

R19 Tstud™

Structural Insulated Framing System
STRONGER, SMARTER, AND COST EFFECTIVE

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The R19 Tstud™ is an engineered building product that uses two lumber members, an internal truss system, and a frothed-in-place closed-cell foam. The R19 Tstud™ raises the bar on five major construction concerns: thermal breaks, structural strength, wind loads, sound transmission and fire/life safety.



2x6

5.5" R19 Tstud™
Certified to crush #2 SPF
Bottom plate at 3600#

Certified to crush LSL or LVL
Bottom plate at 5600#

Lengths Available:
92 5/8", 8', 104 5/8", 9', 10', 12', 14**
and 16** (*special order only)

R19

VS.

R6.8

STANDARD 2X6

5.5" R19 Tstud w/ R21 Fiberglass Batt

| Thermal Break (in) | US Imperial Effective R-Value (h*ft²F/Btu) | US Imperial U-Factor (h*ft²F/Btu) | Canadian Metric U-Factor |
|--------------------|--------------------------------------------|-----------------------------------|--------------------------|
| 2.5 | 23.4 | 0.043 | 0.24 |

98% COMPLETE THERMAL BREAK THROUGH THE WALL ASSEMBLY

with R19 top and bottom plates.

| Wall Assembly Layer or Component | R Value |
|----------------------------------|---------|
| Exterior Air Film | 0.17 |
| Wood Siding | 0.81 |
| OSB Sheathing | 0.55 |
| R19 Tstud | 19 |
| Insulation | Varies |
| 1/2" Gypsum Drywall | 0.45 |
| Interior Air Film | 0.68 |

Table 3. Allowable Compressive Load for Walls Framed with SPF No. 2 Tstud™

| Stud Height (ft) | Allowable Compressive Load ¹ (lbs) | | | |
|------------------|-----------------------------------------------|------------------------------------------------|------------------|------------------|
| | Top/Bottom Plate ² | | | |
| | Tstud™ (SPF) (SG = 0.42) ³ | Southern Pine (SP) (SG = 0.55) ⁴ | LVL ⁵ | LSL ⁶ |
| 8 | 3665 | 4875 | 7070 | 6900 |
| 9 | 3665 | 4875 | 7035 | 6900 |
| 10 | 3665 | 4875 | 6565 | 6565 |
| 11 | 3665 | 4875 | 6045 | 6045 |
| 12 | 3665 | 4875 | 5505 | 5505 |
| 13 | 3665 | 4875 | 4975 | 4975 |
| 14 | 3665 | 4475 | 4475 | 4475 |
| 15 | 3665 | 4025 | 4025 | 4025 |
| 16 | 3625 | 3625 | 3625 | 3625 |

SI: 1 in = 25.4 mm, 1 lb = 4.45 N

1. Maximum stud spacing of 24".
2. Compression perpendicular to grain is assumed to be 425 psi for Tstud™ and SPF, 565 psi for SP, 820 for LVL, and 800 for LSL (adjusted per *NDS* Section 3.10.4). Adjustment for plates having a higher or lower compression perpendicular to grain value is required.
3. Compression perpendicular to grain of the Tstud™ or SPF top and bottom plates controls for walls less than or equal to 15 ft. in height.
4. Compression perpendicular to grain of the SP top and bottom plates controls for walls less than or equal to 13 ft. in height.
5. Compression perpendicular to grain of the LVL top and bottom plates controls for walls less than or equal to 8 ft. in height.
6. Compression perpendicular to grain of the LSL top and bottom plates controls for walls less than or equal to 9 ft. in height.