

LP SOLIDGUARD LSL ZINC BORATE TREATED LSL U.S. TECHNICAL GUIDE

1.35E LSL



LP® SolidGuard® LSL

Extra Protection, Through and Through

LP SolidGuard LSL is a zinc borate treated product that protects against termites and fungal decay. The manufacturing process for LP SolidGuard LSL blends zinc borate throughout the product, eliminating the need for field treatment.

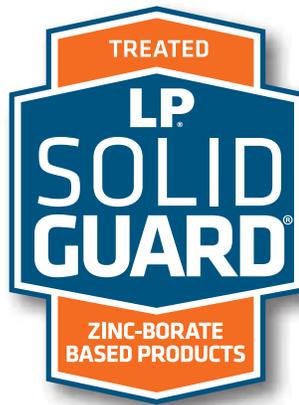
LP SolidGuard LSL is manufactured to be straight, more uniform in strength, stiffness, and size than traditional lumber. Long lengths make it easy for continuous framing along long walls.

Warranty

- 25-Year Limited Warranty against fungal decay and termites. See warranty for full terms and conditions, available at lpcorp.com

Responsible, Sustainable

- LP uses forest management and procurement systems certified to the SFI Standard, which helps ensure wood comes from well managed forests.



Advantages of LP SolidGuard LSL

- Treated throughout—no need to field treat after cutting or drilling
- Manufactured straight and stays straight
- Fast installation and minimal waste
- Helps reduce labor and material costs, as well as the risk of callbacks
- Available in long lengths
- Available in common traditional lumber sizes
- Free of knots and other naturally occurring defects
- Edges and ends are sealed for additional moisture protection
- LSL helps mitigate shrinkage in multiple story buildings



SolidGuard®

ENGINEERED WOOD PRODUCTS

When treated with zinc borate, LP SolidStart® LSL is designated LP SolidGuard LSL

PLATE BEARING STRESS	
Plate Material	Bearing Stress, $F_{c\perp}$ (psi)
LP SolidGuard LSL	685 ¹
Douglas fir-Larch	625
So. Pine (No. 2 & No. 3 and Stud)	565
Spruce-Pine-Fir	425
Hem-Fir	405

Notes:

1. The NDS bearing area factor, C_b , is permitted to be applied to the reference compression perpendicular-to-grain design value.



FASTENER DESIGN					
Equivalent Specific Gravity					
Nails and Wood Screws			Bolts and Lag Screws		
Withdrawal		Dowel Bearing		Dowel Bearing (into the face only)	
Edge	Face	Edge	Face	Load Applied Parallel to Grain	Load Applied Perpendicular to Grain
0.46	0.50	0.50	0.55	0.50	0.58

Notes:

1. The equivalent specific gravity for each connection type listed above is for standard load duration and shall be adjusted according to code.
2. Fastener spacing, end and edge distance shall be as specified by code except for nail spacing as specified below.
3. Shear wall design shall be based on the specific gravity of the wall studs, not to exceed 0.50.

SPACING REQUIREMENTS (1-1/2" LSL AND THICKER)				
Fastener Orientation	Nail Size (common or box)	Minimum End Distance	Minimum Nail Spacing	
			Single Row	Multiple Row
Edge ⁶	8d & smaller	2"	3"	3"
	10d & 12d	2"	3"	4"
	16d ⁵	2-1/2"	4"	6"
Face	8d & smaller	7/8"	1"	
	10d & 12d	7/8"	1"	
	16d ⁵	7/8"	1-1/2"	

Notes:

1. Edge distance must be sufficient to prevent splitting.
2. For multiple rows of nails, the rows must be offset 1/2" or more from each other, and staggered.
3. Edge orientation refers to nails driven into the narrow edge of the LSL, parallel to the face of the strands. Face orientation refers to nails driven into the wide face of the LSL, perpendicular to the face of the strands.
4. 16d sinkers (3-1/4" x 0.148"Ø) can be spaced the same as the 10d & 12d nails.
5. Shear wall boundary nailing into the edge of the sill plate shall not be less than 3" oc.

	SolidGuard	1.35E LSL Mill 1092		PR-L280 ICCES ESR-2403 CMCC 13319-R ZB Treated AWA UC2	MADE IN USA
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Actual LP SolidGuard LSL stamp represented. Look for the stamp and gray end and edge seal on your product.



Start straight and finish straight.

Surpasses traditional framing lumber in length, strength and consistency.

LP® SolidStart® LSL is ideal for wall framing because its uniform density and low manufactured moisture content help it start straight and stay straight. As a result, you can count on predictable performance from one piece to the next. LP SolidStart LSL installs just like traditional lumber, so there are no special tools to buy. Due to LP LSL's strength, stiffness, and consistency you can design tall walls that enhance the quality of the homes you build.

