



PRE-PRIMED MDO Sign Board



- Pre-Primed MDO saves time and labor
- Smooth surface for high quality top coatings
- Enhanced panel stability using "Swan Peel™" Technology
- Waterproof bond for exceptional machinability and weatherability
- High face/edge screwholding
- Extremely durable with superior surface and life
- NAUF - meets CARB requirements

Swanson Group® provides the highest proven performance in panel solutions. Customers recognize our exceptional history of performance, exhibited in our panel solutions, including the first high gloss UV coated MDO panel in North America.

We are now enhancing our capability to provide superior panel performance. "Swan Peel™" Technology provides a smoother surface: less grain show through, and improved glue and overlay bond. "Swan Peel™" 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:

Pre-Primed MDO is a premium primed MDO overlaid, two-step® plywood which provides an excellent base coat for top coating.

Panel Construction/Moisture Resistance:

Pre-Primed MDO is a proprietary, thermo-set, acrylic, primed MDO which is applied to Douglas Fir/Hemlock plywood. It is produced with a two-step® layup using our Swan Peel™ Technology, has a waterproof glue bond and meets APA PS 1-09 specifications. All Swanson products are made in the USA.

Working Faces/Treatment:

Pre-Primed MDO is available with one or two working faces. Panels with a single working face are provide with an MDO backer. The white, thermo-set Acrylic prime coat is 0.9 to 1.25 mil dry and is formulated to provide good adhesion to the MDO and a good base for subsequent overcoats. At least two top coats are required.

Working Edges/Treatment:

- Edges are factory sawn and primed.
- Fill, prime and top coat all exposed wood with at least two coats of acrylic, polyurethane or polyurethane-acrylic.

Applications:

- Exterior signage and billboards.
- Furniture, cabinets, displays, fixtures, shelving and partitions.
- Soffit, fascia & trim; sports sideboards.
- Truck body, trailer liners and doors.

Limitations:

Pre-Primed MDO is not a finished product. It requires two top coats and two edge coats for prolonged exposure in exterior applications.

Thicknesses & Sizes:

Pre-Primed MDO is available in 3/8", 1/2", 5/8", & 3/4" thickness. Standard panel sizes are 4' X 8' and 10' only.

Sign Board:

- Highway® HDO - Premium sign panel, prepped for reflective film.
- SignReady UV™ - Prefinished, high gloss, paint/vinyl letter ready, 5-yr. limited warranty.
- Prefinished UV™ - Prefinished, satin gloss, paint/vinyl letter ready, 2-yr. limited warranty.
- Signal® MDO - Two-step®, hardwood faced, tightly laid core, ideal for cutout letters.
- Pre-Primed MDO - Exclusive, primed overlay, Two-step®.
- Crezon Two-Step® MDO - Premium paint grade.
- Guardian® One-Step MDO - Standard paint grade.

Technical Data Applicable Standards

All panels are manufactured by Swanson Group® per product standard PS1-09. This standard is available at www.apawood.org.

| Physical Properties | 3/8" to 1/2" | 5/8" to 3/4" |
|---|--|---|
| Modulus of Rupture ^{2,3} | 6,670 psi | 6,680 psi |
| Modulus of Elasticity ^{2,3} | 795,050 psi | 853,565 psi |
| Lineal Expansion ^{2,3} | 0.057% | 0.0450% |
| Thickness Swell | 3.8% | 3.8% |
| Water Absorption (24-Hours) | 6.0% | 6.0% |
| Internal Bond ² | 180 psi | 134 psi |
| Shelf Stiffness EI ASTM D-3043 C | 74,770 lb-in ² /ft ⁶ | 606,720 lb-in ² /ft ⁶ |
| Shelf Bending FbS ASTM D-3043 C | 1,615 lb-in/ft ⁶ | 6,460 lb-in/ft ⁶ |
| Face Screw Holding ² | 430 lbs. | 449 lbs. |
| Edge Screw Holding ² | Not Applicable | 408 lbs. |
| Moisture Content ² ASTM D-1037 | 6-9% | 6-9% |
| Specific Gravity ² ASTM D-1037 | .592 | .527 |
| Density ² ASTM D-1037 | 36.9 lbs./ft. ³ | 32.9 lbs./ft. ³ |
| Flame Spread ASTM E-84 | 76 - 200 ⁵ | 76 - 200 ⁵ |
| Smoke Developed ASTM E-84 | 25 - 270 ⁵ | 25 - 270 ⁵ |
| Flame/Smoke Spread Rating E-84 | Class C | |
| Formaldehyde Level E-1333 | 0.08 parts/million | |

| Panel Tolerances ² | 3/8" to 3/4" |
|-------------------------------|--------------------|
| Thickness Tolerance | +/- 1/32" (.031") |
| Length & Width Tolerance | +0, -1/16" (.062") |
| Squareness | 1/16" (.062") |
| Straightness | 1/16" (.062") |

