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MoistureShield® Flexure Loading Summary

Specimen Number	Beam Dimensions Width, Depth, Span	Delta Inches	Load Pounds	Modulus of Rupture	Modulus of Elasticity	Shear Stress
C1	5.5" x 1.5" x 24"	1.086	673.8	1,307	98,311	61
C2	5.5" x 1.5" x 24"	0.977	713.5	1,384	115,717	65
C3	5.5" x 1.5" x 24"	1.222	774.7	1,502	100,453	70
C4	5.5" x 1.5" x 24"	1.129	732.5	1,421	102,805	67
C5	5.5" x 1.5" x 24"	1.091	750.6	1,456	109,014	68
Average		1.101	729.0	1,414	105,260	66
Standard Deviation		0.088	38.3	74	7,087	3

R1	5.5" X 1.25" X 24"	1.868	583.2	1,629	85,484	64
R2	5.5" X 1.25" X 24"	1.536	538.4	1,504	95,975	59
R3	5.5" X 1.25" X 24"	1.482	522.8	1,460	96,590	57
R4	5.5" X 1.25" X 24"	1.759	568.5	1,588	88,493	62
R5	5.5" X 1.25" X 24"	1.580	541.8	1,513	93,891	59
Average		1.645	550.9	1,539	92,086	60
Standard Deviation		1.62	24.4	68	4,878	3

Commercial Decking Coefficient of Friction

Sample Number	Static Dry	Static Wet	Dynamic Dry	Dynamic Wet
1	0.63	0.48	0.43	0.32
2	0.60	0.45	0.43	0.35
3	0.57	0.45	0.45	0.35
4	0.62	0.48	0.45	0.32
5	0.67	0.45	0.50	0.35
Average	0.62	0.46	0.45	0.34

ASTM D198-84 / ASTM D2394-83

MoistureShield® Load Design Chart - Residential Decking							
Deflection	Unsupported Beam Span(Inches), Allowable Load (PSF)						
Span / Inches	12	14	16	18	20	22	24
360	122	77	52	36	26	20	15
240	183	115	77	54	40	30	23
180	244	154	103	72	53	40	31
120	367	231	155	109	79	60	46
60	733	462	309	217	158	119	92

Load Design Chart - Commercial Decking							
Deflection	Unsupported Beam Span(Inches), Allowable Load (PSF)						
Span / Inches	12	14	16	18	20	22	24
360	241	152	102	72	52	39	30
240	362	228	153	107	78	59	45
180	483	304	204	143	104	78	60
120	724	456	306	215	156	118	91
60	1,449	912	611	429	313	235	181

ASTM E72-95

Cross-sectional Moment of Inertia					
Sample Number	Span	Delta Inches	Load Pounds	Load/2 Pounds	M of I lb-in ²
C1	24 x 8	1.086	673.8	336.9	152,215
C2	24 x 8	0.977	713.5	356.8	179,166
C3	24 x 8	1.222	774.7	387.4	155,532
C4	24 x 8	1.129	732.5	366.3	159,173
C5	24 x 8	1.091	750.6	375.3	168,788
Average		1.010	729.0	364.5	162,975
Standard Deviation		0.088	38.3	19.1	10,972
R1	24 x 8	1.868	583.2	291.6	76,594
R2	24 x 8	1.536	538.4	269.2	85,994
R3	24 x 8	1.482	522.8	261.4	86,545
R4	24 x 8	1.759	568.5	284.3	79,291
R5	24 x 8	1.580	541.8	270.9	84,128
Average		1.645	550.9	275.5	82,510
Standard Deviation		0.162	24.4	12.2	4,370

MoistureShield®

Average Screw Strip Out Torque - pounds	27 / 39
Average Screw Holding Force - pounds	383 / 510
Average Nail Holding Force - pounds	398
Moisture Absorption - 24 hours	< 3%
Percent of Volume Increase	< 1%
Compression Strength Perp to Grain (PSI)	1290 / 1640
Coefficient of Lineal Thermal Expansion and Contraction	< 2.2 × 10 ⁻⁵
Fire Rating	Class "C"