The uniformity and consistency of LP SolidStart LSL helps you build flat kitchen cabinet walls and minimize cracks in drywall around doorframes, which can reduce shimming, scribing and callbacks. LP SolidStart LSL is made from wood—a renewable natural resource—and low-emitting, safe resins. LP uses SFI® certified forest management and fiber sourcing systems to help ensure that its wood comes from well-managed forests.

Get it straight with LP SolidStart LSL studs.

LP SolidStart LSL studs are available in:

- 1.35E and 1.55E grades for tall walls
- 1.5" thick and depths to match traditional 2x lumber sizes
- Standard precut lengths up to 10'
- Long lengths available for tall walls



Ideal for walls that support kitchen cabinets, chair rails, counter tops, and ceramic-tiled showers, as well as around door and window framing.

Advantages to using LP SolidStart LSL in Wall Framing:

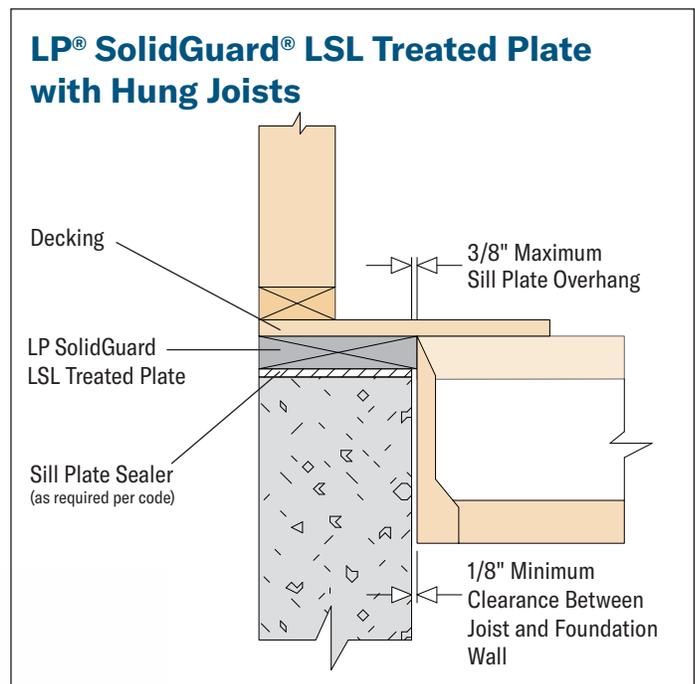
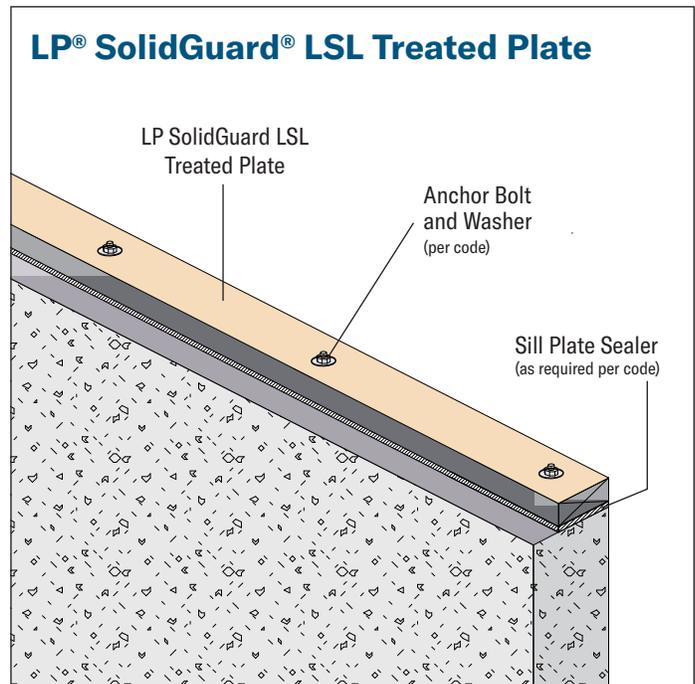
- Straighter than traditional lumber
- Longer lengths allows for taller walls
- Manufactured to a more consistent moisture content, which helps keep it from twisting, warping and shrinking
 - Windows and doors function properly
 - Tile and drywall are less likely to crack
 - Cabinets and countertops are easier to install
 - Less prone to nail pops
- Straighter walls mean less need to scribe or shim cabinetry
- Edges and ends are sealed for additional moisture protection
- Zinc borate treated LP® SolidGuard™ LSL now available for sill plates
- All of these advantages add up to fewer callbacks!

