

Technical Data for Bar Reinforced Molded Plastic Lumber

Properties	ASTM	Value/Units
Specific Gravity	D6111	0.99
Flexural Strength	D6109	2,700 - 9,500 psi*
Flexural Modulus (Secant, at 1% strain)	D6109	270 - 725 ksi*
Compressive Strength (Perpendicular to grain)	D6108	1,482 psi
Compressive Modulus (Perpendicular to grain, Secant, at 1% strain)	D6108	50 ksi
Coefficient of Thermal Expansion	D6341	0.000014 in/in/°F
Static Coefficient of Friction - Dry	D2047	0.73 average
Static Coefficient of Friction - Wet	D2047	0.90 average
Impact Resistance (Izod)	D256	2.64 ft-lb/in
Water Absorption	D570	0.27% max by weight
Screw Withdrawal	D6117	646 lbs
Useful Temperature Range		-40°F to +140°F

*Dependent upon selected profile and reinforcement

All above values shall be considered average except flexural strength. This value must have appropriate reduction factors set by the engineer of record.

Material Property	Description of Test Method	ASTM	Value/Units
Brittleness	Standard Test Method for Brittleness Temperature of Plastics and Elastomers by Impact	D746-07	No break at -40°F
Density and Specific Gravity	Standard Test Methods for Density and Specific Gravity of Plastics by Displacement	D792	60 lbs/cu.ft 0.0347 lbs/cu.in Specific Gravity: 0.96
Hardness-Shore D	Standard Test Method for Rubber Property—Durometer Hardness	D2240- Type D	80*
Abrasion Resistance	Standard Test Method for Abrasion Resistance of Organic Coatings by Taber Abraser	D4060 CS17 Wheel 10,000 cycles 2.2lb load	Weight Loss 0.023g / 0.043%
Ignition Temperature	Standard Test Method for Determining Ignition Temperature of Plastics; Flash Point / Ignition Temperature	D1929-96	824°F
UV: Effect on Hardness	Standard Practice for Florescent UV Exposure of Plastics	D4329 & D2240	500 hrs: 0% Change in Hardness
Chemical Resistance	Standard Practices for Evaluation the Resistance of Plastics to Chemical Reagents	D543-06	Sea Water: 0.06% weight increase
Chemical Resistance	Standard Practices for Evaluation the Resistance of Plastics to Chemical Reagents	D543-06	Gasoline: 3.0% weight increase
Chemical Resistance	Standard Practices for Evaluation the Resistance of Plastics to Chemical Reagents	D543-06	No.2 Diesel: 1.05% weight increase

* Estimated based upon relationship to elastic modulus.

* Flexural stiffness & strength can be increased by adjusting reinforcement & processing conditions. Contact for additional info.