



BEDFORD
TECHNOLOGY

SELECTFORCE[®] AND FIBERFORCE[®]
HDPE PLASTIC LUMBER PRODUCTS
TECHNICAL MANUAL
for
DECKING / BOARDWALK / PLATFORM
APPLICATIONS

2424 ARMOUR ROAD
WORTHINGTON, MN 56187
1-800-721-9037
WEBSITE WWW.PLASTICBOARDS.COM

PREPARED BY: BGO

P/N: TL10001

TABLE OF CONTENTS

SELECTFORCE® HDPE PLASTIC LUMBER PRODUCTS

2. TABLE OF CONTENTS
3. SELECTFORCE® PRODUCT SUMMARY
4. SELECTFORCE® MOLDED PROCESS TECHNICAL DATA SHEET
5. SELECTFORCE® MOLDED PROCESS DECKING SPAN TABLES
6. SELECTFORCE® MOLDED PROCESS SIZE CHART
7. SELECTFORCE® CONTINUOUS EXTRUDED PROCESS TECHNICAL DATA SHEET
8. SELECTFORCE® CONTINUOUS EXTRUDED PROCESS DECKING SPAN TABLES
9. SELECTFORCE® CONTINUOUS EXTRUDED PROCESS SIZE CHART
10. SELECTFORCE® INSTALLATION GUIDE

FIBERFORCE® HDPE PLASTIC LUMBER PRODUCTS

11. FIBERFORCE® PRODUCT SUMMARY
12. FIBERFORCE® MOLDED PROCESS TECHNICAL DATA SHEET
13. FIBERFORCE® MOLDED PROCESS DECKING SPAN TABLES 122°F
14. FIBERFORCE® SPAN TABLES JOIST 120° 12" CENTER DISTANCE
15. FIBERFORCE® SPAN TABLES JOIST 120° 12" CENTER DISTANCE
16. FIBERFORCE® SPAN TABLES JOIST 120° 12" CENTER DISTANCE
17. FIBERFORCE® SPAN TABLES JOIST 120° 16" CENTER DISTANCE
18. FIBERFORCE® SPAN TABLES JOIST 120° 16" CENTER DISTANCE
19. FIBERFORCE® SPAN TABLES JOIST 120° 16" CENTER DISTANCE
20. FIBERFORCE® SPAN TABLES JOIST 120° 24" CENTER DISTANCE
21. FIBERFORCE® SPAN TABLES JOIST 120° 24" CENTER DISTANCE
22. FIBERFORCE® SPAN TABLES JOIST 120° 24" CENTER DISTANCE
23. FIBERFORCE® MOLDED PROCESS SIZE CHART
24. FIBERFORCE® INSTALLATION GUIDE



SELECTFORCE[®] recycled plastic product utilizes high quality HDPE (*High Density Polyethylene*) and color stabilizers to manufacture a high performance product. The material used to manufacture our product comes primarily from post consumer waste such as milk jugs, detergent bottles. This material is shredded and blended with additives to create a strong end product.

SELECTFORCE[®] plastic products are available in many different profiles and many proprietary and non-proprietary parts. **SELECTFORCE**[®] is available in variable lengths and comes standard in black. Other colors are available and custom color formulations are available upon request. Color stabilizers minimize color fading over the life of the product.

SELECTFORCE[®] is a cost effective alternative to products such as wood or composite materials. Due to low maintenance costs. It does not have to be painted, stained or treated and will not rot or splinter. Cleaning consists of soap and water then rinse. The cost savings only increases over time.

Basic Uses

SELECTFORCE[®] has been used for many applications and is best suited where low load bearing is required. Our **FIBERFORCE**[®] product line is the choice for more structural and heavy load applications. Some of the more common uses have been benches, outdoor furniture, decking, docks, board walks, parking curbs, trim work, signs and playground equipment.

HARD TOOL (MOLDED) PROCESS

SELECTFORCE[®] PLASTIC LUMBER TECHNICAL DATA

DESCRIPTION:

Plastic lumber shall be manufactured with recycled HDPE. Lumber shall be molded in one piece per specified size. All materials will have UV additives to prevent deterioration of the plastic lumber from exposure to UV light. HDPE will be made up of a minimum of 95% recycled material; both post industrial and post consumer. Finished plastic lumber will not rot, split, crack or splinter for a minimum of 50 years. It shall be resistant to termites, marine borers, salt spray, oil, and fungus.

TEST	ASTM TEST	VALUE	ENGLISH		METRIC	
			UNITS	VALUE	UNITS	
Flexural Strength	D6109	1355	PSI	95	Kg/cm ²	
Flexural Modulus Secant @ 1% strain	D6109	95939	PSI	6744	Kg/cm ²	
Compression Strength (parallel to grain)	D6108	1420	PSI	100	Kg/cm ²	
Compression Modulus Secant @1% strain (parallel to grain)	D6108	51000	PSI	3585	Kg/cm ²	
Compression Strength (perpendicular to grain)	D6108	650	PSI	45	Kg/cm ²	
Specific Gravity	D6111	53.7	Lbs./ft ³	0.861	g/cc	
Moisture Absorption		0.06	% by Weight	0.06	% by Weight	
Flash Point		644	Deg F°	340	Deg C°	
Spontaneous Ignition	D1929	824	Deg F°	440	Deg C°	
Flame Spread	E84	>200				
Smoke Developed	E84	>700				
Thermal Expansion	D6341	0.000055	Inch/Inch/Deg F°			
Average Screw pull out	D6117	646	Lbs	293	Kg	
Static coefficient of Friction-Dry	D2394	.48				
Static coefficient of Friction-Wet	D2394	.40				
Sliding coefficient of Friction-Dry	D2394	.22				
Sliding coefficient of Friction-Wet	D2394	.43				

MECHANICAL PROPERTIES:

FACE WIDTH	4"	6"	8"	10"	12"
Tolerance (+/-)	3/32"	1/8"	3/16"	1/4"	1/4"

DIMENSIONAL TOLERANCES:

CUP/BULDGE TOLERANCES-deviation in the face from a straight line from edge to edge of piece.

LENGTH TOLERANCE = + 3" / -0" - MEASURED AT 70°F

WARNING: SelectForce[®] plastic lumber is flammable and should not be placed near combustible material or used for indoor applications.

SDS Sheets available upon request.

The technical data on this page represents only average values and not minimum values. Safety factors must be added into the design. See the Bedford Technology plastic lumber design guide for specifics.