LP SOLIDSTART®
LIFETIME
LIMITED WARRANTY

See complete warranty details at
LPCorp.com or call 1-888-820-0325.

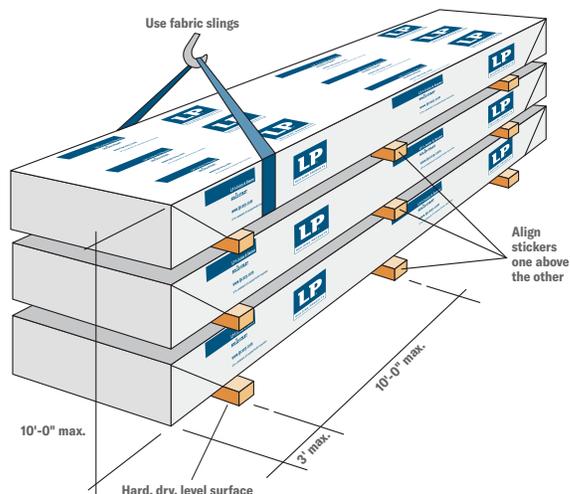
GENERAL CONDITIONS

- LP SolidGuard LSL is treated with zinc borate for fungal decay and termite resistance to a retention level equivalent to that specified in American Wood Protection Association (AWPA) Standard T1-13 for Use Category 2.
- LP SolidGuard LSL framing materials are intended for use in aboveground, protected applications such as sill plates, columns, rim board and studs. The American Wood Protection Association (AWPA) standards classify such applications as Use Category 2.
- LP SolidGuard LSL is not intended for ground contact, nor can it be substituted for treated studs in a permanent wood foundation.
- Zinc borate is an EPA-registered biocide. Borate is a naturally occurring mineral that is odorless and colorless in wood. LP SolidGuard LSL requires no special handling or disposal.
- Zinc borate does not increase corrosion of nails, screws, bolts or other fasteners.
- The treatment process does not reduce design stresses for LP SolidGuard LSL. For complete design and installation details refer to the LP SolidStart® LSL Wall Framing Technical Guide.



HANDLING & STORAGE GUIDELINES

- **WARNING:** Failure to follow proper procedures for handling, storage and installation could result in unsatisfactory performance, unsafe structures and possible collapse.
- Keep LP® SolidStart® Engineered Wood Products dry. These products are intended to resist the effects of moisture on structural performance from normal construction delays but are not intended for permanent exposure to the weather.
- Unload products carefully, by lifting. Support the bundles to reduce excessive bowing. Individual products should be handled in a manner which prevents physical damage during measuring, cutting, erection, etc. I-Joists shall be handled vertically and not flatwise.
- Keep products stored in wrapped and strapped bundles, stacked no more than 10' high. Support and separate bundles with 2 x 4 (or larger) stickers spaced no more than 10' apart. Keep stickers in line vertically.
- Product must not be stored in contact with the ground, or have prolonged exposure to the weather.
- Use forklifts and cranes carefully to avoid damaging product.
- Do not use a visually damaged product. Call your local LP SolidStart Engineered Wood Products distributor for assistance when damaged products are encountered.
- For satisfactory performance, LP SolidStart I-Joists, LSL and LVL must be used under dry, covered and well-ventilated interior conditions in which the equilibrated moisture content does not exceed a yearly average of 15% and does not exceed 19% at any time.
- For built-up members, LP SolidStart I-Joists, LSL and LVL shall be dry before nailing or bolting to avoid trapping moisture.
- LP SolidStart I-Joists, LSL and LVL shall not be used for unintended purposes such as ramps and planks.



LP SolidGuard LSL 1730F₁-1.35E

Standard thicknesses of 1-1/2"
(also available in 1-1/4")

Standard Depths of 3-1/2" and 5-1/2"
(other depths are available)

Standard Length of 16'
(other lengths are available)

Contact your local distributor for availability.

CODE EVALUATION

Code evaluation reports can be obtained at www.lpcorp.com

ICC ESR 2403

APA PR-L280

Florida FL15228

LP City RR-25783

For more information on the full line of LP SolidStart Engineered Wood Products or the nearest distributor, visit our web site at LPCorp.com.

Phone: 1-888-820-0325

E-mail: customer.support@LPCorp.com.

LP SolidStart Engineered Wood Products are manufactured at different locations in the United States and Canada.

Please verify availability with the LP SolidStart Engineered Wood Products distributor in your area before specifying these products.



For product catalog & complete warranty details, visit LPCorp.com

⚠ CAL. PROP 65 WARNING: Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to www.P65Warnings.ca.gov/wood.

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