

# Super-Matte™ MDO CONCRETE FORM

## Product Description:

Super-Matte™ MDO is a premium, Medium Density Overlaid plywood concrete form for matte finishes with a factory applied release coating. It provides enhanced alkalinity resistance and limited grain transfer vs. regular MDOs.

## Panel Construction/Moisture Resistance:

Super-Matte™ MDO is an overlay on hardwood faced plywood with Doug Fir/Hem construction. It is manufactured with a 1 step layup, has a waterproof glue bond and is manufactured to APA PS 1-07. All Olympic products are made in the USA.



## Features and Benefits:

- Enhanced alkalinity resistance vs. regular MDOs
- Matte finish = good base for coated concrete
- Limited grain and patch transfer
- Factory applied Nox-Crete FormCoat
- Balanced substrate construction promotes stability
- Increased # of pours & reduced cost

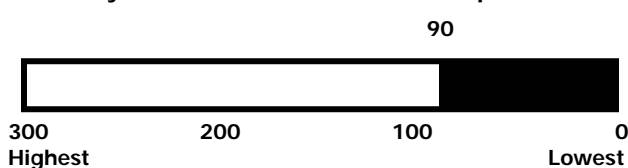
## Working Faces/Treatment:

- Super-Matte™ MDO is available with 1 (standard) or 2 (optional) working faces. Standard panels with a single working face.
- Gloss level of Concrete Surface: Matte
- Wood Grain Transfer to Concrete Surface: limited
- Sugaring: None
- Maintenance: Very Little

## Working Edges/Treatment:

- Factory sawn and sealed with special, yellow, Styrene Acrylic sealer.
- Seal all exposed wood (edges and holes) with Edge Flex 235 by Nox-Crete, Olympic Form Seal by Willamette Valley Co. or equivalent to prevent concrete staining from the wood sugars.

## Alkalinity Resistance after Chemical Exposure



The Abrasion and Chemical Resistance Test reflects the expected panel life in the field. The higher the index number, the more resistant to alkalinity/abrasion.

## Structural/Load Performance Summary

Super-Matte™ MDO is available with custom load tables (V287). Allowable pressure  $l/270$  3/4" @ 12" OC (face gain across supports): 817 PSF

## Pour Ranges:

- Engineered systems: Not Recommended
- Gang forms: Up to 30 pours
- Job built: Up to 20 pours
- Pour ranges are not guaranteed because the number of pours will vary due to jobsite handling and panel maintenance, vertical or horizontal use, form release agent, concrete mix design/strength, alkalinity, pour rate and other factors.

## Release Coating:

- Release agent: Nox-Crete FormCoat factory applied
  - Coating required: light, before first and each subsequent pour.
  - Recommended release agent: Nox-Crete FormCoat or equivalent.
- Avoid release agents containing fuel oils, recycled oils, or solvents.

## Limitations:

Do not exceed design limitations imposed by the load span table. Conform to concrete form design procedures based on American Concrete Institute (ACI) standard 347-04. Release agents are required. Do not employ used concrete form for structural applications. Do not coat or laminate this panel without surface preparation. For coating or laminating information, ask Olympic for technical assistance.

## Thicknesses & Sizes:

Olympic Super-Matte™ MDO is available in: 11/16" & 3/4" and 21 mm. Standard panel sizes are 4' X 8' (1220 X 2440 mm). Non standard thicknesses and widths meeting volume requirements are available.

## Technical Data Applicable Standards

All panels are manufactured by Olympic Panel Products per Product Standard PS1-07. This standard is available at [www.apawood.org](http://www.apawood.org).

Panel Tolerances	11/16" (17.5mm) & 3/4" (19.0 mm)	21.0 mm
Thickness Tolerance	+/- 1/32 (0.031") +/- 0.79mm	+/- 5% +/- 0.041" (1.1mm)
Length & Width Tolerance	+0, - 1/16 (0.062") +0, - 1.6mm	+0, - 1/16 (0.062") +0, - 1.6mm
Squareness	1/16 (0.062") 1.6mm	1/16 (0.062") 1.6mm
Straightness	1/16 (0.062") 1.6mm	1/16 (0.062") 1.6mm
Formaldehyde level ASTM E-1333*	0.03 parts/million	0.03 parts/million

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.

\*Resin system is 100% Phenolic and contains no added Urea resins.