HARD TOOL (MOLDED) PROCESS
SELECTFORCE® PLASTIC LUMBER
SPAN TABLES 122 °F

DECKING MODE

60 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	THICKNESS	INCHES	FT	
5/4X4,6,8	1.125	17.5	1.5	
2X4,6,8,10,12 ,24	1.5	23.1	1.9	
3X4,6,8,10,12	2.4	36.3	3	
4X4,6,8,10,12	3.4	50.4	4.2	
5X5	4.4	63.9	5.3	
6X6,8,12	5.4	77	6.4	

150 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	THICKNESS	INCHES	FT	
5/4X4,6,8	1.125	13.1	1.1	
2X4,6,8,10,12 ,24	1.5	17.4	1.5	
3X4,6,8,10,12	2.4	27.6	2.3	
4X4,6,8,10,12	3.4	38.7	3.2	
5X5	4.4	49.7	4.1	
6X6,8,12	5.4	60.5	5.0	

85 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	THICKNESS	INCHES	FT	
5/4X4,6,8	1.125	15.7	1.3	
2X4,6,8,10,12 ,24	1.5	20.8	1.7	
3X4,6,8,10,12	2.4	32.8	2.7	
4X4,6,8,10,12	3.4	45.8	3.8	
5X5	4.4	58.4	4.9	
6X6,8,12	5.4	70.6	5.9	

(SEATING)

100 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	THICKNESS	INCHES	FT	
5/4X4,6,8	1.125	14.9	1.2	
2X4,6,8,10,12 ,24	1.5	19.8	1.6	
3X4,6,8,10,12	2.4	31.3	2.6	
4X4,6,8,10,12	3.4	43.7	3.6	
5X5	4.4	55.8	4.7	
6X6,8,12	5.4	67.7	5.6	

200 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	THICKNESS	INCHES	FT	
5/4X4,6,8	1.125	11.9	1.0	
2X4,6,8,10,12 ,24	1.5	15.9	1.3	
3X4,6,8,10,12	2.4	25.2	2.1	
4X4,6,8,10,12	3.4	35.5	3.0	
5X5	4.4	45.6	3.8	
6X6,8,12	5.4	55.6	4.6	

Chart for ambient 122° F

For use with live load only; for dead loads please consult factory

HARD TOOL (MOLDED) PROCESS

SELECTFORCE[®] RECYCLED PLASTIC LUMBER

SIZE CHART

LUMBER SIZE	ACTUAL DIMENSIONS	LONGEST LENGTH AVAILABLE -FEET	WEIGHT LBS PER FOOT
1 3/8" Round	1.35" Diameter	8	0.6
2" Round	1.96" Diameter	10	1.1
2 1/2" Round	2.25" Diameter	8	1.6
4" Round	3.9" Diameter	12	4.4
6" Round	5.9" Diameter	16	9.8
8" Round	7.5" Diameter	34	17
9" Round	8.3" Diameter	20	20
10" Round	9.8" Diameter	24	26
5/4" x 4"	1.1" x 3 1/2"	8	1.4
5/4" x 6"	1.1" x 5 1/2"	12	2.2
5/4" x 8"	1.1" x 7 1/2"	12	2.9
2" x 2"	1 1/2" x 1 1/2"	8	0.9
2" x 3"	1 1/2" x 2 1/2"	8	1.5
2" x 4" & Bull Nose	1 1/2" x 3 1/2"	16/12	2
2" x 6"	1 1/2" x 5 1/2"	16	3.2
2" x 7" True Sq. Corner	2" x 7"	16	5.1
2" x 8"	1 1/2" x 7 1/2"	18	3.9
2" x 10"	1 1/2" x 9 3/8"	16	5
2" x 12"	1 1/2" x 11 1/4"	16	6
2" x 24"	1 15/16" x 24"	10	17
3" x 4" & Bull Nose	2 1/2" x 3 1/2"	16	3.1
3" x 6"	2 1/2" x 5 1/2"	12	4.7
3" x 8" & Bull Nose	2 1/2" x 7 1/2"	19/16	6.5
3" x 10"	2 1/2" x 9 3/8"	16	8.1
3" x 12"	2 1/2" x 11 1/4"	16	10

LUMBER SIZE	ACTUAL DIMENSIONS	LONGEST LENGTH AVAILABLE -FEET	WEIGHT LBS PER FOOT
4" x 4"	3 1/2" x 3 1/2"	16	4.4
4" x 4" True	4" x 4"	16	5.4
4" x 6"	3 1/2" x 5 1/2"	20	6.7
4" x 8"	3 1/2" x 7 1/2"	16	9.1
4" x 10"	3 1/2" x 9 1/2"	20	11.5
4" x 12"	3 1/2" x 11 1/4"	20	13.8
4 1/2" x 6" True	4 1/2" x 6"	16	10.1
4 1/2" x 8 3/8" True	4 1/2" x 8 3/8"	16	14.1
4 1/2" x 10" True	4 1/2" x 10"	16	16.8
5" x 5"	4 1/2" x 4 1/2"	16	7
6" x 6"	5 3/8" x 5 3/8"	20	9.7
6" x 8"	5 1/2" x 7 1/2"	20	15.2
6" x 10"	5 1/2" x 9 3/8"	20	19.5
6" x 12"	5 1/2" x 11 1/4"	20	22
6 1/4" x 10" True	6 1/4" x 10"	17	23.3
7" x 7"	6 1/2" x 6 1/2"	12	14
7" x 10" True	7" x 10"	17	26
8" x 8"	7 1/2" x 7 1/2"	24	20
8" x 10"	7 1/2" x 9 3/8"	18	26
8" x 12"	7 1/2" x 11 3/8"	24	31
Heavy Duty Parking Curb	6.5" x 4.5" tall	8	8.8
Parking Curb	6" x 4" tall	8	5.9
Speed Bump	2" tall x 10"	8	4.2

CONTINUOUS EXTRUDED (CE) PROCESS SELECTFORCE® PLASTIC LUMBER TECHNICAL DATA

DESCRIPTION:

Plastic lumber shall be manufactured with recycled HDPE. Lumber shall be molded in one piece per specified size. All materials will have UV additives to prevent deterioration of the plastic lumber from exposure to UV light. HDPE will be made up of a minimum of 95% recycled material; both post industrial and post consumer. Finished plastic lumber will not rot, split, crack or splinter for a minimum of 50 years. It shall be resistant to termites, marine borers, salt spray, oil, and fungus.

TEST	ASTM TEST	VALUE	ENGLISH	VALUE	METRIC
			UNITS		UNITS
Flexural Strength	D6109	1350	PSI	95	Kg/cm ²
Flexural Modulus Secant @ 1% strain	D6109	79000	PSI	5554	Kg/cm ²
Compression Strength (parallel to grain)	D6108	1030	PSI	72	Kg/cm ²
Compression Modulus (parallel to grain)	D6108	39400	PSI	2770	Kg/cm ²
Compression Strength (perpendicular to grain)	D6108	390	PSI	27	Kg/cm ²
Specific Gravity	D6111	41.5	Lbs./ft ³	0.67	g/cc
Flash Point		644	Deg F°	340	Deg C°
Spontaneous Ignition	D1929	824	Deg F°	440	Deg C°
Flame Spread	E84	>200			
Smoke Developed	E84	>700			
Thermal Expansion	D6341	0.000058	Inch/Inch/Deg F°		
Average Screw Pull Out	D6117	511	Lbs	232	Kg
Average Nail Pull Out	D6117	145	Lbs	66	Kg
Static Coefficient of Friction- Dry Plain Surface	C1028	.37			
Static coefficient of Friction—Wet Plain Surface	C1028	.46			
Static Coefficient of Friction- Dry Wood Grain Embossed Surface	C1028	.51			
Static coefficient of Friction—Wet Wood Grain Embossed Surface	C1028	.55			

GENERAL DIMENSIONAL TOLERANCES: +/- 0.05"

CUP/BULDGE TOLERANCES: +/- 0.05"

LENGTH TOLERANCE = + 3" / -0" - MEASURED AT 70°F

SDS Sheets available upon request.

