

Fiber Reinforced Molded Lumber (MF)

Structural Grade Recycled Plastic Lumber

TECHNICAL MANUAL

Note: This product was previously marketed under the trade name FiberForce[®] (MF)

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1. Fiber Reinforced Molded Lumber (MF) Product Summary

PRODUCT DESCRIPTION

Tangent Fiber Reinforced Molded Lumber is a high performance structural product consisting of high quality HDPE (High Density Polyethylene) and fiberglass to increase strength and rigidity in the product. The HDPE used to manufacture Fiber Reinforced Molded Lumber is primarily derived from post consumer products.

PROFILES

Fiber Reinforced Molded Lumber is manufactured in many different profiles and lengths. It is resistant to marine borers, termites, fungus, salt and oils so replacement due to these elements is nearly nonexistent.

COMMON APPLICATIONS

Fiber Reinforced Molded Lumber 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, it is well suited for exterior applications where structural support or load bearing is required. Examples of applications are retaining walls, fencing, decks, large equipment mats, light commercial and many marine applications.



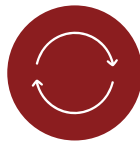
CONFIDENTLY DURABLE

No rotting, splintering or peeling with materials that stand the test of time. Our products can withstand year round weather and endure the harshest of environments.



LASTING BEAUTY

Our boards are manufactured with UV stabilizers throughout so they will never require painting, staining or sealing.



SUSTAINABLY MADE

Our boards don't need to be treated like wood and are environmentally-friendly. Made from recycled materials, our lumber won't leach chemicals into our environment.



EASE OF CARE

Our products are resistant to marine borers and insects. Also impervious to moisture, Tangent materials are truly a low-maintenance product.



MADE IN THE USA

Our products are made in the United States. With quality that is second to none, our quality and engineering teams test our products against over 15 ASTM standards.

2. Fiber Reinforced Molded Lumber Specifications

Tangent Fiber Reinforced Molded Lumber is manufactured with HDPE and fiberglass elements to act as a reinforcement with HDPE. Lumber will 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. When properly installed, Fiber Reinforced Molded Lumber will not rot, split, crack or splinter. It is completely resistant to termites, marine borers, salt spray, oil and fungus.

TEST	ASTM TEST	VALUE (ENGLISH)	VALUE (METRIC)
Flexural Strength	D6109	2,750 psi	193 kg/cm ²
Flexural Modulus Secant @ 1% strain	D6109	306,080 psi	21,520 kg/cm ²
Compression Strength Parallel to grain	D6108	2,842 psi	200 kg/cm ²
Compression Strength Perpendicular to grain	D6108	1,482 psi	104 kg/cm ²
Compression Modulus Strength Parallel to grain—Secant at 1% strain	D6108	159,576 psi	11,219 kg/cm ²
Compression Modulus Strength Perpendicular to grain—Secant at 1% strain	D6108	54,119 psi	3,804 kg/cm ²
Specific Gravity	D6111	0.93 g/cc	0.93 g/cc
Flash Point		644°F	340°C
Moisture Absorption		0.06 % by weight	0.06 % by weight
Thermal Expansion	D6341-98	0.000033 inch/inch/°F	0.00006
Average Screw pull out	D6117	646 lbs	293 kg
Static coefficient of Friction - Dry	D2047	0.73	
Static coefficient of Friction - Wet	D2047	0.90	
Flame Spread	E84	62	
Flame Spread Classification	E84	60	
Smoke Developed	E84	230	
Smoke Developed Classification	E84	250	
Spontaneous Ignition	D1929	824°F	440°C
Tensile test (skin)	D638	3,623 psi	254 kg/cm ²
Shear Strength	D2344	800 psi	56 kg/cm ²
Notched impact resistance Method A	D256	2.77 ft-lb/inch	
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:

Width Tolerance: 4" +/- 3/32", 6" +/- 1/8", 8" +/- 3/16", 10" +/- 1/4", 12" +/- 1/4"

Cup/Bulge: Deviation in the face from a straight line from edge to edge of piece.

