

PolyTuf™ 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.
- Very color stable due to UV pigment systems which resist breakdown from prolonged sun and weather exposure.

It is possible that the material may fade very slightly over the entire service life of the product. However, most wood and wood composite products will fade quickly to a weathered gray look due to the wood fiber content inherent in the products.

| Property | ASTM Method | Units | Value |
|--|-------------|---------------------|----------------|
| Specific Gravity | D6111-13 | lbs/in ³ | 0.0216-0.0275* |
| Water Absorption | D570-98 | % | < 1 |
| Stress @ 3% Strain** <i>Flexural Property</i> | D6109-05 | psi | 1,414 |
| Secant Modulus @ 1% Strain** <i>Flexural Property</i> | D6109-05 | psi | 77,067 |
| Coefficient of Thermal Expansion | D6341-98 | in/in/°f | 0.000064 |
| Screw Withdrawal | D6117-05 | lbf | 583 |

* Lower density may occur in larger cross sections

** Testing performed on samples of 2" x 6" nominal size

TAILORED OPTIONS

Tangent Technologies LLC has over one hundred custom shapes in house to meet your requirements or we can customize a unique shape to meet your needs.

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

A multitude of finishes are available.

- **Uniform Finish** – Deep rich color.
- **Exotic Collection** – Multi tone and color surface finish with interior core with embedded rings of color – Patent Pending
- **Tiger Striping** – Generates highlights between the dark and lights in a single base color. A varied but consistent look that creates depth in tone similar to wood finishes.
- **Wood Grain** – Visually non-repeating deep wood grain embossed pattern can be applied to most shapes.

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, **PolyTuf™** is well suited for site amenities, casual furniture, playground, agricultural, spa & pool, golf course, marine, to name just a few applications.

SUITABILITY AND 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 **PolyTuf™** 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. Eye protective wear, dusk masks, gloves and normal safety precautions must be used when handling and fabricating the product. (See MSDS sheet for more details)

Inherent in **PolyTuf™** Products you will observe a greater coefficient of thermal expansion 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 extremely dry days there is the potential to experience a small static shock if you walk across a **PolyTuf™** product and touch a conducting surface such as a metal fixture. This is comparable to walking across your carpet and receiving a static shock when you touch the door handle. We do not warranty against static electricity as it is a natural occurring phenomenon and is not a manufacturing defect.

During winter conditions, you might find any surface made from **PolyTuf™** 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 **PolyTuf™** products.

WARRANTY

Tangent Technologies LLC the manufacturer of the **PolyTuf™** product 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 Technologies LLC 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 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 **PolyTuf™** products. However, the installer and/or purchaser of any **PolyTuf™** product is solely responsible for interpreting specific job conditions, and determining the engineering design and suitability of end use and application of any **PolyTuf™** 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 Technologies LLC the manufacturer of the **PolyTuf™** products be liable for labor, installation, reinstallation or for any indirect, punitive, exemplary or consequential damages of any kind whatsoever from the provisions of this information.

This revision 1.6 [12/21/15] supersedes all other PolyTuf™ technical data sheets.

TANGENT

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