

Dimensional Lumber Data Sheet

Premium Recycled Plastic Lumber is manufactured from purified blends of post-consumer, pre-consumer and/or virgin HDPE (high-density polyethylene) base resins.

Additional proprietary additives are compounded into each product as the customer specifies for their unique application. Antioxidant processing aids, UV-inhibited pigments, foaming agents and other compounds are introduced pending the end use and customer needs.

FEATURES

- Manufactured to exacting specifications.
- Essentially maintenance free due to exceptional resistance to moisture, fading, insects, splintering, warping and other common outcomes from environmental stress that one observes with common wood or wood fiber composite products.
- Requires no waterproofing, staining or other common reoccurring maintenance other than the occasional washing with soap and water to remove dirt and debris if desired.
- UV-resistant pigments create a very color stable material that can withstand prolonged sun and weather exposure.

Material may fade slightly over the entire service life of the product, but nothing compared to the typical weathered fading of wood and wood composite products.

TAILORED OPTIONS

Tangent currently makes over three hundred custom shapes in-house and we can customize a unique shape to meet your requirements.

The popular wood tones are all available as standard colors such as: Cedar, Weathered Wood, Sand, Tudor Brown, Gray, Light Gray, Cherrywood, Light Oak, Sand, Bright White and Black. Custom colors can be made available and may require the use of virgin HDPE to meet color specification of bright colors.

- Wood Grain - Multi-tone extrusions with wood-like cross sectional grains. Generates highlights between dark and light tones throughout the board. A varied but consistent look that creates depth in tone similar to wood finishes.
- A Multitude of Finishes - Many different embossed surfaces available for wood-like textures to finish the look and feel.
- Fabrication - Full CNC and traditional fabrication tools to customize the finish parts you need.

Property	ASTM Method	Units	Value
Specific Gravity	D611-13	lbs/in ³	0.0216-0.0275*
Water Absorption	D570-98	%	<1
Stress @ 3% Strain** Flexural Property	D6109-05	psi	1,414
Secant Modulus @ 1% Strain** Flexural Property	D6109-055	psi	77,067
Coefficient of Thermal Expansion	D6341-98	in/in/°F	0.000064
Screw Withdrawal	D6117-05	lbf	583

TYPICAL APPLICATIONS

Extremely well-suited for exterior applications where resistance to weathering and minimal maintenance is required but the high value appearance must be maintained such as color stability and surface finish over the useful service life.

Used in a multitude of commercial fabricated applications, our dimensional lumber is well suited for site amenities, casual furniture, playground equipment, agriculture, spa & pool, golf course and marine.

*Lower density may occur in larger cross sections

**Testing performed on samples of 2" x 3" nominal size

SUITABILITY & LIMITATIONS

These products have greater impact resistance than wood but conversely less rigidity and therefore prior to use a thorough design engineering study must be performed to determine the suitability of dimensional lumber in any critical application.

Fabrication is similar to wood and normal woodworking tools can be used. One should be advised that by transforming the product by drilling holes and routing edges, the integrity and strength of the part can be altered. Protective eye wear, dust masks, gloves and normal safety precautions must be used when handling and fabricating the product. (See MSDS sheet for more details.)

You will observe a greater coefficient of thermal expansion in dimensional lumber products than stiffer wood products. Therefore when designing your application an accommodation must be made to properly allow for expected expansion and contraction over the length of the product.

Static electricity is a naturally occurring phenomenon to all resin-based products. On dry days there is potential to experience a static shock if you walk across Dimensional Lumber and touch a conducting surface such as a metal fixture. The physics is similar to walking across a carpet and receiving a shock when you touch a door handle. We do not warranty against static electricity as it is naturally occurring and is not a manufacturing defect. Contact our technical sales reps to learn how to minimize the generation of static electricity through product selection, available additives and construction details.

During winter conditions, you might find any surface made from dimensional lumber to be slippery in snow, wet and frost conditions. Unlike most other surfaces you can easily spread rock salt or calcium chloride to restore decent traction and melt the frost or ice layer with no harmful effect to the dimensional lumber product.

WARRANTY

Tangent offers a limited warranty that this product will not rot, splinter, decay or suffer structural damage directly from termites or fungal decay under normal use. Tangent does not recommend or approve this product for all end use applications. The appropriate national and local code authorities should be consulted for safety, suitability and applicability for intended use prior to purchasing product. (See Full Warranty for details)

This guideline and summary is intended to provide the distributor, installer and end user with basic guidelines and technical specifications for designing and properly installing the dimensional lumber products. However, the installer and/or purchaser of any dimensional lumber product is solely responsible for interpreting specific job conditions, and determining the engineering design and suitability of end use and application of any dimensional lumber product.

Adherence to applicable building and safety codes for specific locations and applications of this product are the sole responsibility of the installer and/or purchaser. In no event shall Tangent the manufacturer of the dimensional lumber products be liable for labor, installation, re-installation or for any indirect, punitive, exemplary or consequential damages of any kind whatsoever from the provisions of this information.

This revision 1.9 [7/28/23] supersedes all other dimensional lumber technical data sheets.