WARNING: SelectForce® plastic lumber is flammable and should not be placed near combustible material or used for indoor applications.

The technical data on this page represents only average values and not minimum values. Safety factors must be added into the design. See the Bedford Technology plastic lumber design guide for specifics.

CONTINUOUS EXTRUDED (CE) PROCESS
SELECTFORCE® PLASTIC LUMBER
SPAN TABLES 122 °F

DECKING MODE

60 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	THICKNESS	INCHES	FT	
1 x 3.5,5.5,7.5,9.5,12	1.0	14.2	1.2	
1.25 x 5.5,9.5	1.25	17.5	1.5	
2 x 2,3,4,6,8,10,12	1.5	21.0	1.8	
2 x 2 TRUE	2.0	27.6	2.3	
3 x 4,10	2.5	34.3	2.9	
4 x 4,6	3.5	47.1	3.9	

150 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	THICKNESS	INCHES	FT	
1 x 3.5,5.5,7.5,9.5,12	1.0	10.6	0.9	
1.25 x 5.5,9.5	1.25	13.1	1.1	
2 x 2,3,4,6,8,10,12	1.5	15.8	1.3	
2 x 2 TRUE	2.0	20.9	1.7	
3 x 4,10	2.5	26.1	2.2	
4 x 4,6	3.5	36.2	3.0	

85 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	THICKNESS	INCHES	FT	
1 x 3.5,5.5,7.5,9.5,12	1.0	12.7	1.1	
1.25 x 5.5,9.5	1.25	15.7	1.3	
2 x 2,3,4,6,8,10,12	1.5	18.9	1.6	
2 x 2 TRUE	2.0	24.9	2.1	
3 x 4,10	2.5	31.0	2.6	
4 x 4,6	3.5	42.8	3.6	

100 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	THICKNESS	INCHES	FT	
1 x 3.5,5.5,7.5,9.5,12	1.0	12.0	1.0	
1.25 x 5.5,9.5	1.25	15.0	1.2	
2 x 2,3,4,6,8,10,12	1.5	18.0	1.5	
2 x 2 TRUE	2.0	23.7	2.0	
3 x 4,10	2.5	29.5	2.5	
4 x 4,6	3.5	40.8	3.4	

(SEATING)

200 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	THICKNESS	INCHES	FT	
1.25 x 5.5,9.5,12	1.25	12.0	1.0	
2 x 2,3,4,6,8,10,12	1.5	14.4	1.2	
2 x 2 TRUE	2.0	19.0	1.6	
3 x 4,10	2.5	22.9	1.9	
4 x 4,6	3.5	32.2	2.7	

Chart for ambient 122° F

For use with live load only; for dead loads please consult factory

CONTINUOUS EXTRUDED (CE) PROCESS
SELECTFORCE® RECYCLED PLASTIC LUMBER
SIZE CHART

LUMBER SIZE	ACTUAL DIMENSIONS	WEIGHT LBS PER FOOT
6" Round True	6.0" Diameter	8.8
1/2" x 1 1/2"	0.5"x1.49"	0.22
1/2" x 2 1/2"	0.5"x2.45"	0.37
1/2" x 6"	0.5"x5.96"	0.87
1/2" x 8"	0.5"x7.96"	1.2
1/2" x 9 1/2"	0.5"x9.46"	1.4
5/8" x 12 3/16"	0.63"x12.18"	2.2
5/8" x 18"	0.63"x18.03"	3.3
5/8" x 24"	0.63"x24.03"	4.4
3/4" x 1 3/4"	0.75"x1.75"	0.38
3/4" x 2 5/8"	0.75"x2.63"	0.57
3/4" x 2 3/4"	0.75"x2.75"	0.60
3/4" x 3 1/2"	0.75"x3.50"	0.77
3/4" x 4 1/2"	0.75"x4.50"	1.0
3/4" x 5 1/2"	0.75"x5.50"	1.3
3/4" x 6" Tongue & Groove	0.75"x6.0"	1.3
3/4" x 18"	0.75"x18.03"	3.9
3/4" x 24"	0.75"x24.03"	5.2
1" x 2" True	1.0"x2.0"	0.58
1" x 3 1/2"	1.0"x3.50"	1.0
1" x 5 1/2"	1.0"x5.50"	1.6
1" x 5 1/2" Groove & Groove	1.0"x5.47"	1.6
1" x 7 1/2"	1.0"x7.50"	2.2
1" x 9 1/2"	1.0"x9.50"	2.8
1" x 12" True	1.0"x12.0"	3.5
1 1/4" x 5 1/2"	1.25"x5.50"	2.0
1 1/4" x 9 1/2"	1.25"x9.50"	3.5
1 1/2" x 9 1/4"	1.5"x9.25"	4.0

LUMBER SIZE	ACTUAL DIMENSIONS	WEIGHT LBS PER FOOT
2" x 2"	1.5"x1.5"	0.65
2" x 2" True	2.0"x2.0"	1.2
2" x 3"	1.5"x2.5"	1.1
2" x 4"	1.5"x3.5"	1.5
2" x 6"	1.5"x5.5"	2.4
2" x 6" Tongue & Groove	1.5"x5.0"	2.2
2" x 8"	1.5"x7.5"	3.3
2" x 10"	1.5"x9.5"	4.1
3" x 4"	2.48"x3.5"	2.6
3" x 4" Bullnose	2.55"x3.5"	2.4
4" x 4"	3.52"x3.52"	3.6
4" x 6"	3.52"x5.52"	5.6
5 1/4" x 5 1/4" True	5.3"x5.3"	8.0
6" x 6"	5.5"x5.5"	8.8

SELECTFORCE® PLASTIC PRODUCT INSTALLATION GUIDE

1. Structural Ability

SELECTFORCE® plastic is not recommended for structural use; therefore, the substructure must be constructed of FIBERFORCE®, or another structural grade material. Due to its increased flexibility (as compared to wood), SELECTFORCE® plastic lumber requires more support. Please refer to span tables to determine support requirements based on live load and ambient temperature.

2. Expansion/Contraction

SELECTFORCE® plastic expands and contracts along its length. A 10' (3.048m) length will expand and contract up to 3/8" (1cm). Due to this fact, SELECTFORCE® plastic should be run along the shortest length with the joist running the long direction. **Example:** An 8'x16' (2.44cm x 4.88cm) deck should use 8' (2.44m) SELECTFORCE® plastic over joists running the 16' (4.88m) length. These joists are normally divided into 2- 8'x8' (2-2.44m x 2.44m) sections with a header between them. Also, lighter colors do not heat up as much in sunlight and are therefore preferable when installing in a sunny location.

3. Fastening

To withstand the expansion and contraction as well as to maintain a long lasting, beautiful looking deck, stainless steel deck screws should be used, preferably #10 x 2 1/2 (#10 x 6.5cm) or 3" (7.5cm) long, square drive stainless steel deck screws. Each deck board should be fastened with at least 2 screws per joist. Screws must be pre-drilled and should be counter-sunk. Also, coating the screws with a lubricant, such as a silicone caulk, or soap will ease installation. All screws should be a minimum of 3/4" (2cm) from the edge or end of the board.

