



# TEMPERED PLYRON<sup>®</sup> Industrial Panel



- High impact & wear resistance
- Grain free with superior paintability
- High strength, light weight
- High face/edge screwholding
- NAUF - meets CARB requirements

**Swanson Group<sup>®</sup> provides the highest proven performance in panel solutions.** Customers recognize our exceptional history of performance, exhibited in our panel solutions.

We have enhanced our capability to provide superior panel performance. “Swan Peel”<sup>™</sup> Technology provides a smoother surface: less grain show through, and improved glue and overlay bond. “Swan Peel”<sup>™</sup> Technology reduces thickness variability: resulting in an enhanced balanced construction, tighter core lines, and dimensional stability.

**Swanson is manufacturing overlay panels in a new state-of-the-art facility - the most technologically advanced operation in North America.**

#### Product Description:

Tempered Plyron<sup>®</sup> is an impact resistant, hardboard faced plywood with excellent paintability and printability.

#### Panel Construction/Moisture Resistance:

Tempered Plyron<sup>®</sup> is constructed of tempered hardboard laminated to Douglas Fir/Hemlock plywood. It is produced with a 1 step layup, has a waterproof glue bond and meets APA PS 1-09 specifications. All Swanson products are made in the USA.

#### Working Faces/Treatment:

Tempered Plyron<sup>®</sup> is available with 2 working faces only. Face color is natural hardboard.

#### Working Edges/Treatment:

- Edges are factory sawn, without edge treatment.
- Tongue and grooved edges meeting volume limits are available.
- For interior applications requiring edge banding, do not edge seal, otherwise, seal all edges using clear or pigmented Pre-Form by Nox-Crete or equivalent. Pre-Form can not be over coated.

#### Applications:

- Wear-resistant flooring panels, stage floors
- Furniture, cabinets, displays, fixtures, casework
- Shelving & partitions

#### Limitations:

Do not exceed design limitations imposed by the floor or shelving span tables. Tempered Plyron<sup>®</sup> is not designed for repetitive heavy wheel loads. It must be primed and top coated for exposure in exterior applications.

#### Thicknesses & Sizes:

Tempered Plyron<sup>®</sup> is available in 1/2", 5/8" & 3/4" thicknesses. Standard panel sizes are 4' X 8' only. Non standard thicknesses meeting volume requirements are available.

#### Product Grade:

Standard product and Special Product are shipped allowing up to 10% total Good One Side (G1S) and/or Shop, identified & priced separately. Shipments of G1S and shop only may be available. Check with sales.

#### Technical Data Applicable Standards:

All panels are manufactured by Swanson Group per Product Standard PS1-09. This standard is available at [www.apawood.org](http://www.apawood.org).

PHYSICAL PROPERTIES <sup>1</sup>	1/2"	5/8" to 3/4"
Modulus of Rupture <sup>2,3</sup>	6,870 psi	6.655 psi
Modulus of Elasticity <sup>2,3</sup>	687,050 psi	683,860 psi
Lineal Expansion <sup>2,3</sup>	0.080%	0.098%
Thickness Swell	8.7%	9.6%
Water Absorption (24 Hours)	6.7%	6.8%
Internal Bond <sup>2</sup>	169 psi	134 psi
Shelf Stiffness EI ASTM D-3043 C	97,600 lb-in <sup>2</sup> /ft6	270,460 lb-in <sup>2</sup> /ft6
Shelf Bending FbS ASTM D-3043 C	2,720 lb-in/ft6	4,720 lb-in/ft6
Face Screw holding <sup>2</sup>	470 lbs	440 lbs
Edge Screw holding <sup>2</sup>	Not Applicable	398 lbs
Moisture Content <sup>2</sup> ASTM D-1037	6-9%	6-9%
Specific Gravity <sup>2</sup> ASTM D-1037	.784	.686
Density <sup>2</sup> ASTM D-1037	49.5 lbs/ft <sup>3</sup>	43.0 lbs/ft <sup>3</sup>
Janka Hardness <sup>2</sup> ASTM D-1037	1,428 lbs	950 lbs
Flame Spread ASTM E-84	76 - 20065	76 - 20065
Smoke Developed ASTM E-84	25 - 27065	25 - 27065
Flame/Smoke spread rating E-84	Class C	
Formaldehyde level E-1333	0.01 parts/million	

PANEL TOLERANCES <sup>2</sup>	1/2" to 3/4"	5/8" to 3/4"
Thickness Tolerance	+/- 1/32" (.031")	6.655 psi
Length & Width Tolerance	+0, -1/16" (.062")	683,860 psi
Squareness	1/16" (.062")	0.098%
Straightness	1/16" (.062")	9.6%

<sup>1</sup>5 Panel Average. Product averages vary for individual thicknesses, consult sales or technical staff for exact properties <sup>2</sup>All tolerances and specifications apply at the time of manufacture.

