

## MATERIAL SAFETY DATA SHEET

TRADE NAME – FUNDERBOARD  
SYNONYM – LOW PRESSURE MELAMINE BOARD

ALL EXPOSURE LIMITS ARE 8-HOUR TIME-WEIGHTED-AVERAGES UNLESS OTHERWISE NOTED. OSHA PEL'S AND ACGIH TLV'S ARE CURRENT VALUES.

### PHYSICAL DATA

BOILING POINT	N/A	SPECIFIC GRAVITY	24-47 PCF
VAPOR PRESSURE	N/A	PERCENT VOLATILES	<1
VAPOR DENSITY	N/A	EVAPORATION RATE	N/A
SOLUBILITY IN WATER	N/A	APPEARANCE AND ODOR: ANY COLOR BOARD – VERY SLIGHT FORMALDEYDE ODOR	

### FIRE AND EXPOLSION DATA

FLASH POINT (METHOD)	N/A
FLAMMABLE LIMITS	LEL N/A %    UEL N/A
EXTINGUISHING MEDIA	CO2, DRY CHEMICAL, FOAM, WATER FOG
SPECIAL FIRE FIGHTING PROCEDURES	THIS MATERIAL HAS COMBUSTION CHARACTERISTICS SIMILAR TO WOOD

UNUSUAL FIRE AND EXPLOSION HAZARDS: PRODUCTS WITH DENSITIES LESS THAN 33 PCF MAY BE PRONE TO SMOLDER LONGER THAN WOOD AFTER FLAMES HAVE BEEN EXTINGUISHED.

### HEALTH HAZARD INFORMATION

PRIMARY ROUTES OF EXPOSUE: INHALATION IF DUST IS CREATED DURING FABRICATION.

SIGNS AND SYMPTONS OF OVERESPOSURE:

ACUTE: IRRITATION OF EYES, NOSE, THROAT, AND LUNGS

CHRONIC: NONE EXPECTED

AGGRAVATED MEDICAL CONDITIONS: RESPIRATORY ILLNESS.

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION: REMOVE TO FRESH AIR

EYES: FLUSH WITH SOAP AND WATER

SKIN: WASH WITH SOAP AND WATER

INGESTION: GIVE WATER AND INDUCE VOMITING

OTHER: FORMALDEHYDE HAS BEEN FOUND TO BE CARCINOGENIC IN TESTING  
LABORATORY ANIMALS

Funder America, Inc.  
P.O. Box 888  
Funder Drive  
Mocksville, NC 27028  
Ph: 800-438-6276

### REACTIVITY DATA

STABLE: XX                      UNSTABLE: \_\_\_\_\_                      HAZARADOUS POLYMERIZATION: \_\_\_\_\_

CONDITIONS TO AVOID: FIRE AND INTENSE HEAT

INCOMPATIBILITIES: NONE KNOWN

HAZARDOUS DECOMPOSITON PRODUCTS: NONE KNOWN

### SPILL AND LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: NORMAL HOUSEKEEPING

DISPOSAL METHOD: IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS

### SPECIAL PROTECTION INFORMATION

VENTILATION: NOT NECESSARY UNLESS FABRICATING; IF SO, USE SUFFICIENT VENTILATION  
TO KEEP EXPOSURES BELOW TLV.

RESPIRATORY PROTECTION: (USE ONLY NIOSH CERTIFIED DEVICES): DUST MASK DEVICE  
DURING FABRICATION IF NECESSARY.

PROTECTIVE CLOTHING: NOT NORMALLY NECESSARY

EYE PROTECTION: SAFETY GLASSES WITH SIDESHIELDS AS A MINIMUM WHEN FABRICATING

### SPECIAL PRCAUTIONS

NONE KNOWN

THE ABOVE INFORMATION LISTED IS BELIEVED TO BE ACCURATE BUT NOT WARREANTED OR GUARANTEED.

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### FIRE AND EXPLOSION DATA

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FLASH POINT (METHOD)	N/A
FLAMMABLE LIMITS	LEL N/A %    UEL N/A
EXTINGUISHING MEDIA	CO <sub>2</sub> , DRY CHEMICAL, FOAM, WATER FOG
SPECIAL FIRE FIGHTING PROCEDURES	THIS MATERIAL HAS COMBUSTION CHARACTERISTICS SIMILAR TO WOOD

UNUSUAL FIRE AND EXPLOSION HAZARDS: PRODUCTS WITH DENSITIES LESS THAN 33 PCF MAY BE PRONE TO SMOLDER LONGER THAN WOOD AFTER FLAMES HAVE BEEN EXTINGUISHED.

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### HEALTH HAZARD INFORMATION

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PRIMARY ROUTES OF EXPOSURE: INHALATION IF DUST IS CREATED DURING FABRICATION.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

ACUTE: IRRITATION OF EYES, NOSE, THROAT, AND LUNGS.