¹5-panel average. Product averages vary for individual thicknesses, consult sales or technical staff for exact properties.² All tolerances and specifications apply at the time of manufacture.

²ANSI 208.1 test result.

³Calculations based on test averages of along and across grain.

⁴Shelving physical properties based on engineering calculations.

⁵Flame and smoke spread properties based on engineering calculations.

⁶Shelving stiffness/bending properties are based on a limited 5-panel average.

Note: All tolerances and specifications apply at the time of manufacture.

Note: Product averages vary for individual thicknesses. Consult sales or technical offices for exact properties.

Product Grade

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

Weatherability:

| Pre-Primed MDO | | | | | |
|---|-------------------|-----------------------------|------------------|-------------|----------------|
| EMMAQUA* Outdoor Accelerated Weathering Test Simulates 3.4 years in Florida and 2.9 years in Arizona | | | | | |
| Test | CHALK UNWSH | COLOR CHNGE UNWSH | CRACK UNWSH | BLIST UNWSH | CHECK UNWSH |
| ASTM # | D 4214-97 | D1729-96 (2003) | D661-93 (2000) | D 714-02 | D660-93 (2000) |
| Acrylic Latex | Trace | Barely Traceable Yellowing | NONE | NONE | NONE |
| Chromatic | Barely Traceable | Moderate Bleaching | NONE | NONE | NONE |
| Oil Alkyd | Moderately Severe | Slightly Moderate Bleaching | Severe Long Line | NONE | NONE |

*Equatorial Mount with Mirrors for Acceleration with Water.
 CHALK UNWSH = Chalking, unwashed area: ASTM D4214-97 - Test methods for evaluation degree of chalking of exterior paint films (Method A/Cloth Method).
 COLOR CHNGE UNWSH = Visual color, unwashed area: ASTM D1729-96 (2003) - Practice for visual appraisal of color and color difference of diffusely-illuminated opaque materials.
 CRACK UNWSH = Cracking, unwashed area: ASTM D661-93 (2000) - Method for evaluating degree of cracking of exterior paints.
 BLIST UNWSH = Blistering, unwashed area: ASTM D714-02 - Method for evaluating degree of blistering paints.
 CHECK UNWSH = Check, unwashed area: ASTM D660-93 (2000) - Method for evaluating degree of checking of exterior paints.

Standard Packaging:

| Thickness | Pre-Primed MDO Average Weight* lbs./Panel | Pieces per Unit |
|-----------|---|-----------------|
| 3/8" | 35.0 | 88 |
| 1/2" | 50.0 | 66 |
| 5/8" | 64.0 | 50 |
| 3/4" | 67.0 | 44 |

*Average product weights may vary +/- 10%

Pre-Primed MDO Finishing Instructions

General: Pre-Primed MDO's primer is a thermo-set Acrylic and is designed specifically for MDO. It provides an excellent base coat for top coats.

Coating System: Use two coats of high quality exterior industrial enamel:

- Water Based Enamel System: High quality, all-Acrylic semi-gloss or gloss enamel system, or
 - Solvent Based Alkyd System: High quality, industrial semi-gloss or gloss enamel system, or
 - Sign Chromatic Based: Semi-gloss or gloss system.
2. **Application:** Test overcoats to ensure proper performance. Follow overcoat producer's recommendations. Use good painting practices. Do not use interior paints, water base vinyl-acrylic, solvent based alkyd flat or alkyd solid color stains. Perform a tape pull test (ASTM D3359) before applying lettering & blocking tape.
3. **Edge Coating:** Fill, prime and top coat all exposed wood with at least two coats of acrylic, polyurethane or polyurethane-acrylic primers and paints or exterior grade caulking.

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. Contact Swanson Group® for a copy of the complete Swanson Terms and Conditions of Sale.