4. Butt Joints

When butting SELECTFORCE® plastic lumber against any wall, fixed surface or other boards (if necessary), they should be securely fastened to the nailer or double joist with a gap allowing for expansion. The size of gap should be determined based on weather conditions at the time of installation—the closer the temperature is to the usual high temperature for the year, the smaller the gap. (See chart below). The project should be designed to minimize the butt joints. However, in the event that joints are required, a double joist underneath the butt joint should be used. Boards should be securely fastened with a row of screws on each side of the joint 1" (2.5cm) from end of the board. Always keep deck boards out 3/8" (1cm) from permanent structure.

Temperature at time of installation	Gap between butt ends
Greater then or equal to 90° F (32° C)	1/16" (1.5mm) or less
70° F (21° C)	1/8" (3mm)
50° F (10° C)	1/4" (6mm)
Less than 30° F (-1° C)	3/8" (1cm)

10. Rip Cutting

Rip cutting is not recommended on any plastic lumber. In the event that rip cutting is needed please refer to the following example. Example, if a 4" (10cm) board is needed, 3/4" (2cm) should be ripped off of both sides of a 5-1/2" (14cm) board.

Should there be any questions regarding these instructions, please contact your sales representative for more details. **Failure to follow these instructions will void all warranties.**

* Note: Information in parenthesis is a metric conversion of the English representation



FIBERFORCE[®] is high performance structural products consisting of high quality HDPE (High Density Polyethylene) and fiberglass to increase strength and rigidity in the product. The HDPE used to manufacture **FIBERFORCE**[®] is primarily derived from post consumer products.

FIBERFORCE[®] is manufactured in many different profiles and lengths. **FIBERFORCE**[®] is resistant to marine borers, termites, fungus, salt and oils so replacement due to these elements is nearly nonexistent.

Basic Uses

FIBERFORCE[®] is proven for use in structural applications where a wider span, dimensional stability, increased strength or stiffness is required. Due to the increased strength and resistance to environmental elements, **FIBERFORCE**[®] is well suited for exterior applications where structural support or load bearing is required. Examples of applications are: retaining walls, fencing, decking, joist, post, large equipment mats, light commercial and many marine applications.

HARD TOOL (MOLDED) PROCESS **FIBERFORCE[®] PLASTIC LUMBER TECHNICAL DATA**

DESCRIPTION:

Structural plastic lumber shall be manufactured with HDPE and fiberglass elements to act as a reinforcement with HDPE. Lumber shall be molded in one piece per specified size. All materials will have UV additives to prevent deterioration of the plastic lumber from exposure to UV light. HDPE will be made up of recycled material; both post industrial & post consumer, excluding additives and colorants. Finished plastic lumber will not rot, split, crack or splinter for a minimum of 50 years. It shall be resistant to termites, marine borers, salt spray, oil and fungus.

Test	ASTM Test	ENGLISH		METRIC	
		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 Parallel to grain—Secant at 1% strain	D6108	159576	PSI	11219	Kg/cm ²
Compression Modulus Perpendicular to grain—Secant at 1% strain	D6108	54119	PSI	3804	Kg/cm ²
Specific Gravity	D6111	58	Lbs./ft ³	0.93	g/cc
Moisture Absorption		0.06	% by Weight	0.06	% by Weight
Flash Point		644	Deg F	340	Deg C
Spontaneous Ignition	D1929	824	Deg F	440	Deg C
Flame Spread	E84	62			
Flame Spread Classification	E84	60			
Smoke Developed	E84	230			
Smoke Developed Classification	E84	250			
Thermal Expansion	D6341	0.000033	Inch / Inch / Deg F°		
Average Screw pull out	D6117	646	Lbs	293	Kg
Static Coefficient of Friction—Dry	D2394	.53			
Static Coefficient of Friction—Wet	D2394	.51			
Sliding Coefficient of Friction—Dry	D2394	.23			
Sliding Coefficient of Friction—Wet	D2394	.51			
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		

DIMENSIONAL TOLERANCES:

CUP/BULDGE TOLERANCES—deviation in the face from a straight line from edge to edge of piece.

FACE WIDTH	4"	6"	8"	10"	12"
Tolerance (+/-)	3/32"	1/8"	3/16"	1/4"	1/4"

LENGTH TOLERANCE = 3" / -0" - Measured at 70 deg. F

SDS Sheets available upon request.

The technical data on this page represents only average product performance values and not minimum values. Safety factors must be added into the design. See the Bedford Technology plastic lumber design guide for specifics.

HARD TOOL (MOLDED) PROCESS
FIBERFORCE[®] PLASTIC LUMBER
SPAN TABLES 122°F

DECKING MODE

60 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	THICKNESS	INCHES	FT	
5/4X4,6,8	1.125	24.3	2.0	
2X4,6,8,10,12 ,24	1.5	32.1	2.7	
3X4,6,8,10,12	2.4	50.3	4.2	
4X4,6,8,10,12	3.4	69.8	5.8	
5X5	4.4	88.7	7.4	
6X6,8,12	5.4	106.8	8.9	

150 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	THICKNESS	INCHES	FT	
5/4X4,6,8	1.125	18.2	1.5	
2X4,6,8,10,12 ,24	1.5	24.1	2.0	
3X4,6,8,10,12	2.4	38.3	3.2	
4X4,6,8,10,12	3.4	53.7	4.5	
5X5	4.4	68.9	5.7	
6X6,8,12	5.4	83.9	7.0	

85 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	THICKNESS	INCHES	FT	
5/4X4,6,8	1.125	21.8	1.8	
2X4,6,8,10,12 ,24	1.5	28.9	2.4	
3X4,6,8,10,12	2.4	45.5	3.8	
4X4,6,8,10,12	3.4	63.5	5.3	
5X5	4.4	81.0	6.7	
6X6,8,12	5.4	98.0	8.2	

(SEATING)

100 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	THICKNESS	INCHES	FT	
5/4X4,6,8	1.125	20.7	1.7	
2X4,6,8,10,12 ,24	1.5	27.4	2.3	
3X4,6,8,10,12	2.4	43.4	3.6	
4X4,6,8,10,12	3.4	60.6	5.1	
5X5	4.4	77.4	6.5	
6X6,8,12	5.4	93.9	7.8	

200 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	THICKNESS	INCHES	FT	
5/4X4,6,8	1.125	16.6	1.4	
2X4,6,8,10,12 ,24	1.5	22.0	1.8	
3X4,6,8,10,12	2.4	35.0	2.9	
4X4,6,8,10,12	3.4	49.2	4.1	
5X5	4.4	63.2	5.3	
6X6,8,12	5.4	77.1	6.4	

