



# MDO SIGN/INDUSTRIAL MATERIAL SAFETY DATA SHEET

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**EMERGENCY NUMBER: (360) 432-5005**  
**Ken Pratt, Product Development/Technical Director**

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## Section I: Material identification

Material Name: Medium Density Overlaid Plywood

Trade Names and Synonyms: Signal MDO,  
Guardian MDO,  
2-Step MDO

1	Health (see section VI) for FIRST AID MEASURES
1	Flammability (see section IV) for FIRE FIGHTING MEASURES
0	Reactivity

## Section II: Ingredients and Hazards

Product is made from veneered softwood, phenol formaldehyde adhesives, resins, paper under heat and pressure. Product contains cured phenol formaldehyde adhesives and resins which may release formaldehyde in trace, but limited detectable amounts. Release formaldehyde of <0.01 parts per million in Large Scale Chamber Test.

Hazards arise from remanufacture, sawing (wood dust) and from storage at high humidity and elevated temperatures (100 F) in unventilated spaces (formaldehyde gas).

Wood Dust: ACGIH (1987) TLV's: TWA 5mg/m<sup>3</sup> for softwood, STEL 10 mg/m<sup>3</sup>

Formaldehyde Gas: Large Chamber Threshold (ASTM E1333-96[02]): <0.01 ppm

## Section III: Physical Data

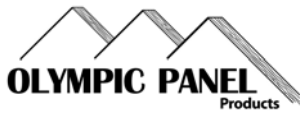
Specific gravity: Approximately 0.5, (Water = 1)

Percent Volatile: Approximately 5% at 220 F

Solubility in Water: Insoluble

Heat of Combustion: 8,000 to 10,000 BTU/Lb.

Appearance and Odor: Wooden Panels, Wood-Like



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## Section IV: Fire and Explosion Hazard Data

Flashpoint: None

Auto-ignition temperature: Variable (typically >400°F)

### FIRE FIGHTING MEASURES

Extinguishing Media: Water Spray, Carbon Dioxide Foam or Dry Chemical as determined by surrounding fire

Unusual Fire and Explosion Hazards: Wood Dust. In remanufacture, accumulation of wood dust during sawing may lead to explosive conditions.

## Section V: Reactivity Data

Stability: Stable

Incompatibility: Avoid contact with strong oxidizers.

Conditions to Avoid:

Formaldehyde. First time exposure of product to high humidity and elevated temperatures may result in release of formaldehyde gas.

Wood Dust. Accumulation of wood dust in remanufacturing area may result in spontaneous heating or combustion. 212 F has been suggested as the upper temperature limit for continuous exposure of wood without risk of ignition. For wood dust this temperature would be lower. Avoid contact with oxidizers and drying oils.

Hazardous Decomposition Products:

Burning of wood products produces irritating and toxic fumes and gases including Carbon Monoxide, Aldehydes and Organic Acids. Decomposition products of phenolic resins include formaldehyde, aromatic ring compounds and other toxic compounds.



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## Section VI: Health Hazards

Exposure Limit <sup>(1)</sup> .....ACGIH TLV  
 TWA - 5.0 mg/m<sup>3</sup> (softwood);  
 TLV – 1.0 mg/m<sup>3</sup> (softwood);  
 STEL (15 min.) - 10.0 mg/m<sup>3</sup>; (softwood)  
 TWA - 1.0 mg/m<sup>3</sup> (hardwoods such as alder, beech and oak)  
 TWA - 15.0 mg/m<sup>3</sup> (total dust);  
 1.0 mg/m<sup>3</sup> (respirable fraction)

<sup>(1)</sup> ACGIH – American Conference of Governmental Industrial Hygienists, TLV – threshold limit value, TWA – time-weighted average, STEL – short-term exposure limit, OSHA - Occupational Safety and Health Administration, PEL – permissible exposure limit

Skin and Eye Contact .....Wood dust can cause eye irritation. Various wood species can elicit allergic contact dermatitis in sensitized individuals.

Ingestion .....Not applicable

Skin Absorption .....Not known to occur

Inhalation .....May cause nasal dryness, irritation and obstruction. Coughing, wheezing and sneezing sinusitis and prolonged colds have also been reported.

Chronic overexposure None, unless contact made with Formaldehyde: Formaldehyde is classified as a “Suspected Carcinogen.” It may cause upper respiratory and eye irritation.

Wood Dust: Allergic response, asthma or bronchitis may develop. Can cause eye irritation

<p><b>EMERGENCY AND FIRST AID PROCEDURES:</b></p> <p>Eyes ..... Flush with water to remove dust.          Inhalation ..... Remove to fresh air.          Skin ..... Consult physician after rash or persistent irritation or evidence of dermatitis.          Ingestion ..... Consult physician.</p> <p>In all cases if irritation persists, obtain medical advice.</p>
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## **Section VII Spill or Leak Procedures**

Steps to be taken in case material is released or spilled:

No special precautions are required for the "as produced" product. In the remanufacturing operation sawdust should be contained. Sweep or vacuum dust for disposal, avoid creating dust conditions. Provide good ventilation when dust conditions are likely to occur.

Waste Disposal Method:

Scrap can be landfilled. Incineration in suitable incinerators only. Sawdust should be placed in a container for proper disposal in landfill or burning in a suitable incinerator as stipulated by local state and federal regulatory requirements.

## **Section VIII: Special Protection Information**

Respiratory Protection: Dust mask when sawing.

Ventilation: Local exhaust to control sawdust in air as required by OSHA, state or local regulations.

Protective Gloves: Recommended for handling and sawing.

Eye Protection: Safety glasses recommended when sawing

## **Section IX: Special Precautions**

Precautions to be taken in Handling and Storing: Do not store product at high humidity in unvented space.

Other Precautions: None

**IMPORTANT:** The information and data herein are believed to be accurate and have been compiled from sources believed reliable. Although reasonable care has been taken in preparation of this information, Olympic Panel Products LLC. Company makes no warranty of any kind, expressed or implied, concerning the accuracy or completeness of this information or data, and assumes no responsibility for its application to purchaser's intended purposes (if purchaser alters the product in such a manner as to create wood dust, then this is purchaser's responsibility). Normally recommended industrial hygiene, engineering practices and safe handling procedures should be employed at all times.