## Standard Packaging:

Thickness	Super-Matte™ MDO 1 Side (lbs./SF)	Super-Matte™ MDO 2 Sides (lbs./SF)	Pieces per Unit
11/16" – 17.5 mm	2.036	2.061	48
3/4" – 19.0 mm	2.175	2.200	44
21.0 mm	2.365	2.390	40

Thickness	Super-Matte® MDO 1 Side (Kg/M²)	Super-Matte® MDO 2 Sides (Kg/M²)	Pieces per Unit
11/16" – 17.5 mm	9.94	10.06	48
3/4" – 19.0 mm	10.62	10.74	44
21.0 mm	11.50	11.67	40

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

## 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.

- Enhanced alkalinity resistance vs. regular MDOs
- Matte finish = good coated concrete base
- Smooth Matte finish due to hardwoods
- Limited grain and patch transfer
- Factory applied Nox-Crete FormCoat
- Balanced substrate design promotes stability
- Increased pours & reduced cost/pour

## 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

Hardwoods used on Super-Matte™ MDO vary up to 10% in bending and shear strength.

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

Stress Table – Dry, Working Stress Wet Design Capacities – 4' X 8' & 10'				
Nominal Thickness	Custom Design V287			Wet Adjust Factor
	11/16"	3/4"	21.0 mm	
Number of Plies	7	7	9	
<b>Table 1: Face Grain Perpendicular to Supports<sup>1</sup></b>				
Bending Stiffness <sup>1</sup>	315,982.7	391,713	508,2211	.85
Bending Resistance <sup>2</sup>	1,006.7	1,303.5	1558.5	.75
Planar Shear <sup>3</sup>	423.9	351.7	535	.75
<b>Table 2: Face Grain Parallel to Supports<sup>1</sup></b>				
Bending Stiffness <sup>1</sup>	189,543.0	240,823	355,652	.85
Bending Resistance <sup>2</sup>	800.3	761.0	1,202.0	.75
Planar Shear <sup>3</sup>	286.7	313.3	314.9	.75

<sup>1</sup>Bending Stiffness = EI\* (lb-in<sup>2</sup>/ft); <sup>2</sup>Bending Resistance = M or F<sub>b</sub>S (lb-in/ft);

<sup>3</sup>Planar Shear Capacity: V or F<sub>v</sub>lb/Q (lb/ft) There is no DOL (Duration of Load) or Experience factor applied to EI, F<sub>b</sub>S and F<sub>v</sub>lb/Q.

**Load Span Tables:** Tables 3 through 4 are based on standard APA and PS-1 criteria.

LOAD SPAN TABLES – WET CONDITIONS						
Recommended Maximum PSF on V287 Panels <b>One Step Only</b>						
<b>Table 3: Face Grain Perpendicular to Supports<sup>1</sup></b>						
Support Spacing	Plywood Thickness – Allowable Pressure (PSF)					
	11/16" - 17.5 mm 1 Step		3/4" - 19.0 mm 1 Step		21.0 mm 2 Step	
(in.)	1/360	1/270	1/360	1/270	1/360	1/270
8"	1244	1244	1320	1320	1985	1985
12"	753	770	817	817	1053	1229
16"	350	467	413	550	514	686
19.2"	210	280	251	334	317	422
24"	110	147	133	178	170	227
<b>Table 4: Face Grain Parallel to Supports<sup>1</sup></b>						
Support Spacing	Plywood Thickness – Allowable Pressure (PSF)					
	11/16" - 17.5mm 1 Step		3/4" - 19.0mm 1 Step		21.0mm - Two Step	
(in.)	1/360	1/270	1/360	1/270	1/360	1/270
8"	1126	1126	1175	1175	1296	1296
12"	570	697	690	727	802	802
16"	244	325	301	401	513	581
19.2"	174	231	215	242	368	422
24"	89	118	111	148	192	256

Notes: <sup>1</sup>Plywood 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.

## 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.

## Olympic Panel Technical/Sales Information

204 East Railroad Avenue; Shelton, WA 98584

Sales phone: 800-445-2442 Sales Fax: 360-432-5081

[www.olympicpanel.com](http://www.olympicpanel.com)

Olympic Panel Products LLC and Olympic Panel are registered trademarks of Olympic Panel Products LLC.

© 2008 Olympic Panel Products LLC.

All Rights Reserved. Printed in the USA.

Specifications subject to change without notice.

Effective: 5/2008; Replaces: New

## Jobsite Care and Handling

1. **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.
2. **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.
3. **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.
4. **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
5. **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.

## 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 the sales office for a copy of the complete Olympic Terms and Conditions of Sale.

## 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.olympicpanel.com](http://www.olympicpanel.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 re-use
  - **B-Matte® MDO** - Matte finish, high re-use

