

ECO-TECH, INC.

EXPANSION/CONTRACTION CHARACTERISTICS

Our product primarily includes polyethylene's, although we have designed specific mixes to provide specific board qualities which our customers require.

There is no moisture retention or exulsion.

Over a one year period, ECO-LUMBER has shown the following characteristics:

- ** More durable than wood in all weather conditions.
- ** Will not crack or splinter like wood.
- ** Nail pops and resulting damage is eliminated due to the inherent nature of plastic. Plastic has memory and will resume its original shape.
- ** After initial curing process at our plant, shrinkage is virtually eliminated.
- ** Resists chemical and organic contamination.
- ** Does not mold, mildew, rot or harbor germs and infestations like wood.
- ** Maintenance free.
- ** Can accept machine nails or screws.
- ** Can be drilled and bolted.
- ** Can be cut like wood, although we suggest carbide tip saw blades be used.

<u>Mechanical Properties</u>	<u>Test Method</u>	<u>Typical Value</u>
Accel. Weathering > 1MM langley	(ASTM E838)	1.0 Color
Compressive Strength	(ASTM D695), psi @ .2in.def.	2600 - 2650
	psi @ .4in.def.	3190 - 3220
	psi @ .6in.def.	5350 - 5580
Coeff. Thermal Expansion in/in/F.	(ASTM D696)	0.00001
Density, lbs/cu.in.	(ASTM D792)	.020 - .026
Flexural Modulus, psi	(ASTM D790)	98700 - 108500
Shear Strength, psi	(ASTM D732-90)	1950 - 3300
Tensile Strength, psi	(ASTM D638)	2300 - 2850
Specific Gravity (molecular weight)		.94 - .955

For Deflection/Load Calculations, use $\delta = (5)(W)L^4 / (384)(97900)(I)$

W = # / in of load, L = in. span, and I = moment of inertia (bh³/12)