Length Tolerance: + 3" / -0" at 70°F

*The above listed are specifications for plastic lumber to be used as a reference for bid specifications. This is only a guide. Your specific application should be addressed by a professional engineer.

3. Fiber Reinforced Molded Lumber Span Tables 122°F

DECKING MODE

Chart for ambient 122°F. For use with live load only; for dead loads please call Tangent.
Serviceability limit for these spans is L/240.

60 LBS/SQ FOOT LIVE LOAD

SIZE	Actual Size	Maximum Span	
	THICKNESS	INCHES	FEET
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	FEET
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	FEET
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

100 LBS/SQ FOOT LIVE LOAD

SIZE	Actual Size	Maximum Span	
	THICKNESS	INCHES	FEET
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

(SEATING) 200 LBS/SQ FOOT LIVE LOAD

SIZE	Actual Size	Maximum Span	
	THICKNESS	INCHES	FEET
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

4. Fiber Reinforced Molded Lumber Span Tables 122°F

JOIST MODE - 12" ON CENTER

Serviceability limit for these spans is L/240.

60 LBS/SQ FOOT LIVE LOAD

SIZE	Actual Size		Maximum Span	
	WIDTH	HEIGHT	INCHES	FEET
5/4 x 4	1.1	3.5	33.4	2.8
5/4 x 6	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	FEET
5/4 x 4	1.1	3.5	28.7	2.4
5/4 x 6	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

5. Fiber Reinforced Molded Lumber Span Tables 122°F

JOIST MODE - 12" ON CENTER

Serviceability limit for these spans is L/240.

150 LBS/SQ FOOT LIVE LOAD

SIZE	Actual Size		Maximum Span	
	WIDTH	HEIGHT	INCHES	FEET
5/4 x 4	1.1	3.5	25.3	2.1
5/4 x 6	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	FEET
5/4 x 4	1.1	3.5	23.1	1.9
5/4 x 6	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

6. Fiber Reinforced Molded Lumber Span Tables 122°F

JOIST MODE - 16" ON CENTER

Serviceability limit for these spans is L/240.

60 LBS/SQ FOOT LIVE LOAD

SIZE	Actual Size		Maximum Span	
	WIDTH	HEIGHT	INCHES	FEET
5/4 x 4	1.1	3.5	30.4	2.5
5/4 x 6	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	FEET
5/4 x 4	1.1	3.5	26.1	2.2
5/4 x 6	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

7. Fiber Reinforced Molded Lumber Span Tables 122°F

JOIST MODE - 16" ON CENTER

Serviceability limit for these spans is L/240.

150 LBS/SQ FOOT LIVE LOAD

SIZE	Actual Size		Maximum Span	
	WIDTH	HEIGHT	INCHES	FEET
5/4 x 4	1.1	3.5	23	1.9
5/4 x 6	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	FEET
5/4 x 4	1.1	3.5	21	1.7
5/4 x 6	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

8. Fiber Reinforced Molded Lumber Span Tables 122°F

JOIST MODE - 24" ON CENTER

Serviceability limit for these spans is L/240.

60 LBS/SQ FOOT LIVE LOAD

SIZE	Actual Size		Maximum Span	
	WIDTH	HEIGHT	INCHES	FEET
5/4 x 4	1.1	3.5	26.6	2.2
5/4 x 6	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	FEET
5/4 x 4	1.1	3.5	22.8	1.9
5/4 x 6	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

9. Fiber Reinforced Molded Lumber Span Tables 122°F

JOIST MODE - 24" ON CENTER

Serviceability limit for these spans is L/240.




