



NATRON WOOD PRODUCTS

6 Ply /5 Layer 11/16 MDO

Design Capacities

Along Panel			Across Panel		
MOE	MOR	F _s	MOE	MOR	F _s
1,500,000	1,190	63	1,500,000	1,190	63
I		0.20	I		0.11
KS		0.48	KS		0.40
lb/Q		6.54	lb/Q		4.26
EI	F _b S	F _s lb/Q	EI	F _b S	F _s lb/Q
301,220	568	412	161,605	476	268

Tables derived on: January 3 2018

By: Eric Sporer, Manager, Laboratories, Technical Services Division

Panel Thickness (in.)	3/4	0.750
Duration of Load Factor	1.25	
Experience Factor	1.30	
Bending and Shear Deflection	2	Note: 1 = combined, 2 = separate

No. of Spans		
SW =	PDS	[enter "PDS" or actual support width (in.)]
Spans =	PDS	[enter "PDS" or actual number of spans up to 3]
Panel length (in.) =	96	
Panel width (in.) =	48	

PDS note: For spans <48 in., SW assumed to be nominal 2x, for spans >= 48 in. nominal 4x assumed.
 PDS note: When panel strength axis is across supports; spans <= 32 in., 3 spans are assumed, for spans >32 in. 2 spans are assumed. When panel strength axis is parallel supports; spans <= 16 in., 3 spans are assumed, for 16 in. >spans >=24 in. 2 spans are assumed, spans > 24 in., 1 span is assumed.



Panel Strength Axis Across Supports, Spans (o.c.)												
	4	8	12	16	19.2	24	30	32	36	40	48	60
Applied SW =	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
L ₁ (in.) =	4	8	12	16	19.2	24	30	32	36	40	48	60
L ₂ (in.) =	2.5	6.5	10.5	14.5	17.7	22.5	28.5	30.5	34.5	38.5	44.5	56.5
L ₃ (in.) =	3	7	11	15	18	23	29	31	35	39	45	57
SW Factor (in.) =	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.625	0.625
Applied Spans =	3	3	3	3	3	3	3	3	2	2	2	2

Panel Strength Axis Parallel to Supports, Spans (o.c.)												
	4	8	12	16	19.2	24	30	32	36	40	48	60
Applied SW =	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
L ₁ (in.) =	4	8	12	16	19.2	24	30	32	36	40	48	60
L ₂ (in.) =	2.5	6.5	10.5	14.5	17.7	22.5	28.5	30.5	34.5	38.5	44.5	56.5
L ₃ (in.) =	3	7	11	15	18	23	29	31	35	39	45	57
SW Factor (in.) =	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.625	0.625
Applied Spans =	3	3	3	3	2	2	1	1	1	1	1	1

Panel Strength Axis Across Supports, Spans (o.c.)												
	4	8	12	16	19.2	24	30	32	36	40	48	60
L/360	9,245	2,010	785	375	225	120	65	50	45	35	20	10
L/270	12,325	2,680	1,045	500	305	160	85	70	60	45	30	15
Bending	6,920	1,730	770	435	300	190	125	110	70	55	40	25
Shear	5,360	2,060	1,275	925	755	595	470	440	375	335	290	230
Deflection*	0.01	0.02	0.03	0.05	0.07	0.11	0.17	0.19	0.15	0.18	0.24	0.38

Panel Strength Axis Parallel to Supports, Spans (o.c.)												
	4	8	12	16	19.2	24	30	32	36	40	48	60
L/360	9,165	1,630	545	235	170	85	20	15	10	10	5	5
L/270	12,220	2,170	725	315	225	115	25	20	15	10	5	5
Bending	5,805	1,450	645	365	200	130	85	75	55	45	30	20
Shear	3,490	1,340	830	600	475	370	365	345	305	270	235	185
Deflection*	0.00	0.02	0.04	0.07	0.06	0.10	0.36	0.42	0.50	0.63	0.77	1.30

* Average deflection at maximum recommended load based on strength (in.)



The Following is a Short Table of Net Results From The Load-Span Table:
 (Recommended loads less than 100 psf are not shown - English units only)

Panel Strength Axis Across Supports, Spans (o.c.)												
	4	8	12	16	19.2	24	30	32	36	40	48	60
L/360	5,360	1,730	770	375	225	120	---	---	---	---	---	---
L/270	5,360	1,730	770	435	300	160	---	---	---	---	---	---

Panel Strength Axis Parallel to Supports, Spans (o.c.)												
	4	8	12	16	19.2	24	30	32	36	40	48	60
L/360	3,490	1,340	545	235	170	---	---	---	---	---	---	---
L/270	3,490	1,340	645	315	200	115	---	---	---	---	---	---