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 to four or five units. Separate units with clean, dry spacers of uniform thickness, aligned carefully. Use three spacers for panels 8' long, four or five spacers for longer panels.

Environmental Impact

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

Warnings: This product will generate wood dust from sawing, sanding, or shaping. Safety data sheets are available on Swanson's website at 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

Pre-Primed MDO Shelving Load Span Table:

| Table 1 - Face Grain Across Supports - Multiple Spans ¹ | | | | | | |
|--|-------|-------|-------|-------|-------|-------|
| Span ¹ | 1/2" | | 5/8" | | 3/4" | |
| | ℓ/240 | ℓ/180 | ℓ/240 | ℓ/180 | ℓ/240 | ℓ/180 |
| 4" | 1,899 | 1,899 | 2,340 | 2,340 | 2,870 | 2,870 |
| 8" | 730 | 730 | 900 | 900 | 1,104 | 1,104 |
| 12" | 452 | 452 | 557 | 557 | 683 | 683 |
| 16" | 301 | 323 | 404 | 404 | 495 | 495 |
| 19.2" | 176 | 225 | 331 | 331 | 405 | 405 |
| 24" | 90 | 121 | 175 | 230 | 227 | 303 |
| 30" | 46 | 61 | 91 | 121 | 120 | 160 |
| 32" | 38 | 50 | 75 | 100 | 99 | 133 |
| 36" | 26 | 35 | 53 | 70 | 70 | 94 |
| 40" | | 26 | 38 | 51 | 52 | 69 |
| 48" | | | 25 | 34 | 34 | 46 |

| Table 2 - Face Grain Parallel to Supports - Multiple Spans ¹ | | | | | | |
|---|-------|-------|-------|-------|-------|-------|
| Span ¹ | 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" | 229 | 251 | 280 | 280 | 381 | 381 |
| 19.2" | 130 | 173 | 195 | 195 | 312 | 312 |
| 24" | 65 | 86 | 125 | 125 | 230 | 230 |
| 30" | 32 | 43 | 76 | 80 | 145 | 147 |
| 32" | 27 | 35 | 63 | 70 | 119 | 129 |
| 36" | | 25 | 44 | 55 | 83 | 102 |
| 40" | | | 32 | 42 | 61 | 81 |
| 48" | | | 21 | 28 | 40 | 53 |
| 60" | | | | | 20 | 26 |

| Table 3 - Face Grain Across Supports - Single Spans ² | | | | | | |
|--|-------|-------|-------|-------|-------|-------|
| Span ² | 1/2" | | 5/8" | | 3/4" | |
| | ℓ/240 | ℓ/180 | ℓ/240 | ℓ/180 | ℓ/240 | ℓ/180 |
| 4" | 2,374 | 2,374 | 2,926 | 2,926 | 3,588 | 3,588 |
| 8" | 913 | 913 | 1,125 | 1,125 | 1,380 | 1,380 |
| 12" | 349 | 465 | 652 | 697 | 814 | 854 |
| 16" | 142 | 189 | 275 | 367 | 357 | 476 |
| 19.2" | 80 | 107 | 156 | 211 | 208 | 278 |
| 24" | 40 | 53 | 80 | 106 | 106 | 142 |
| 30" | 20 | 26 | 40 | 53 | 54 | 72 |
| 32" | | 22 | 33 | 44 | 44 | 59 |
| 36" | | | 23 | 30 | 31 | 41 |
| 40" | | | | 22 | 22 | 30 |
| 48" | | | | | | 20 |

| Table 4 - Face Grain Parallel to Supports - Single Spans ² | | | | | | |
|---|-------|-------|-------|-------|-------|-------|
| Span ² | 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" | 259 | 345 | 498 | 498 | 657 | 657 |
| 16" | 102 | 136 | 237 | 280 | 446 | 476 |
| 19.2" | 57 | 75 | 133 | 177 | 253 | 337 |
| 24" | 28 | 37 | 66 | 88 | 126 | 168 |
| 30" | | | 33 | 44 | 63 | 84 |
| 32" | | | 27 | 36 | 51 | 69 |
| 36" | | | | 25 | 36 | 48 |
| 40" | | | | | 26 | 34 |

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_b and shear F_s) increase 15% for shelving use per the APA experience factor. Pallet design normally is based on higher allowable loads than given. NOTES: ¹Spans are center-to-center of supports. ²Span is out-to-out of supports. Allow for 1-1/2" supports on each end.



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