Chart for ambient 122° F

For use with live load only; for dead loads please consult factory

FIBERFORCE® PLASTIC LUMBER

SPAN TABLES JOIST 120° F

12" CENTER DISTANCE

60 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	WIDTH	HEIGHT	INCHES	FT
5/4 X 4	1.1	3.5	33.4	2.8
5/4 x6	1.1	5.4	51.4	4.3
5/4 x 8	1.1	7.3	69.2	5.8
2 x 4	1.5	3.5	37	3.1
2 x 6	1.5	5.4	56.8	4.7
2 x 8	1.5	7.3	76.4	6.4
2 x 10	1.5	9.25	96.3	8
2 x 12	1.5	11.3	117	9.7
3 x 4	2.4	3.4	41.8	3.5
3 x 6	2.4	5.5	67	5.6
3 x 8	2.4	7.4	89.5	7.5
3 x 10	2.4	9.3	111.6	9.3
3 x 12	2.4	11.3	134.5	11.2
4 x 4	3.4	3.4	46.7	3.9
4 x 6	3.4	5.4	73.3	6.1
4 x 8	3.4	7.5	100.5	8.4
4 x 10	3.4	9.5	126.0	10.5
4 x 12	3.4	11.375	149.4	12.4
5 x 5	4.4	4.4	64.9	5.4
6 x 6	5.4	5.4	84	7
6 x 8	5.4	7.4	113.1	9.4
6 x 12	5.4	11.3	167.6	14
8 x 8	7.3	7.3	121	10.1
8 x 10	7.3	9.3	151.1	12.6
10 x 10	9.8	9.8	169.4	14.1

100 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	WIDTH	HEIGHT	INCHES	FT
5/4 X 4	1.1	3.5	28.7	2.4
5/4 x6	1.1	5.4	44.2	3.7
5/4 x 8	1.1	7.3	59.6	5
2 x 4	1.5	3.5	31.8	2.6
2 x 6	1.5	5.4	48.8	4.1
2 x 8	1.5	7.3	65.8	5.5
2 x 10	1.5	9.25	83.1	6.9
2 x 12	1.5	11.3	101.2	8.4
3 x 4	2.4	3.4	36	3
3 x 6	2.4	5.5	57.9	4.8
3 x 8	2.4	7.4	77.5	6.5
3 x 10	2.4	9.3	96.9	8.1
3 x 12	2.4	11.3	117.1	9.8
4 x 4	3.4	3.4	40.2	3.4
4 x 6	3.4	5.4	63.4	5.3
4 x 8	3.4	7.5	87.4	7.3
4 x 10	3.4	9.5	109.9	9.2
4 x 12	3.4	11.375	130.8	10.9
5 x 5	4.4	4.4	56.3	4.7
6 x 6	5.4	5.4	73.2	6.1
6 x 8	5.4	7.4	99.1	8.3
6 x 12	5.4	11.3	148.2	12.4
8 x 8	7.3	7.3	106.7	8.9
8 x 10	7.3	9.3	134	11.2
10 x 10	9.8	9.8	151.9	12.7

FIBERFORCE[®] PLASTIC LUMBER

SPAN TABLES JOIST 120° F

12" CENTER DISTANCE

150 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	WIDTH	HEIGHT	INCHES	FT
5/4 X 4	1.1	3.5	25.3	2.1
5/4 x6	1.1	5.4	39	3.2
5/4 x 8	1.1	7.3	52.6	4.4
2 x 4	1.5	3.5	28	2.3
2 x 6	1.5	5.4	43.1	3.6
2 x 8	1.5	7.3	58.2	4.8
2 x 10	1.5	9.25	73.5	6.1
2 x 12	1.5	11.3	89.6	7.5
3 x 4	2.4	3.4	31.8	2.6
3 x 6	2.4	5.5	51.2	4.3
3 x 8	2.4	7.4	68.6	5.7
3 x 10	2.4	9.3	85.9	7.2
3 x 12	2.4	11.3	104	8.7
4 x 4	3.4	3.4	35.6	3
4 x 6	3.4	5.4	56.2	4.7
4 x 8	3.4	7.5	76.6	6.4
4 x 10	3.4	9.5	97.8	8.2
4 x 12	3.4	11.375	116.6	9.7
5 x 5	4.4	4.4	49.9	4.2
6 x 6	5.4	5.4	65	5.4
6 x 8	5.4	7.4	88.4	7.4
6 x 12	5.4	11.3	133	11.1
8 x 8	7.3	7.3	95.5	8
8 x 10	7.3	9.3	120.5	10
10 x 10	9.8	9.8	137.4	11.5

200 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	WIDTH	HEIGHT	INCHES	FT
5/4 X 4	1.1	3.5	23.1	1.9
5/4 x6	1.1	5.4	35.6	3
5/4 x 8	1.1	7.3	48	4
2 x 4	1.5	3.5	25.6	2.1
2 x 6	1.5	5.4	39.4	3.3
2 x 8	1.5	7.3	53.2	4.4
2 x 10	1.5	9.25	67.2	5.6
2 x 12	1.5	11.3	82	6.8
3 x 4	2.4	3.4	29	2.4
3 x 6	2.4	5.5	46.8	3.9
3 x 8	2.4	7.4	62.8	5.2
3 x 10	2.4	9.3	78.7	6.6
3 x 12	2.4	11.3	95.3	7.9
4 x 4	3.4	3.4	32.5	2.7
4 x 6	3.4	5.4	51.4	4.3
4 x 8	3.4	7.5	69.3	5.8
4 x 10	3.4	9.5	89.8	7.5
4 x 12	3.4	11.375	107.1	8.9
5 x 5	4.4	4.4	45.6	3.8
6 x 6	5.4	5.4	59.6	5
6 x 8	5.4	7.4	81.2	6.8
6 x 12	5.4	11.3	122.6	10.2
8 x 8	7.3	7.3	87.9	7.3
8 x 10	7.3	9.3	111.1	9.3
10 x 10	9.8	9.8	127.3	10.6

FIBERFORCE[®] PLASTIC LUMBER

SPAN TABLES JOIST 120° F

12" CENTER DISTANCE

85 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	WIDTH	HEIGHT	INCHES	FT
5/4 X 4	1.1	3.5	30.1	2.5
5/4 x6	1.1	5.4	46.4	3.9
5/4 x 8	1.1	7.3	62.5	5.2
2 x 4	1.5	3.5	33.4	2.8
2 x 6	1.5	5.4	51.3	4.3
2 x 8	1.5	7.3	69.1	5.8
2 x 10	1.5	9.25	87.2	7.3
2 x 12	1.5	11.3	106	8.8
3 x 4	2.4	3.4	37.8	3.1
3 x 6	2.4	5.5	60.7	5.1
3 x 8	2.4	7.4	81.2	6.8
3 x 10	2.4	9.3	101	8.5
3 x 12	2.4	11.3	123	10.1
4 x 4	3.4	3.4	42.2	3.5
4 x 6	3.4	5.4	66.5	5.5
4 x 8	3.4	7.5	90.3	7.5
4 x 10	3.4	9.5	115	9.6
4 x 12	3.4	11.375	137	11.4
5 x 5	4.4	4.4	59.0	4.9
6 x 6	5.4	5.4	76.5	6.4
6 x 8	5.4	7.4	104	8.6
6 x 12	5.4	11.3	154	12.9
8 x 8	7.3	7.3	111	9.3
8 x 10	7.3	9.3	140	11.6
10 x 10	9.8	9.8	158	13.1