CHRONIC: NONE EXPECTED

AGGRAVATED MEDICAL CONDITIONS: RESPIRATORY ILLNESS.

EMERGENCY AND FIRST AID PROCEDURES

INHALATION: REMOVE TO FRESH AIR.

EYES: FLUSH WITH RUNNING WATER FOR 15 MINUTES.

SKIN: WASH WITH SOAP AND WATER.

INGESTION: GIVE WATER AND INDUCE VOMITING.

OTHER: FORMALDEHYDE HAS BEEN FOUND TO BE CARCINOGENIC IN TESTING LABORATORY ANIMALS.

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### REACTIVITY DATA

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STABLE:   X        UNSTABLE:             HAZARDOUS POLYMERIZATION:       

CONDITIONS TO AVOID: FIRE AND INTENSE HEAT

INCOMPATIBILITIES: NONE KNOWN

HAZARDOUS DECOMPOSITION PRODUCTS: NONE KNOWN

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**FUNDER**

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**MATERIAL SAFETY DATA**

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**TRADE NAME — FUNDERBOARD**  
**SYNONYM — LOW PRESSURE MELAMINE BOARD**

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ALL EXPOSURE LIMITS ARE 8-HOUR TIME-WEIGHTED-AVERAGES UNLESS OTHERWISE NOTED. OSHA PEL'S AND ACGIH TLV'S ARE CURRENT VALUES.

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**PHYSICAL DATA**

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BOILING POINT	N/A	SPECIFIC GRAVITY	24-47 PCF
VAPOR PRESSURE	N/A	PERCENT VOLATILES	<1
VAPOR DENSITY	N/A	EVAPORATION RATE	N/A
SOLUBILITY IN WATER	N/A	APPEARANCE AND ODOR: ANY COLOR BOARD — VERY SLIGHT FORMALDEHYDE ODOR	

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## PARTICLEBOARD MATERIAL SAFETY DATA SHEET

### SECTION IV - FIRE AND EXPLOSION DATA

**FLASH POINT** - Not Applicable

**AUTO IGNITION TEMPERATURE** - 425 - 475 degrees F

**FLAMMABLE LIMITS** - Formaldehyde LEL 7%, UEL 73%

**FIRE EXTINGUISHING MEDIA** - Water Spray, Carbon Dioxide

**SPECIAL FIRE FIGHTING PROCEDURES** - Fire fighting procedures for wood products are well known.

**UNUSUAL FIRE AND EXPLOSION HAZARDS** - Particleboard does not present a fire or explosion hazard. Sawing, sanding, or machining particleboard could result in the creation of wood dust. Wood dust may present a strong to severe explosion hazard if a dust cloud contacts an ignition source. According to data contained in NFPA Standards, .04 ounce per cubic foot is the minimum explosive concentration for wood flour.

### SECTION V - HEALTH HAZARD DATA

**Wood Dust/Fiber:** May cause nasal dryness, irritation and mucostasis. Coughing, wheezing, sneezing sinusitis and prolonged colds have also been reported. Depending on species, may cause respiratory sensitization and/or irritation. IARC classifies wood dust as a carcinogen to humans (Group 1). This classification is based primarily on IARC's evaluation of increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust. IARC did not find sufficient evidence to associate cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach, colon or rectum with exposure to wood dust.

**Signs and Symptoms of Exposure:** Acute - may cause temporary irritation of skin, eyes, or respiratory system. If irritation persists consult a physician. Chronic - rats exposed to 14 ppm formaldehyde developed nasal cancer. The NCI epidemiology study of 26,000 workers found little, if any, evidence linking formaldehyde exposure to cancer. The EPA has classified formaldehyde a B-1 Probable Human Carcinogen. Formaldehyde is listed by the IARC and the NTP as an animal carcinogen.

### EMERGENCY FIRST AID PROCEDURES

**Inhalation, Eyes, Skin** - Remove to fresh air

**Ingestion** - N/A

### SECTION VI - REACTIVITY DATA

**STABILITY** - Stable

**CONDITIONS TO AVOID** - High relative humidity and high temperature increases the rate of formaldehyde emissions in particleboard.

**INCOMPATIBILITY (materials to avoid)** - Strong oxidizing agents, strong acids

**HAZARDOUS DECOMPOSITION PRODUCTS** - Thermal and/or thermal-oxidative decomposition can product irritating and potentially toxic fumes and gases, including CO, aldehydes and organic acids.

**HAZARDOUS POLYMERIZATION** - Will not occur

### SECTION VII - SPECIAL PRECAUTION PROCEDURES

**PRECAUTIONS AND SAFE HANDLING:** Provide adequate ventilation to reduce the possible build-up of formaldehyde vapors.

**STEPS TO BE TAKEN IF SPILLED OR RELEASED:** See above.

**WASTE DISPOSAL METHOD:** Incinerate or landfill in accordance with local, state, and federal regulations.



## PARTICLEBOARD MATERIAL SAFETY DATA SHEET

### SECTION VIII - SPECIAL PROTECTION INFORMATION

#### **RESPIRATORY PROTECTION**

Not required. However, the wearing of NIOSH approved breathing protection for exposure to wood dust may be necessary. Respirators are required if air contaminants exceed OSHA PEL.

