



Black Rhino Recycling, Inc.

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**Structural Grade Plastic Lumber
100% Recycled HDPE with Fiberglass
TECHNICAL DATA**

Test	English Units		Metric Units		
	ASTM Test	Value	Units	Value	Units
Flexural Strength	D6109	2750	PSI	193	Kg/cm ²
Flexural Modulus Secant @ 1% strain	D6109	306080	PSI	21520	Kg/cm ²
Compression Strength Parallel to grain	D6108	2842	PSI	200	Kg/cm ²
Compression Strength Perpendicular to grain	D6108	1482	PSI	104	Kg/cm ²
Compression Modulus Strength Parallel to grain – Secant at 1% strain	D6108	159576	PSI	11219	Kg/cm ²
Compression Modulus Strength Perpendicular to grain – Secant at 1% strain	D6108	54119	PSI	3804	Kg/cm ²
Specific Gravity	D6111	0.93	g/cc	0.93	g/cc
Flash point		644	Deg F	340	Deg C
Moisture Absorption		0.06	% by Weight	0.06	% by Weight
Thermal Expansion	D6341-98	0.000033	Inch/Inch/Deg F		
Average Nail pull out	D6117-97	504	Lbs	229	Kg
Average Screw pull out	D6117	646	Lbs	293	Kg
Static coefficient of Friction -Dry	D2394-83(99)	.53			
Static coefficient of Friction -Wet	D2394-83(99)	.51			
Sliding coefficient of Friction -Dry	D2394-83(99)	.23			
Sliding coefficient of Friction -Wet	D2394-83(99)	.51			
Flame Spread	E84(03a)	62			
Flame Spread Classification	E84(03a)	60			
Smoke Developed	E84(03a)	230			
Smoke Developed Classification	E84(03a)	250			
Spontaneous Ignition	D-1929	824	Deg F	440	Deg C
Tensile test (skin)	D638	3623	PSI	254	Kg/cm ²
Shear Strength	D2344	800	PSI	56	Kg/cm ²
Notched impact resistance Method A	D256	2.77	Ft*LB/IN		
Abrasion resistance	D4060	<0.02	Oz – with 2.2 lb sample		
Ultraviolet (skin)	D4329	< 10	% Change in Type D durometer at 500 hours		

The technical data on this page represents only average values and not minimum values. Safety factors must be added into the design.

Chemical Resistance

High-Density Polyethylene has a high resistance to most acids and chemicals. Plastic Lumber has a high tolerance to exposure by most substances.

Ultraviolet Weathering

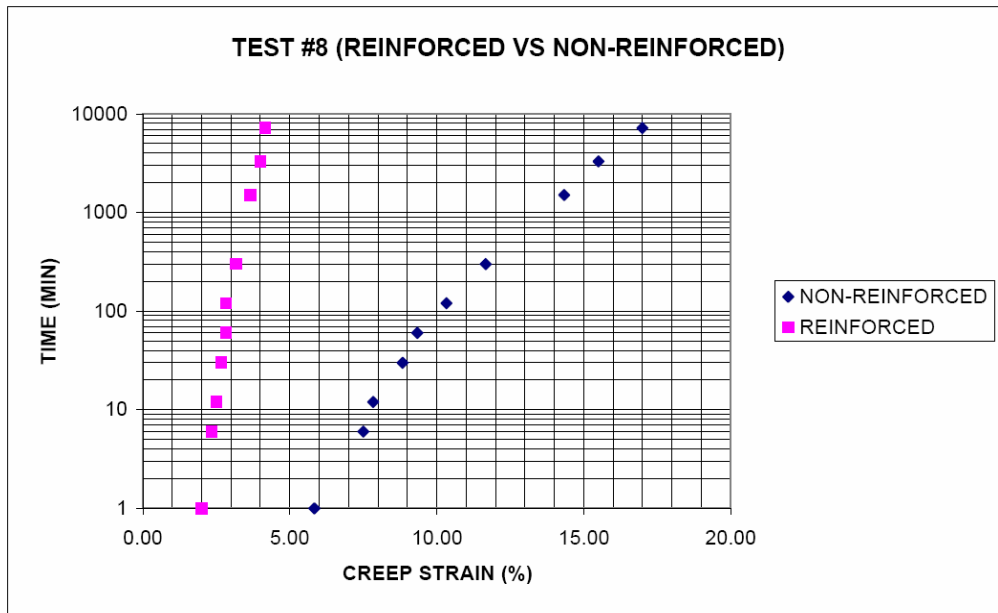
An ultraviolet stabilizer is added at the time of manufacture to help protect against ultraviolet degradation of the plastic surface in exterior applications.

NON-REINFORCED

<u>TIME (MIN)</u>	<u>MEASUREMENT (IN)</u>	<u>DEFLECTION</u>	<u>STRAIN (IN/IN)</u>	<u>STRAIN (%)</u>
1	5.65	0.35	0.058	5.83
6	5.55	0.45	0.075	7.50
12	5.53	0.47	0.078	7.83
30	5.47	0.53	0.088	8.83
60	5.44	0.56	0.093	9.33
120	5.38	0.62	0.103	10.33
300	5.3	0.7	0.117	11.67
1500	5.14	0.86	0.143	14.33
3300	5.07	0.93	0.155	15.50
7200	4.98	1.02	0.170	17.00

INITIAL DIST (IN)
6

TEMP = 72 F
FORCE APPLIED = 195 LB



REINFORCED

<u>TIME (MIN)</u>	<u>MEASUREMENT (IN)</u>	<u>DEFLECTION</u>	<u>STRAIN (IN/IN)</u>	<u>STRAIN (%)</u>
1	5.88	0.12	0.020	2.00
6	5.86	0.14	0.023	2.33
12	5.85	0.15	0.025	2.50
30	5.84	0.16	0.027	2.67
60	5.83	0.17	0.028	2.83
120	5.83	0.17	0.028	2.83
300	5.81	0.19	0.032	3.17
1500	5.78	0.22	0.037	3.67
3300	5.76	0.24	0.040	4.00
7200	5.75	0.25	0.042	4.17

INITIAL DIST (IN)
6

TEMP = 72 F
FORCE APPLIED = 195 LB