FIBERFORCE® PLASTIC LUMBER

SPAN TABLES JOIST 120° F

16" CENTER DISTANCE

60 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	WIDTH	HEIGHT	INCHES	FT
5/4 X 4	1.1	3.5	30.4	2.5
5/4 x6	1.1	5.4	46.8	3.9
5/4 x 8	1.1	7.3	63.1	5.3
2 x 4	1.5	3.5	33.7	2.8
2 x 6	1.5	5.4	51.8	4.3
2 x 8	1.5	7.3	69.7	5.8
2 x 10	1.5	9.25	88	7.3
2 x 12	1.5	11.3	108.7	9.1
3 x 4	2.4	3.4	38.1	3.2
3 x 6	2.4	5.5	61.2	5.1
3 x 8	2.4	7.4	81.9	6.8
3 x 10	2.4	9.3	102.3	8.5
3 x 12	2.4	11.3	123.6	10.3
4 x 4	3.4	3.4	42.6	3.6
4 x 6	3.4	5.4	67.1	5.6
4 x 8	3.4	7.5	92.3	7.7
4 x 10	3.4	9.5	115.9	9.7
4 x 12	3.4	11.375	136.3	11.4
5 x 5	4.4	4.4	59.5	5
6 x 6	5.4	5.4	77.2	6.4
6 x 8	5.4	7.4	104.4	8.7
6 x 12	5.4	11.3	155.6	13
8 x 8	7.3	7.3	112.1	9.3
8 x 10	7.3	9.3	140.5	11.7
10 x 10	9.8	9.8	158.7	13.2

100 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	WIDTH	HEIGHT	INCHES	FT
5/4 X 4	1.1	3.5	26.1	2.2
5/4 x6	1.1	5.4	40.2	3.3
5/4 x 8	1.1	7.3	54.2	4.5
2 x 4	1.5	3.5	28.9	2.4
2 x 6	1.5	5.4	44.5	3.7
2 x 8	1.5	7.3	60	5
2 x 10	1.5	9.25	75.8	6.3
2 x 12	1.5	11.3	92.4	7.7
3 x 4	2.4	3.4	32.8	2.7
3 x 6	2.4	5.5	52.8	4.4
3 x 8	2.4	7.4	70.7	5.9
3 x 10	2.4	9.3	88.5	7.4
3 x 12	2.4	11.3	107.2	8.9
4 x 4	3.4	3.4	36.7	3.1
4 x 6	3.4	5.4	57.9	4.8
4 x 8	3.4	7.5	80	6.7
4 x 10	3.4	9.5	100.8	8.4
4 x 12	3.4	11.375	118.7	9.9
5 x 5	4.4	4.4	51.4	4.3
6 x 6	5.4	5.4	67	5.6
6 x 8	5.4	7.4	91	7.6
6 x 12	5.4	11.3	136.7	11.4
8 x 8	7.3	7.3	98.2	8.2
8 x 10	7.3	9.3	123.8	10.3
10 x 10	9.8	9.8	141	11.8

FIBERFORCE[®] PLASTIC LUMBER

SPAN TABLES JOIST 120° F

16" CENTER DISTANCE

150 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	WIDTH	HEIGHT	INCHES	FT
5/4 X 4	1.1	3.5	23	1.9
5/4 x6	1.1	5.4	35.4	3
5/4 x 8	1.1	7.3	47.8	4
2 x 4	1.5	3.5	25.5	2.1
2 x 6	1.5	5.4	39.2	3.3
2 x 8	1.5	7.3	53	4.4
2 x 10	1.5	9.25	67	5.6
2 x 12	1.5	11.3	81.7	6.8
3 x 4	2.4	3.4	28.9	2.4
3 x 6	2.4	5.5	46.6	3.9
3 x 8	2.4	7.4	62.5	5.2
3 x 10	2.4	9.3	78.4	6.5
3 x 12	2.4	11.3	95	7.9
4 x 4	3.4	3.4	32.4	2.7
4 x 6	3.4	5.4	51.2	4.3
4 x 8	3.4	7.5	70.9	5.9
4 x 10	3.4	9.5	89.4	7.5
4 x 12	3.4	11.375	105.5	8.8
5 x 5	4.4	4.4	45.5	3.8
6 x 6	5.4	5.4	59.4	5
6 x 8	5.4	7.4	80.9	6.7
6 x 12	5.4	11.3	122.2	10.2
8 x 8	7.3	7.3	87.6	7.3
8 x 10	7.3	9.3	110.8	9.2
10 x 10	9.8	9.8	126.9	10.6

200 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	WIDTH	HEIGHT	INCHES	FT
5/4 X 4	1.1	3.5	21	1.7
5/4 x6	1.1	5.4	32.3	2.7
5/4 x 8	1.1	7.3	43.7	3.6
2 x 4	1.5	3.5	23.3	1.9
2 x 6	1.5	5.4	35.8	3
2 x 8	1.5	7.3	48.4	4
2 x 10	1.5	9.25	61.2	5.1
2 x 12	1.5	11.3	74.7	6.2
3 x 4	2.4	3.4	26.4	2.2
3 x 6	2.4	5.5	42.6	3.5
3 x 8	2.4	7.4	57.2	4.8
3 x 10	2.4	9.3	71.7	6
3 x 12	2.4	11.3	87	7.2
4 x 4	3.4	3.4	29.6	2.5
4 x 6	3.4	5.4	46.9	3.9
4 x 8	3.4	7.5	63.2	5.3
4 x 10	3.4	9.5	81.9	6.8
4 x 12	3.4	11.375	96.8	8.1
5 x 5	4.4	4.4	41.6	3.5
6 x 6	5.4	5.4	54.4	4.5
6 x 8	5.4	7.4	74.2	6.2
6 x 12	5.4	11.3	112.3	9.4
8 x 8	7.3	7.3	80.5	6.7
8 x 10	7.3	9.3	101.9	8.5
10 x 10	9.8	9.8	117.1	9.8

FIBERFORCE® PLASTIC LUMBER
SPAN TABLES JOIST 120° F

16" CENTER DISTANCE

85 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	WIDTH	HEIGHT	INCHES	FT
5/4 X 4	1.1	3.5	27.4	2.3
5/4 x6	1.1	5.4	42.2	3.5
5/4 x 8	1.1	7.3	57.0	4.7
2 x 4	1.5	3.5	30.4	2.5
2 x 6	1.5	5.4	46.7	3.9
2 x 8	1.5	7.3	63.0	5.2
2 x 10	1.5	9.25	79.6	6.6
2 x 12	1.5	11.3	96.9	8.1
3 x 4	2.4	3.4	34.4	2.9
3 x 6	2.4	5.5	55.4	4.6
3 x 8	2.4	7.4	74.2	6.2
3 x 10	2.4	9.3	92.8	7.7
3 x 12	2.4	11.3	112	9.4
4 x 4	3.4	3.4	38.5	3.2
4 x 6	3.4	5.4	60.8	5.1
4 x 8	3.4	7.5	83.8	7.0
4 x 10	3.4	9.5	106	8.8
4 x 12	3.4	11.375	124	10.4
5 x 5	4.4	4.4	53.9	4.5
6 x 6	5.4	5.4	70.2	5.8
6 x 8	5.4	7.4	95.2	7.9
6 x 12	5.4	11.3	143	11.9
8 x 8	7.3	7.3	103	8.6
8 x 10	7.3	9.3	129	10.8
10 x 10	9.8	9.8	147	12.2

