

Stress and Load Span Tables

These stress and load span tables simulate actual wet form conditions. Dry load span values are overstated and should not be used. Canadian (COFI) design values for Douglas Fir are 25% higher than APA

Stress Tables: Tables 1 & 2 herein are based on standard APA and commercial standards PS-1 criteria.

Stress Table – Dry Working Stress Design Capacities					
Nominal Thickness	Struct 1		Class 1		Wet Adjust Factor
	1/2"	3/4"	1/2"	3/4"	
Number of Plys	5	7	5	7	
Table 1: Face Grain Perpendicular to Supports-Dry¹					
Bending Stiffness ¹	138,226	467,824	137,951	421,415	.85
Bending Resistance ²	393	875	391	789	.75
Planar Shear ³	267	360	199	262	.75
Table 2: Face Grain Parallel to Supports-Dry¹					
Bending Stiffness ¹	40,100	191,029	34,054	160,967	.85
Bending Resistance ²	207	551	152	402	.75
Planar Shear ³	145	302	103	229	.75

¹Bending Stiffness = EI* (lb-in²/ft); ²Bending Resistance = M or F_bS (lb-in/ft);

³Planar Shear Capacity: V or F_vlb/Q (lb/ft) There is no DOL (Duration of Load) or Experience factor applied to EI. F_bS and F_vlb/Q.

Load Span Tables: Tables 3 through 6 are based on standard APA and PS-1 criteria.

Struct 1 LOAD SPAN TABLES – WET CONDITIONS								
Recommended Maximum PSF on Struct 1 Panels								
Table 3: Face Grain Perpendicular to Supports ¹								
Support Spacing	Plywood Thickness – Allowable Pressure (PSF)							
	1/2"	5/8" or 11/16"	3/4"	1-1/8"	1-1/8"	1-1/8"	1-1/8"	
(in.)	λ/360	λ/270	λ/360	λ/270	λ/360	λ/270	λ/360	λ/270
8"	1,405	1,405	1,970	1,970	2,050	2,050	3,095	3,095
12"	485	620	745	875	1,060	1,105	1,845	1,845
16"	205	275	350	450	505	575	1,335	1,335
19.2"	120	160	195	265	305	405	1,015	1,015
24"			100	135	160	210	625	650
Table 4: Face Grain Parallel to Supports ¹								
Support Spacing	Plywood Thickness – Allowable Pressure (PSF)							
	1/2"	5/8" or 11/16"	3/4"	1-1/8"	1-1/8"	1-1/8"	1-1/8"	
(in.)	λ/360	λ/270	λ/360	λ/270	λ/360	λ/270	λ/360	λ/270
8"	550	610	1,115	1,115	1,685	1,685	2,525	2,525
12"	155	210	430	575	715	810	1,560	1,560
16"			180	240	310	415	1,000	1,000
19.2"			125	170	220	250	555	555
24"					110	150	355	355

Notes: ¹Plywood continuous across two or more spans
These are total loads (weight of panel should be considered in horizontal applications)
DOL (Duration of Load) 1.25 and Experience factor of 1.30 used in load tables.

Class 1 LOAD SPAN TABLES – WET CONDITIONS								
Recommended Maximum PSF on Class 1 Panels								
Table 5: Face Grain Perpendicular to Supports ¹								
Support Spacing	Plywood Thickness – Allowable Pressure (PSF)							
	1/2"	5/8" or 11/16"	3/4"	1-1/8"	1-1/8"	1-1/8"	1-1/8"	
(in.)	λ/360	λ/270	λ/360	λ/270	λ/360	λ/270	λ/360	λ/270
8"	1,000	1,000	1,320	1,320	1,580	1,580	2,230	2,230
12"	455	495	710	710	885	885	1,380	1,380
16"	195	260	325	400	445	505	1,000	1,000
19.2"	110	150	190	255	270	350	740	820
24"			100	130	145	190	425	530
Table 6: Face Grain Parallel to Supports ¹								
Support Spacing	Plywood Thickness – Allowable Pressure (PSF)							
	1/2"	5/8" or 11/16"	3/4"	1-1/8"	1-1/8"	1-1/8"	1-1/8"	
(in.)	λ/360	λ/270	λ/360	λ/270	λ/360	λ/270	λ/360	λ/270
8"	392	434	747	747	1,175	1,175	1,819	1,819
12"	145	167	409	466	596	648	1,167	1,167
16"			167	213	273	364	749	749
19.2"			121	163	194	216	404	448
24"					100	135	241	289

Notes: ¹Plywood continuous across two or more spans
These are total loads (weight of panel should be considered in horizontal applications)
DOL (Duration of Load) 1.25 and Experience factor of 1.30 used in load tables.