NATRON WOOD PRODUCTS

6Ply/5 Layer 3/4 MDO

Design Capacities

Along Panel			Across Panel		
MOE	MOR	F _s	MOE	MOR	F _s
1,500,000	1,190	63	1,500,000	1,190	63
	I	0.29		I	0.12
	KS	0.63		KS	0.42
	lb/Q	7.05		lb/Q	4.36
EI	F _s S	F _s lb/Q	EI	F _s S	F _s lb/Q
431,249	752	444	174,758	499	275

Tables derived on: January 3 2018
By: Eric Sporer, Manager, Laboratories, Technical Services Division

Panel Thickness (in.) 3/4 0.750
Duration of Load Factor 1.25
Experience Factor 1.30
Bending and Shear Deflection 2 Note: 1 = combined, 2 = separate

No. of Spans
SW = PDS [enter "PDS" or actual support width (in.)]
Spans = PDS [enter "PDS" or actual number of spans up to 3]
Panel length (in.) = 96
Panel width (in.) = 48

PDS Note: For spans <48 in., SW assumed to be nominal 2x, for spans >= 48 in., nominal 4x assumed.
PDS Note: When panel strength axis is across supports; spans <= 32 in., 3 spans are assumed, for spans >32 in. 2 spans are assumed. When panel strength axis is parallel supports; spans <= 16 in., 3 spans are assumed, for 16 in. >spans >=24 in. 2 spans are assumed, spans > 24 in., 1 span is assumed.

Panel Strength Axis Across Supports, Spans (o.c.)												
	4	8	12	16	19.2	24	30	32	36	40	48	60
Applied SW =	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	3.5	3.5
L ₁ (in.) =	4	8	12	16	19.2	24	30	32	36	40	48	60
L ₂ (in.) =	2.5	6.5	10.5	14.5	17.7	22.5	28.5	30.5	34.5	38.5	44.5	56.5
L ₃ (in.) =	3	7	11	15	18	23	29	31	35	39	45	57
SW Factor (in.) =	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.625	0.625
Applied Spans =	3	3	3	3	3	3	3	3	2	2	2	2

Panel Strength Axis Parallel to Supports, Spans (o.c.)												
	4	8	12	16	19.2	24	30	32	36	40	48	60
Applied SW =	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	3.5	3.5
L ₁ (in.) =	4	8	12	16	19.2	24	30	32	36	40	48	60
L ₂ (in.) =	2.5	6.5	10.5	14.5	17.7	22.5	28.5	30.5	34.5	38.5	44.5	56.5
L ₃ (in.) =	3	7	11	15	18	23	29	31	35	39	45	57
SW Factor (in.) =	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.625	0.625
Applied Spans =	3	3	3	3	2	2	1	1	1	1	1	1

Panel Strength Axis Across Supports, Spans (o.c.)												
	4	8	12	16	19.2	24	30	32	36	40	48	60
L/360	13,235	2,880	1,120	535	325	175	90	75	65	50	30	15
L/270	17,650	3,840	1,495	715	435	230	120	100	85	65	45	20
Bending	9,170	2,295	1,020	575	400	255	165	145	90	75	50	35
Shear	5,770	2,220	1,375	995	815	640	505	475	400	360	310	245
Deflection*	0.00	0.02	0.03	0.05	0.07	0.10	0.15	0.17	0.14	0.17	0.21	0.37

Panel Strength Axis Parallel to Supports, Spans (o.c.)												
	4	8	12	16	19.2	24	30	32	36	40	48	60
L/360	9,910	1,760	590	255	185	95	20	15	10	10	5	5
L/270	13,215	2,350	785	340	245	125	30	25	15	10	10	5
Bending	6,080	1,520	675	380	210	135	85	75	60	50	35	20
Shear	3,570	1,375	850	615	485	380	375	350	310	280	240	190
Deflection*	0.00	0.02	0.04	0.07	0.06	0.10	0.34	0.39	0.50	0.64	0.83	1.21

* Average deflection at maximum recommended load based on strength (in.)

The Following is a Short Table or Not Results From The Load-Span Table:
(Recommended loads less than 100 psf are not shown - English units only)

Panel Strength Axis Across Supports, Spans (o.c.)												
	4	8	12	16	19.2	24	30	32	36	40	48	60
L/360	5,770	2,220	1,020	535	325	175	---	---	---	---	---	---
L/270	5,770	2,220	1,020	575	400	230	120	100	---	---	---	---

Panel Strength Axis Parallel to Supports, Spans (o.c.)												
	4	8	12	16	19.2	24	30	32	36	40	48	60
L/360	3,570	1,375	590	255	185	---	---	---	---	---	---	---
L/270	3,570	1,375	675	340	210	125	---	---	---	---	---	---