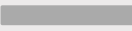







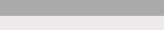


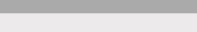

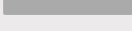
150 LBS/SQ FOOT LIVE LOAD

200 LBS/SQ FOOT LIVE LOAD

SIZE	Actual Size		Maximum Span	
	WIDTH	HEIGHT	INCHES	FEET
5/4 x 4	1.1	3.5	20.1	1.7
5/4 x 6	1.1	5.4	31.6	2.6
5/4 x 8	1.1	7.3	41.9	3.5
2 x 4	1.5	3.5	22.3	1.9
2 x 6	1.5	5.4	34.3	2.9
2 x 8	1.5	7.3	46.4	3.9
2 x 10	1.5	9.25	58.7	4.9
2 x 12	1.5	11.3	71.6	6
3 x 4	2.4	3.4	25.3	2.1
3 x 6	2.4	5.5	40.8	3.4
3 x 8	2.4	7.4	54.8	4.6
3 x 10	2.4	9.3	68.8	5.7
3 x 12	2.4	11.3	83.4	7
4 x 4	3.4	3.4	28.4	2.4
4 x 6	3.4	5.4	44.9	3.7
4 x 8	3.4	7.5	61.4	5.1
4 x 10	3.4	9.5	78.6	6.6
4 x 12	3.4	11.375	93.3	7.8
5 x 5	4.4	4.4	39.9	3.3
6 x 6	5.4	5.4	52.2	4.3
6 x 8	5.4	7.4	71.2	5.9
6 x 12	5.4	11.3	107.9	9
8 x 8	7.3	7.3	77.3	6.4
8 x 10	7.3	9.3	98.0	8.2
10 x 10	9.8	9.8	112.7	9.4








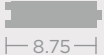






SIZE	Actual Size		Maximum Span	
	WIDTH	HEIGHT	INCHES	FEET
5/4 x 4	1.1	3.5	18.3	1.5
5/4 x 6	1.1	5.4	28.8	2.4
5/4 x 8	1.1	7.3	38.2	3.2
2 x 4	1.5	3.5	20.3	1.7
2 x 6	1.5	5.4	31.3	2.6
2 x 8	1.5	7.3	42.3	3.5
2 x 10	1.5	9.25	53.6	4.5
2 x 12	1.5	11.3	65.4	5.5
3 x 4	2.4	3.4	23.1	1.9
3 x 6	2.4	5.5	37.3	3.1
3 x 8	2.4	7.4	50.1	4.2
3 x 10	2.4	9.3	62.9	5.2
3 x 12	2.4	11.3	76.3	6.4
4 x 4	3.4	3.4	25.9	2.2
4 x 6	3.4	5.4	41	3.4
4 x 8	3.4	7.5	55.4	4.6
4 x 10	3.4	9.5	71.9	6
4 x 12	3.4	11.375	85.4	7.1
5 x 5	4.4	4.4	36.4	3
6 x 6	5.4	5.4	47.7	4
6 x 8	5.4	7.4	65.2	5.4
6 x 12	5.4	11.3	99	8.2
8 x 8	7.3	7.3	70.8	5.9
8 x 10	7.3	9.3	89.9	7.5
10 x 10	9.8	9.8	103.7	8.6

10. Fiber Reinforced Molded Lumber Size Chart











Shape	Nominal Profile	Actual Dimensions (in x in)	Longest Length (ft)	Approx. Weight (lb/ft)	Actual Dimensions (cm x cm)	Longest Length (m)	Approx. Weight (kg/m)
	5/4 x 2 7/8	1.10 x 2.88	7.5	1.4	2.8 x 7.3	2.3	2.1
	5/4 x 4	1.10 x 3.54	8	1.5	2.8 x 9.0	2.4	2.3
	5/4 x 6	1.10 x 5.52	12	2.3	2.8 x 14.0	3.7	3.4
	5/4 x 8	1.10 x 7.40	12	3.1	2.8 x 18.8	3.7	4.6
	2 x 2	1.60 x 1.60	7.5	1.0	4.1 x 4.1	2.3	1.5
	2 x 3	1.60 x 2.60	7.5	1.6	4.1 x 6.6	2.3	2.4
	2 x 4	1.45 x 3.43	16	2.2	3.7 x 8.7	4.9	3.3
	2 x 4 BN	1.45 x 3.50	12	2.2	3.7 x 8.9	3.7	3.3
	2 x 6	1.46 x 5.44	16	3.5	3.7 x 13.8	4.9	5.2
	2 x 6 Sq. Corner	1.46 x 5.44	20	3.5	3.7 x 13.8	6.1	5.2
	2 x 8	1.50 x 7.40	18	4.2	3.8 x 18.8	5.5	6.3
	2 x 10	1.46 x 9.26	16	5.4	3.7 x 23.5	4.9	8.0
  9.09	2 x 10 T&G	1.46 x 9.09	16	5.5	3.7 x 23.1	4.9	8.2
	2 x 12	1.46 x 11.25	16	6.5	3.7 x 28.6	4.9	9.7
	2 x 5 1/2 True	1.99 x 5.49	16	4.8	5.1 x 13.9	4.9	7.1
	2 x 7 True	1.98 x 6.95	16	6.1	5.1 x 17.7	4.9	9.0

