding irregular surfaces; Reduces squeaking and splitting
High Grab.....	Reduces the use of fasteners

Item #	Package	Size
1652275	Paper Cartridge	10 fl. oz. (295 mL)
1602142	Paper Cartridge	28 fl. oz. (828 mL)

## COVERAGE

For a 10 fl. oz. cartridge:

- A ¼" (6 mm) bead extrudes approximately 30.6 ft (9.3 m).
- A 3/8" (9.5 mm) bead extrudes approximately 13.6 ft. (4.1 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).

## DIRECTIONS

### **Tools Typically Required:**

Utility knife, caulking gun

### **Safety Precautions:**

Interior applications require ventilation to the outside during application and cure. Wear gloves. Wash hands after use.

### **Preparation:**

The temperature of the adhesive, the surfaces and the working area must be between 1.4°F (-17°C) and 120°F (49°C). For smooth, fast, easy application during cold weather, store adhesive at room temperature (70° ± 5°F) 24 hours prior to use. Ensure surfaces to be bonded are clean, dry, structurally sound and free of dust, grease, oil or other contaminants. To increase adhesion, sand glossy surfaces to a dull finish. Pre-fit all materials prior to applying product. Cut off tip of cartridge at 45° angle to desired bead size. For exterior applications, the recommended bead size is 3/8" (9.5 mm). Puncture seal inside of nozzle.

### **Application:**

Using a caulking gun, apply adhesive in a continuous bead to joists, studs or back side of siding or panels, whichever is appropriate. Ensure that all outer edges and centers are adequately supplied with adhesive to ensure a complete and total bond. Use nails sparingly for support and as an aid to alignment during installation. Do not smear beads. Repositioning time is approximately 15 minutes. If work is delayed, remove excess adhesive and begin again. After use, wipe off nozzle tip and recap immediately. Allow 48 hours for curing at room temperature and before additional coverings are placed over adhered surfaces.

### **Subfloor and Decking:**

Apply continuous beads (1/4" to 3/8") of adhesive to all floor joists. For tongue and groove panels, apply 1/4" beads to groove avoiding excess "squeeze out". Position panels allowing 1/8" gap for expansion at butt joints and nail within 10 minutes after adhesive application. Use proper nailing method as designated by APA Adhesive Nail-On Schedule.

### **Clean-up:**

Clean tools and uncured adhesive residue immediately with mineral spirits or paint thinner in a well-ventilated area to the outdoors. Cured adhesive may be carefully cut away with a sharp-edged tool.

## STORAGE AND DISPOSAL

Not damaged by freezing. For best results, store at 70° ± 5°F in a cool, dry place. Store away from heat, flame and sparks. Take unwanted product to an approved household hazardous waste transfer facility. Hardened material may be disposed of with trash.

## LABEL PRECAUTIONS

**DANGER! EXTREMELY FLAMMABLE. VAPORS MAY CAUSE FLASH FIRE. HARMFUL IF INHALED OR SWALLOWED.**

**DANGER!** Contains acetone and methyl acetate. **EXTREMELY FLAMMABLE.** Vapors may ignite explosively. Do not use or store near heat, sparks or open flame. Do not smoke when using this product. Extinguish all flames and pilot lights and turn off all sources of ignition, including stoves, heaters and electric motors during use and until all vapors are gone. Prevent build-up of vapors by opening all windows and doors to achieve cross ventilation. Use in a well ventilated area. Avoid breathing vapors. Avoid contact with eyes and skin. Prolonged or repeated exposure may affect the nervous system causing dizziness, headache or nausea. If you experience eye watering, headache or dizziness, leave the area to obtain fresh air. Do not take internally. **FIRST AID:** If swallowed do not induce vomiting, call a physician or Poison Control center immediately. For eye contact flush with water for 15 minutes, call a physician. For skin contact, wash thoroughly with soap and water. If overcome by vapors, get fresh air. **KEEP OUT OF THE REACH OF CHILDREN.**

**WARNING:** This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

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> Light Tan	<u>Application Temperature:</u> Apply and cure between 1.4°F (-17°C) and 120°F (49°C)
<u>Appearance:</u> Thick paste	<u>Odor:</u> Sweet, aromatic
<u>Base:</u> Synthetic rubber and resins Formaldehyde free	<u>Repositioning Time:</u> 15 minutes
<u>Specific Gravity:</u> 1.44	<u>Full Cure Time:</u> 2 to 7 days Note: Cure time depends upon temperature, humidity, porosity of substrate and amount of adhesive used.
<u>Viscosity:</u> 210,000 cps	
<u>pH:</u> 7	
<u>Flash Point:</u> 1.4°F (-17°C)	
<u>VOC Content:</u> 0.3% by weight (5.2 g/L)	
<u>Shelf Life:</u> 18 months from date of manufacture (unopened)	
<u>Lot Code Explanation:</u> YYDDD YY = Last two digits of year of manufacture DDD = Day of manufacture based on 365 days in a year	
(Lot code is stamped on bottom plunger of cartridge)	For example: 13061 = 61 <sup>st</sup> day of 2013 = March 2, 2013

### Typical Cured Performance Properties

<u>Color:</u>	Light Tan
<u>Cured Form:</u>	Non-flammable solid
<u>Service Temperature:</u>	-20°F (-29°C) to 150°F (66°C)
<u>Water Resistance:</u>	Yes
<u>Shear Strength (ASTM D 3498):</u>	
Wet Lumber:	295 psi (2.03 N/mm <sup>2</sup> ) (Requirement = 150 psi (1.03 N/mm <sup>2</sup> ))
Frozen Lumber:	165 psi (1.14 N/mm <sup>2</sup> ) (Requirement = 100 psi (0.69 N/mm <sup>2</sup> ))
Dry Lumber:	246 psi (1.70 N/mm <sup>2</sup> ) (Requirement = 150 psi (1.03 N/mm <sup>2</sup> ))
Gap Filling:	248 psi (1.71 N/mm <sup>2</sup> ) (Requirement = 100 psi (0.69 N/mm <sup>2</sup> ))
<u>Specifications:</u>	Meets and exceeds the following specifications: <ul style="list-style-type: none"> <li>▪ American Plywood Association (APA) AFG-01</li> <li>▪ ASTM D 3498-93</li> <li>▪ HUD UM 60A</li> </ul>