FIBERFORCE[®] PLASTIC LUMBER

SPAN TABLES JOIST 120° F

24" CENTER DISTANCE

60 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	WIDTH	HEIGHT	INCHES	FT
5/4 X 4	1.1	3.5	26.6	2.2
5/4 x6	1.1	5.4	41.8	3.5
5/4 x 8	1.1	7.3	55.3	4.6
2 x 4	1.5	3.5	29.5	2.5
2 x 6	1.5	5.4	45.4	3.8
2 x 8	1.5	7.3	61.2	5.1
2 x 10	1.5	9.25	77.3	6.4
2 x 12	1.5	11.3	94.2	7.9
3 x 4	2.4	3.4	33.4	2.8
3 x 6	2.4	5.5	53.8	4.5
3 x 8	2.4	7.4	72.1	6
3 x 10	2.4	9.3	90.3	7.5
3 x 12	2.4	11.3	109.2	9.1
4 x 4	3.4	3.4	37.4	3.1
4 x 6	3.4	5.4	59.1	4.9
4 x 8	3.4	7.5	81.5	6.8
4 x 10	3.4	9.5	102.7	8.6
4 x 12	3.4	11.375	121.5	10.1
5 x 5	4.4	4.4	52.4	4.4
6 x 6	5.4	5.4	68.3	5.7
6 x 8	5.4	7.4	92.7	7.7
6 x 12	5.4	11.3	139.2	11.6
8 x 8	7.3	7.3	100	8.3
8 x 10	7.3	9.3	125.9	10.5
10 x 10	9.8	9.8	143.3	11.9

100 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	WIDTH	HEIGHT	INCHES	FT
5/4 X 4	1.1	3.5	22.8	1.9
5/4 x6	1.1	5.4	35.8	3
5/4 x 8	1.1	7.3	47.5	4
2 x 4	1.5	3.5	25.3	2.1
2 x 6	1.5	5.4	38.9	3.2
2 x 8	1.5	7.3	52.6	4.4
2 x 10	1.5	9.25	66.5	5.5
2 x 12	1.5	11.3	81.1	6.8
3 x 4	2.4	3.4	28.7	2.4
3 x 6	2.4	5.5	46.3	3.9
3 x 8	2.4	7.4	62.1	5.2
3 x 10	2.4	9.3	77.8	6.5
3 x 12	2.4	11.3	94.3	7.9
4 x 4	3.4	3.4	32.2	2.7
4 x 6	3.4	5.4	50.9	4.2
4 x 8	3.4	7.5	70.4	5.9
4 x 10	3.4	9.5	88.8	7.4
4 x 12	3.4	11.375	105.3	8.8
5 x 5	4.4	4.4	45.1	3.8
6 x 6	5.4	5.4	59	4.9
6 x 8	5.4	7.4	80.4	6.7
6 x 12	5.4	11.3	121.3	10.1
8 x 8	7.3	7.3	87	7.3
8 x 10	7.3	9.3	110	9.2
10 x 10	9.8	9.8	126.1	10.5

FIBERFORCE® PLASTIC LUMBER

SPAN TABLES JOIST 120° F

24" CENTER DISTANCE

150 LBS/SQ FOOT LIVE LOAD

200 LBS/SQ FOOT LIVE LOAD

150 LBS/SQ FOOT LIVE LOAD					200 LBS/SQ FOOT LIVE LOAD				
		ACTUAL SIZE		MAXIMUM SPAN			ACTUAL SIZE		MAXIMUM SPAN
SIZE	WIDTH	HEIGHT	INCHES	FT	SIZE	WIDTH	HEIGHT	INCHES	FT
5/4 X 4	1.1	3.5	20.1	1.7	5/4 X 4	1.1	3.5	18.3	1.5
5/4 x6	1.1	5.4	31.6	2.6	5/4 x6	1.1	5.4	28.8	2.4
5/4 x 8	1.1	7.3	41.9	3.5	5/4 x 8	1.1	7.3	38.2	3.2
2 x 4	1.5	3.5	22.3	1.9	2 x 4	1.5	3.5	20.3	1.7
2 x 6	1.5	5.4	34.3	2.9	2 x 6	1.5	5.4	31.3	2.6
2 x 8	1.5	7.3	46.4	3.9	2 x 8	1.5	7.3	42.3	3.5
2 x 10	1.5	9.25	58.7	4.9	2 x 10	1.5	9.25	53.6	4.5
2 x 12	1.5	11.3	71.6	6	2 x 12	1.5	11.3	65.4	5.5
3 x 4	2.4	3.4	25.3	2.1	3 x 4	2.4	3.4	23.1	1.9
3 x 6	2.4	5.5	40.8	3.4	3 x 6	2.4	5.5	37.3	3.1
3 x 8	2.4	7.4	54.8	4.6	3 x 8	2.4	7.4	50.1	4.2
3 x 10	2.4	9.3	68.8	5.7	3 x 10	2.4	9.3	62.9	5.2
3 x 12	2.4	11.3	83.4	7	3 x 12	2.4	11.3	76.3	6.4
4 x 4	3.4	3.4	28.4	2.4	4 x 4	3.4	3.4	25.9	2.2
4 x 6	3.4	5.4	44.9	3.7	4 x 6	3.4	5.4	41	3.4
4 x 8	3.4	7.5	61.4	5.1	4 x 8	3.4	7.5	55.4	4.6
4 x 10	3.4	9.5	78.6	6.6	4 x 10	3.4	9.5	71.9	6.0
4 x 12	3.4	11.375	93.3	7.8	4 x 12	3.4	11.375	85.4	7.1
5 x 5	4.4	4.4	39.9	3.3	5 x 5	4.4	4.4	36.4	3
6 x 6	5.4	5.4	52.2	4.3	6 x 6	5.4	5.4	47.7	4
6 x 8	5.4	7.4	71.2	5.9	6 x 8	5.4	7.4	65.2	5.4
6 x 12	5.4	11.3	107.9	9	6 x 12	5.4	11.3	99	8.2
8 x 8	7.3	7.3	77.3	6.4	8 x 8	7.3	7.3	70.8	5.9
8 x 10	7.3	9.3	98.0	8.2	8 x 10	7.3	9.3	89.9	7.5
10 x 10	9.8	9.8	112.7	9.4	10 x 10	9.8	9.8	103.7	8.6

FIBERFORCE[®] PLASTIC LUMBER
SPAN TABLES JOIST 120° F

24" CENTER DISTANCE

85 LBS/SQ FOOT LIVE LOAD

SIZE	ACTUAL SIZE		MAXIMUM SPAN	
	WIDTH	HEIGHT	INCHES	FT
5/4 X 4	1.1	3.5	24.0	2.0
5/4 x6	1.1	5.4	37.6	3.1
5/4 x 8	1.1	7.3	49.9	4.2
2 x 4	1.5	3.5	26.6	2.2
2 x 6	1.5	5.4	40.9	3.4
2 x 8	1.5	7.3	55.2	4.6
2 x 10	1.5	9.25	69.8	5.8
2 x 12	1.5	11.3	85.1	7.1
3 x 4	2.4	3.4	30.1	2.5
3 x 6	2.4	5.5	48.6	4.0
3 x 8	2.4	7.4	65.2	5.4
3 x 10	2.4	9.3	81.7	6.8
3 x 12	2.4	11.3	98.9	8.2
4 x 4	3.4	3.4	33.8	2.8
4 x 6	3.4	5.4	53.4	4.4
4 x 8	3.4	7.5	72.8	6.1
4 x 10	3.4	9.5	93.1	7.8
4 x 12	3.4	11.375	110	9.2
5 x 5	4.4	4.4	47.4	3.9
6 x 6	5.4	5.4	61.9	5.2
6 x 8	5.4	7.4	84.2	7.0
6 x 12	5.4	11.3	127	10.6
8 x 8	7.3	7.3	91.1	7.6
8 x 10	7.3	9.3	115	9.6
10 x 10	9.8	9.8	132	11.0