*T&G is Tongue & Groove









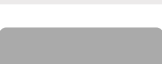
10. Fiber Reinforced Molded Lumber Size Chart (cont.)

Shape	Nominal Profile	Actual Dimensions (in x in)	Longest Length (ft)	Approx. Weight (lb/ft)	Actual Dimensions (cm x cm)	Longest Length (m)	Approx. Weight (kg/m)
	2 x 24	1.95 x 23.98	10	20.6	5.0 x 60.9	3.1	30.8
	3 x 4	2.40 x 3.38	16	3.4	6.1 x 8.6	4.9	5.0
	3 x 4 BN	2.40 x 3.40	16	3.4	6.1 x 8.6	4.9	5.0
	3 x 6	2.38 x 5.42	16	5.1	6.0 x 13.8	4.9	7.6
	3 x 8	2.45 x 7.38	16	7.0	6.2 x 18.7	4.9	10.4
	3 x 8 BN	2.40 x 7.30	16	7.0	6.1 x 18.5	4.9	10.4
	3 x 10	2.40 x 9.30	16	8.9	6.1 x 23.6	4.9	13.3
 8.75	3 x 10 T&G	2.44 x 8.75	20	8.9	6.2 x 22.2	6.1	13.3
	3 x 12	2.40 x 11.30	16	10.8	6.2 x 28.7	4.9	16.0
	3 x 3 3/4 True	2.91 x 3.64	16	4.7	7.4 x 9.2	4.9	7.0
	3 x 24 True	2.95 x 23.92	10	31.1	7.5 x 60.8	3.1	46.6
	4 x 4	3.45 x 3.45	20	4.8	8.8 x 8.8	6.1	7.0
	4 x 4 True	3.94 x 3.94	16	5.9	10.0 x 10.0	4.9	8.8
	4 x 6	3.38 x 5.38	20	7.2	8.6 x 13.7	6.1	10.7









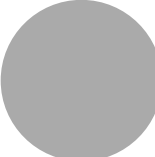
10. Fiber Reinforced Molded Lumber Size Chart (cont.)

Shape	Nominal Profile	Actual Dimensions (in x in)	Longest Length (ft)	Approx. Weight (lb/ft)	Actual Dimensions (cm x cm)	Longest Length (m)	Approx. Weight (kg/m)
	4 x 8	3.38 x 7.38	20	9.8	8.6 x 18.7	6.1	14.6
	4 x 10	3.44 x 9.50	20	14.4	8.8 x 24.1	6.1	21.5
	4 x 12	3.44 x 11.25	20	15.0	8.8 x 28.6	6.1	22.4
	4 1/2 x 10 True	4.48 x 9.95	16	19.6	11.4 x 25.3	4.9	29.3
	5 x 5	4.37 x 4.37	20	7.6	11.1 x 11.1	6.1	11.3
	6 x 6	5.38 x 5.38	16	11.5	13.7 x 13.7	4.9	17.2
	6 x 6 True	5.88 x 5.88	16	15.2	14.9 x 14.9	4.9	22.7
	6 x 8	5.40 x 7.38	32	16.0	13.7 x 18.7	9.7	24.0
	6 x 10	5.40 x 9.38	20	22.3	13.7 x 23.8	6.1	33.4
	6 x 12	5.37 x 11.25	16	25.0	13.6 x 28.6	4.9	37.4







