



A Division of Transportation Equipment Inc.



# Plastic Lumber Specification

10/30/09

## UV Stability:

To obtain color, UV stability, and other desirable properties various additives are incorporated into the plastic. Our black pigment is specified to have a particle size in the range of 19-21 millimicrons to give optimum UV absorption.

## Expansion/Contraction:

The rate of change of length with temperature change is 0.0015@/ft./oF. Allowance should be made for these changes when installing to avoid bowing.

## Softening Temperature:

The usual test for softening is the temperature at which the plastic deflects under a fixed load. For polyethylene and similar plastic, the load is specified as 66 PSI. Under these conditions, allowing for the fact that our parts are made from a blend of plastics and they have an internal structure, the softening point would be 165oF.

## Ignition:

The ignition temperature is approximately 750oF and the surface flame spread is Class 3 when tested by the British Standard.

## Composition:

The vast majority (over 90%) of the recycled plastic used in manufacturing end products is low end, contaminated, post consumer (up to 25%), and/or post industrial waste. The industrial waste typically contains two or three different plastic materials, which are so intermingled and/or co-extruded that separation is impossible. The plastics generally are polyolefines contaminated with other plastics, e.g. polyester, nylon, polystyrene, etc. Contamination can be different grades of the same plastic, i.e. extrusion and injection molding grades.

The following are ASTM Standards as set forth by the Plastic Lumber Trade Association. Our plastic lumber specifications meet or exceed these standards.

TEST METHOD	MECHANICAL PROPERTIES	TYPICAL VALUES
ASTMD143	Hardness	1,436 lbs.
ASTMD143	Ultimate Shear Strength	1,116 PSI
ASTMD198	Ultimate Compressive Strength	3,755 PSI
ASTMD198	Ultimate Tensile Strength	1,453 PSI
ASTMD790	Modulus of Elasticity	140,000 PSI
ASTMD790	Modulus of Rupture	2,100 PSI
ASTMD792	Specific Gravity	.86
ASTMD1037	Water Absorption (sanded surface)	.045%
ASTMD1037	Water Absorption (un-sanded surface)	.026%
ASTMD1761	Nail Withdrawal	130 lbs.
ASTMD1761	Screw Withdrawal	355 lbs.