HARD TOOL (MOLDED) PROCESS **FIBERFORCE[®] RECYCLED PLASTIC LUMBER** SIZE CHART

LUMBER SIZE	ACTUAL DIMENSIONS	LONGEST LENGTHS AVAILABLE- FEET	WEIGHT LBS PER FOOT
1 3/8" Round	1.35" Diameter	8	0.6
2" Round	1.96" Diameter	10	1.2
2 1/2" Round	2.25" Diameter	8	1.8
4" Round	3.9" Diameter	12	4.8
6" Round	5.9" Diameter	16	10
8" Round	7.6" Diameter	34	18.5
9" Round	8.3" Diameter	20	22
10" Round	9.8" Diameter	24	28
12" Round	11.8" Diameter	20	43
13" Round	12.8" Diameter	45	49
5/4" x 4"	1.1" x 3 1/2"	8	1.5
5/4" x 6"	1.1" x 5 1/2"	12	2.3
5/4" x 8"	1.1" x 7 1/2"	12	3.1
2" x 2"	1 1/2" x 1 1/2"	8	1
2" x 3"	1 1/2" x 2 1/2"	8	1.6
2" x 4" & Bull Nose	1 1/2" x 3 1/2"	16/12	2.2
2" x 6"	1 1/2" x 5 7/16"	16	3.5
2" x 6" Sq. Corner	1 1/2" x 5 1/2"	20	3.5
2" x 7" True Sq. Corner	2 x 7"	16	5.6
2" x 8" Round or Sq. Corner	1 1/2" x 7 7/16"	16	4.2
2" x 10"	1 1/2" x 9 3/8"	16	5.4
2" x 10" Tongue & Groove	1 1/2" x 9 1/16"	16	5.4
2" x 12"	1 1/2" x 11 1/4"	16	6.5
2" x 24"	1 15/16" x 24"	10	17
3" x 4" & Bull Nose	2 1/2" x 3 1/2"	16	3.4
3" x 6"	2 1/2" x 5 1/2"	16	5.1
3" x 8" & Bull Nose	2 1/2" x 7 1/2"	20/16	7
3" x 10"	2 1/2" x 9 3/8"	16	9.1
3" x 10" Tongue & Groove	2 1/2" x 9 1/16"	20	9.1
3" x 12"	2 1/2" x 11 1/4"	16	10.8

LUMBER SIZE	ACTUAL DIMENSIONS	LONGEST LENGTHS AVAILABLE- FEET	WEIGHT LBS PER FOOT
4" x 4"	3 1/2" x 3 1/2"	16	4.8
4" x 4" True	4" x 4"	16	5.9
4' x 6"	3 1/2" x 5 1/2"	20	7.2
4" x 8"	3 1/2" x 7 1/2"	20	9.8
4" x 10"	3 1/2" x 9 1/2"	20	12
4" x 12"	3 1/2" x 11 1/4"	20	15
4 1/2" x 6" True	4 1/2" x 6"	16	11
4 1/2" x 8 3/8" True	4 1/2" x 8 3/8"	16	15
4 1/2" x 10" True	4 1/2" x 10"	16	18
5' x 5"	4 1/2" x 4 1/2"	16	7.6
6" x 6"	5 3/8" x 5 3/8"	20	11.5
6" x 8"	5 1/2" x 7 1/2"	20	16
6" x 10"	5 1/2" x 9 3/8"	20	21
6" x 12"	5 1/2" x 11 1/4"	20	25
6" x 16"	6" x 15 1/2"	25	34
6 1/4" x 10" True	6 1/4" x 10"	17	25
7" x 7"	6 1/2" x 6 1/2"	12	15
7" x 10"	7" x 10"	17	29
8" x 8"	7 1/2" x 7 1/2"	24	22
8" x 10"	7 1/2" x 9 3/8"	18	28
8" x 12"	7 1/2" x 11 3/8"	24	33
10" x 10"	9 3/4" x 9 3/4"	40	40
10" x 12"	9.8" x 11.8"	24	48
12" x 12"	11.9" x 11.9"	40	56
12" x 16"	11.8" x 15.7"	24	77

FIBERFORCE® PLASTIC PRODUCT INSTALLATION GUIDE

1. Structural Ability

FIBERFORCE® plastic lumber is recommended for structural use, but care needs to be used in the design of the structure. In most cases the deflection will control the needed size of boards. Refer to span tables to determine support requirements based on live load and ambient temperature. If you have other applications please contact us or a qualified engineer or architect so he can take into account the long term creep and deflection with FIBERFORCE®.

2. Expansion/Contraction

FIBERFORCE® plastic lumber expands and contracts along its length based on temperature. A calculation of change in length in inches (cm) can be done by using 0.000034 IN/IN/deg F (0.000061 cm/cm/deg C) multiplied by its length in inches (cm) and the temperature change of the board. This expansion and contraction on short lengths minimal, but if you are using longer lengths and in a climate with large temperature change you need to take in account the expansion / contraction of the board in the design.

3. Fastening

When fastening a size #10 screw or larger is recommended. Always pre-drill holes. Each board should be fastened with at least 2 screws if fastening to a joist and should be at least 3/4" (2cm) from the edge or end of the board. Stainless steel fasteners are recommended.

4. Butt Joints

When butting FIBERFORCE® plastic against any wall, fixed surface or other boards (if necessary), they should be securely fastened to the nail board or double joist, with a gap allowing for expansion. The size of gap should be determined based on weather conditions at the time of installation—the closer the temperature is to the usual high temperature for the year, the smaller the gap. (See chart below). The project should be designed to minimize the butt joints. However, in the event that joints are required, a double joist underneath the butt joint should be used. Boards should be securely fastened with a row of screws on each side of the joint, 1" (2.54cm) from end of the board. Always keep boards out 1/4" (6mm) from permanent structure.

Temperature at time of installation	Gap between butt ends
Greater then or equal to 90° F (32° C)	1/32" (.8mm) or less
70° F (21° C)	1/16" (1.6mm)
50° F (10° C)	1/8" (3mm)
Less than 30° F (-1° C)	3/16" (4.8mm)

5. Rip Cutting

Rip cutting is not recommended on any plastic lumber. In the event that rip cutting is needed please refer to the following example. Example, if a 4" (10cm) board is needed, 3/4" (2cm) should be ripped off of both sides of a 5-1/2" (14cm) board.

Should there be any questions regarding these instructions, please contact your sales representative for more details.
Failure to follow these instructions will void all warranties.

* Note: Information in parenthesis is a metric conversion of the English representation



THIS PAGE INTENTIONALLY LEFT BLANK



BEDFORD

TECHNOLOGY

2424 ARMOUR ROAD
WORTHINGTON, MN 56187
1-800-721-9037
WEBSITE WWW.PLASTICBOARDS.COM