10. Fiber Reinforced Molded Lumber Size Chart (cont.)

Shape	Nominal Profile	Actual Dimensions (in x in)	Longest Length (ft)	Approx. Weight (lb/ft)	Actual Dimensions (cm x cm)	Longest Length (m)	Approx. Weight (kg/m)
	6 x 16 True	5.88 x 15.56	24	40.3	14.9 x 39.5	7.3	60.4
	7 x 10 True	6.96 x 9.95	17	30.5	17.7 x 25.3	5.2	45.7
	8 x 8	7.40 x 7.40	24	22.0	18.8 x 18.8	7.3	33.0
	8 x 10	7.40 x 9.38	17	28.0	18.8 x 23.8	5.2	42.0
	8 x 12	7.40 x 11.38	24	33.0	18.8 x 28.9	7.3	49.4
	10 x 10	9.75 x 9.75	41	40.0	24.7 x 24.7	12.5	60.0
	10 x 12	9.75 x 11.75	25	48.0	24.7 x 29.8	7.6	72.0
	12 x 12	11.75 x 11.75	41	56.0	29.8 x 29.8	12.5	84.0
	12 x 16	11.75 x 15.75	25	77.0	29.8 x 40.0	7.6	115.4

10. Fiber Reinforced Molded Lumber Size Chart (cont.)

Shape	Nominal Profile	Actual Dimensions (in x in)	Longest Length (ft)	Approx. Weight (lb/ft)	Actual Dimensions (cm x cm)	Longest Length (m)	Approx. Weight (kg/m)
	1 3/8" Round	Ø 1.34	8	0.6	Ø 3.4	2.4	0.9
	2 1/2" Round	Ø 2.30	10	1.8	Ø 5.8	3.1	2.6
	3 1/2" Round	Ø 3.48	16	4.2	Ø 8.8	4.9	6.2
	4" Round	Ø 3.88	16	4.8	Ø 9.8	4.9	7.1
	5" Round	Ø 4.85	16	8.1	Ø 12.3	4.9	12.1
	6" Round	Ø 5.81	16	11.7	Ø 14.7	4.9	17.5
	8" Round	Ø 7.51	34	19.5	Ø 19.1	10.4	29.2
	8 1/2" Round	Ø 8.30	20	23.9	Ø 21.1	6.1	35.8
	10" Round	Ø 9.83	24	28.3	Ø 25.0	7.3	42.4

10. Fiber Reinforced Molded Lumber Size Chart (cont.)

Shape	Nominal Profile	Actual Dimensions (in x in)	Longest Length (ft)	Approx. Weight (lb/ft)	Actual Dimensions (cm x cm)	Longest Length (m)	Approx. Weight (kg/m)
	HD Parking Curb	4.48 x 6.40	8	12.6	11.4 x 16.2	2.4	18.8
	LD Parking Curb	4.0 x 5.88	8	10.4	10.2 x 14.9	2.4	15.5
	SM Parking Curb	3.19 x 4.38	8	6.2	8.1 x 11.1	2.4	9.2
	Speed Bump	2.0 tall x 9.8	8	8.6	5.1 tall x 24.9	2.4	12.8
	2.5 x 3.5 Stadium	2.50 x 3.50	16	3.9	6.3 x 8.9	4.9	5.8
	Octagon 5.5	5.32	17	9.8	13.5	5.2	14.6

SPL006-230918

11. Fiber Reinforced Molded Lumber Installation Guide

1. STRUCTURAL ABILITY

Tangent Fiber Reinforced Molded 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 they can take into account the long term creep and deflection with Fiber Reinforced Molded Lumber.

2. EXPANSION/CONTRACTION

Fiber Reinforced Molded 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/°F (0.000061 cm/cm/°C) multiplied by its length in inches (cm) and the temperate 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. DECKING: FASTENING

When fastening deckboards, 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. DECKING: BUTT JOINTS

When butting Fiber Reinforced Molded Lumber 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" (0.8mm) 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.

For more information, please visit our website
or contact your sales representative.

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