<sup>2</sup>ANSI 208.1 test result

<sup>3</sup>Calculations based on test averages of along and across grain

<sup>4</sup>Shelving physical properties based on limited 5 panel average. See web site for load table

<sup>5</sup>Flame and Smoke spread properties based on engineering calculations

<sup>6</sup>Shelving stiffness/bending properties are based on a limited 5 panel average

**Tempered Plyron® Shelving Load Span Table:**

Table 1 - Face Grain Across Supports - Multiple Spans <sup>1</sup>						
Span <sup>1</sup>	1/2"		5/8"		3/4"	
	ℓ/240	ℓ/180	ℓ/240	ℓ/180	ℓ/240	ℓ/180
4"	1,457	1,457	2,340	2,340	2,870	2,870
8"	560	560	900	900	1,104	1,104
12"	347	347	557	557	683	683
16"	186	248	282	377	495	495
19.2"	109	145	170	227	365	405
24"	56	75	90	119	198	264
30"	28	38	46	62	105	139
32"	23	31	38	51	87	116
36"		22	27	36	61	82
40"				26	45	60
48"					30	40
60"						

Table 2 - Face Grain Parallel to Supports - Multiple Spans <sup>1</sup>						
Span <sup>1</sup>	1/2"		5/8"		3/4"	
	ℓ/240	ℓ/180	ℓ/240	ℓ/180	ℓ/240	ℓ/180
4"	1,457	1,457	1,811	1,811	2,208	2,208
8"	560	560	696	696	849	849
12"	347	347	431	431	526	526
16"	251	251	312	312	381	381
19.2"	182	206	256	256	312	312
24"	91	121	168	201	245	245
30"	45	60	85	113	159	194
32"	37	49	70	93	131	175
36"	26	34	48	65	92	122
40"		25	35	47	66	89
48"			23	31	44	58
60"					22	29

Table 3 - Face Grain Across Supports - Single Spans <sup>2</sup>						
Span <sup>2</sup>	1/2"		5/8"		3/4"	
	ℓ/240	ℓ/180	ℓ/240	ℓ/180	ℓ/240	ℓ/180
4"	1,822	1,822	2,926	2,926	3,588	3,588
8"	701	701	1,063	1,125	1,380	1,380
12"	215	287	333	445	709	854
16"	88	117	141	188	311	415
19.2"	50	66	81	108	181	242
24"	25	33	41	54	93	124
30"			20	27	47	63
32"				22	39	52
36"					27	36
40"						26
48"						

Table 4 - Face Grain Parallel to Supports - Single Spans <sup>2</sup>						
Span <sup>2</sup>	1/2"		5/8"		3/4"	
	ℓ/240	ℓ/180	ℓ/240	ℓ/180	ℓ/240	ℓ/180
4"	1,822	1,822	2,263	2,263	2,760	2,760
8"	701	701	870	870	1,062	1,062
12"	363	434	539	539	657	657
16"	142	190	264	352	476	476
19.2"	79	106	148	197	277	370
24"	39	52	73	97	138	184
30"		26	36	48	69	92
32"		21	30	40	56	75
36"			21	27	39	52
40"					28	38

Maximum allowable loads are psf. Uniform loading is assumed. Loads are for dry conditions. For wet conditions, reduce loads approximately 25%. Inquire for precise data. Basic allowable stresses (bending F<sub>b</sub> and shear F<sub>v</sub>) increase 15% for shelving use per the APA experience factor. Pallet design normally is based on higher allowable loads than given. NOTES: 1 Spans are center-to-center of supports. 2 Span is out-to-out of supports. Allow for 1-1/2" supports on each end.

**Tempered Plyron® Floor Loads and Span Ratings:**

Tempered Plyron Recommended Uniform Floor Live Load and Span Rating With Strength Axis 8' direction perpendicular to Supports							
Panel Thickness	Allowable Live Loads <sup>2</sup> (lbs. per Square Foot)						
	12"	16"	20"	24"	30"	32"	36"
5/8"	810	365	220	115	60	50	40
3/4"	990	550	335	175	90	75	65

Tempered Plyron Recommended Uniform Floor Live Load and Span Rating With Strength Axis 4' direction parallel to Supports							
Panel Thickness	Allowable Live Loads <sup>2</sup> (lbs. per Square Foot)						
	12"	16"	20"	24"	30"	32"	36"
5/8"	600	250	180	90	20	--	--
3/4"	800	425	300	155	35	30	20

210 psf dead load assumed, Live Load deflection limit is 1/360

Note: Complete fastener schedules for glue nailed and nailed only fasteners are available from IFrom APA The Engineering Wood Association's Engineering Wood Construction Guide, Form E30T, 2005, Table 10:

**Standard Packaging:**

Thickness	Tempered Plyron® 2 Face Average* Weight lbs./SF	Tempered Plyron® 2 Face Average* Weight lbs./panel	Pieces per Unit
1/2"	2.093	67.0	66
5/8"	2.350	75.2	50
3/4"	2.833	90.7	44

\*Average product weights may vary +/- 10%

**Tempered Plyron®**

General: Do not use interior grade paints, water base vinyl-acrylic, solvent based alkyd flat or alkyd solid color stains.

**Suitability for Use and Warranty**

Nothing herein constitutes a warranty express or implied, including any warranty of merchantability or fitness for use, nor is protection from any law or patent to be inferred. The exclusive remedy for all claims is replacement of materials.

**Warehouse Storage and Handling**

- Store in a dry, clean, well-ventilated area indoors.
- Avoid temperatures and moisture extremes. Allow panels to equalize for 72 hours or more before use.
- Pieces must not be stored in contact with the ground.
- Limit the stacking height up to five units. Separate units with clean, dry spacers of uniform thicknesses, aligned carefully. Use three spacers for panels 8' long.

**Environmental Impact**

- Swanson Group® uses process by-products to produce energy
- Swanson products are renewable, biodegradable and recyclable

**Warnings:** This product contains 0.01 parts/million of residual formaldehyde from manufacturing. This product will generate wood dust from sawing, sanding, or shaping. Safety data sheets are available on Swanson's website at [www.swansongroup.biz](http://www.swansongroup.biz) and upon request.

Structural panels (PS-1) are exempt from California Air Resources Board regulations, however, this product is below CARB limits for all uses.

Find out more at [www.swansongroup.biz](http://www.swansongroup.biz)



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