Form Panel Thickness: For more detailed design information, refer to APA publication "Plywood For Concrete Forming" and to American Concrete Institute publication "Formwork for Concrete."

Edge Support: In high moisture/sustained load conditions, edges may have a greater deflection than the panel center and may exceed calculated deflection.

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Suitability for Use and Warranty

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Jobsite Care and Handling

- Product preparation:** OPP's HDO panels are not factory release coated. Lightly coat panels prior to first use and each subsequent use with Nox-Crete PCE/PCS or equivalent agent.
- Pouring and Vibrating:** Follow the rate of pour to reduce excessive pressure that can cause panel damage. Use rubber tipped vibrators and exercise care not to damage form faces.
- Stripping:** Prolong panel life with proper stripping and handling. Use wood wedges, rather than metal bars or pries, to separate the form from the concrete. Form panels must be lowered, not thrown or dropped, to avoid face and edge damage.
- Cleaning:** Storage and Edge Sealing: Clean panels after each use, employing burlap or flat, non-scratching tools such as plastic or wood scrapers. Reseal cut edges or exposed wood at holes or openings with two coats of a Styrene acrylic sealer. Stack panels flat and remove fasteners to prevent damage and warping. Store panels in a protected area and avoid direct sunlight
- Surface Repairs:** Remove form release agent, concrete & loose wood/overlay debris. Sand the damaged surface with coarse (80 grit) disc or paper. For architectural concrete, use fine (120 grit) for the damaged perimeter area. Clean all sanding debris from the repair area. Apply: W.R. Meadows - Rezi-Weld Gel Paste State, Euclid - Euco #620 Gel Epoxy System, or Sika - Sikadur AnchorFix. Use the Rezi-Weld Gel Paste State when the air temp is above 60° F, or the Euco #620 Gel or Sikadur AnchorFix-4 when the air temp is above 33° F. Scrape off the excess repair material using a putty knife. Allow repair material to cure for 24 hours (48 hours in cold weather) before sanding, then, feather sand the area.

Environmental Impact

Olympic Panel produces overlaid plywood from veneer peeled at the Olympic plant and from purchased veneer. All veneer and plywood panels are manufactured in accordance with the following principals:

- Logs and veneer originate in sustainable, secondary growth forests, which are managed according to Federal and State laws and regulations.
- Olympic Panel uses energy efficient, environmental control technology to reduce emissions to levels below federal and state guidelines.
- Olympic Panel uses process by-products to produce energy.
- Olympic's products are renewable, biodegradable and recyclable.

Warnings

This product contains 0.03 parts/million of residual formaldehyde from manufacturing. This product will generate wood dust from sawing, sanding, or shaping. Material Safety Data Sheets are available on Olympic's Web site at www.olypanel.com and upon request. Structural panels (PS-1) are exempt from California Air Resources Board regulations, however, this product is below CARB limits for all applications.

Olympic Panel's Concrete Form Product Family

- **Premium Concrete Form:**
 - **Barrier Film™** - inert to alkalinity for harsh concrete mixes
 - **MultiPour®** - Architectural finish & high re-use
 - **Classic® HDO** - Alkalinity resistance exceeds Doug fir HDO
 - **Super-Matte™ MDO** - Matte finish, slight grain/patch transfer
- **Industry Standard Concrete Form**
 - **Basic™ HDO** - Economical Doug fir HDO 100/30
 - **Hi-Flow™ MDO** - Matte finish, high reuse
 - **B-Matte® MDO** - Matte finish, high re-use

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