



Installation Instructions

You can use the same tools used for wood lumber to fabricate and install TRIMAX Structural Plastic Lumber. Carbide-tipped blades and bits are recommended.

The profile sizes are very similar to wood lumber sizes. These sizes have not been changed so that similar fastening devices can be used. Standard Joist Hangers, Hurricane clips can be used with TRIMAX.

When using a self-tapping screw, TRIMAX does not have to be predrilled. However, predrilling TRIMAX allows the screw head to sink into the board without the plastic "mushrooming." If TRIMAX is not predrilled, a plastic "mushroom" forms around the screw head. This can be pounded with a hammer to hide the screw head and is often utilized as a method to hide the fasteners. When using rough-bolts or lag bolts, predrilling is required.

Screws and bolts are recommended for installation whenever possible. RENEW Plastics recommends the use of all stainless steel fasteners due to the projected life of the TRIMAX product.

TRIMAX Lumber is based on a tension member although deflection almost always controls. The outside membranes of the boards are in constant tension or compression and that provides the strength. It is recommended that you do not rip a board down the center, i.e. cut a 2x8 into (2) 2x4's or notch the profiles. If the boards are ripped, they may immediately curl.

Expansion and contraction of TRIMAX is minimal, but must still be considered. Variations in outdoor temperature cause thermal expansion and contraction in plastic lumber. Unlike wood which will initially contract in both the length and the width, plastic lumber expands and contracts primarily along its length. These length changes are a function of board temperature changes, initial board length, and coefficient of thermal expansion.

Example of Expansion/Contraction Calculation:

Assume Initial Temperature at Installation = 70°F
Extreme Temperature expected = 110°F
Temperature change = 110 - 70 = +40°F
Initial Board Length = 8 Ft (96 Inches)

The calculation for change in length for TRIMAX Structural Plastic Lumber over a 40° F temperature change would be:

$$0.000021 \text{ in/in/}^\circ\text{F} * 96 \text{ inches} * 40^\circ\text{F} = 0.08 \text{ inches (approx } 5/64'' \text{ total)}$$

TRIMAX Piles can be driven into the ground with conventional pile driving equipment. Waterjets, pile drivers and other conventional pile driving machinery have been successfully utilized to drive plastic piles.

As with all building products, proper precautions should be taken to ensure safety of workers. Hard Hats, Safety Glasses and other OSHA recommended items should be used to ensure safety of the builders.

Timber design tables and additional information for TRIMAX Structural Plastic Lumber are available for download at <http://www.renewplastics.com/TRIMAX-Structural-Composite>.