#### **VENTILATION**

**Local Exhaust:** Necessary to remove dust in sanding, sawing and machine processes.

**Mechanical:** Ventilate to assure formaldehyde concentration is less than the OSHA PEL.

#### **EYE PROTECTION**

Wear appropriate eye protection or safety goggles if wood dust exposure is likely.

### SECTION IX - REGULATORY INFORMATION

**H.U.D.:** The HLD regulation of 24 CFR Part 3280 provides for third party certification of particleboard manufactured with urea-formaldehyde resin for formaldehyde emissions. Maximum level is 0.3 ppm (large chamber test method).

**CALIFORNIA PROPOSITION 65 - Safe Drinking Water and Toxic Enforcement Act:** Title 22 California Code of Regulations California Proposition 65 provides for labeling and disclosure of the presence of a chemical(s) known to the State of California to cause cancer or reproductive toxicity. This product contains Formaldehyde in extremely low levels and may, depending on conditions, emit Formaldehyde. Based on a preponderance of data and the recognition by OSHA that 0.75 ppm TWA is a safe employee exposure level, we do not feel that exposure to this product presents significant risk to users.

**SARA 313 -** This product does not contain chemical(s) in concentrations which should require reporting under SARA 313.

**ODS:** During the manufacture of this product there is no intended use of listed ozone depleting chemicals as defined in applicable EPA regulations.

**IMPORTANT:** Temple-Inland Forest Products Corporation believe the information contained in this MSDS to be accurate at the time of preparation and has been compiled using sources believed to be reliable. However, Temple-Inland Forest Products Corporation makes no warrant, either expressed or implied concerning the accuracy or completeness of the information presented. It is the responsibility of the user to comply with local, state, or federal regulations concerning use of this product. It is the further responsibility of the buyer to research and understand safe methods of use, storage, handling and disposal of this product.

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## MEDIUM DENSITY FIBERBOARD

### MATERIAL SAFETY DATA SHEET

#### SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: Medium Density Fiberboard

TRADE NAME: MDF

SYNONYMS: N/A

CHEMICAL FAMILY: N/A

CHEMICAL FORMULA: N/A

CAS NUMBER: None

MANUFACTURER'S NAME AND ADDRESS:

TEMPLE-INLAND FOREST PRODUCTS CORPORATION

P. O. Drawer N

Diboll, Texas 75941

Contact: Don P. Cox

EMERGENCY TELEPHONE NUMBER: 936/829-5511

DATE PREPARED OR REVISED: SEPTEMBER 2001

#### SECTION II - HAZARDOUS INGREDIENTS

Under some conditions and/or subsequent remanufacturing the following hazardous substances may be released.

COMPONENT	CAS #	EXPOSURE LIMIT (OSHA)*	EXPOSURE LIMIT (ACGIH)*
Formaldehyde*	50-00-0	0.75 ppm 8-hr TWA 2 ppm 15-min STEL	0.3 ppm Ceiling
Wood Dust/Fiber**	None	5 mg/m <sup>3</sup> 8-hr TWA 10 mg/m <sup>3</sup> 15-min STEL	5 mg/m <sup>3</sup> 8-hr TWA 10 mg/m <sup>3</sup> 15-min STEL

\*In AFL-CIO v. OSHA 965 F. 2d 962 (11th Cir. 1992), the court overturned OSHA's 1989 Air Contaminants Rule, including the specific PELs for wood dust that OSHA had established at that time. The 1989 PELs were: TWA-5.0 mg/m<sup>3</sup>; STEL (15 min.) - 10.0 mg/m<sup>3</sup> (all soft and hard woods, except Western red cedar). Western red cedar: TWA - 2.5 mg/m<sup>3</sup>.

\*\*Wood dust is now officially regulated as an organic dust under the Particulates Not Otherwise Regulated (PNOR) or Inert or Nuisance Dust categories at PELs noted under Section II of this MSDS. However, a number of states have incorporated provisions of the 1989 standard in their state plans. Additionally, OSHA has announced that it may cite companies under the OSH Act General Duty Clause under appropriate circumstances for non-compliance with the 1989 PELs.

NOTE: Although Agency and Court decision(s) could affect these values, the Company will continue to utilize these values as the PEL.

#### SECTION III - PHYSICAL PROPERTIES

##### DESCRIPTION

Composite panel product composed of resin and wood fibers of varying percents (dependent on properties and thickness) pressed into panels of various sizes (normally 4 ft. X 8 ft.).



## MEDIUM DENSITY FIBERBOARD

### MATERIAL SAFETY DATA SHEET

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#### PHYSICAL DATA

**BOILING POINT** - Not Applicable  
**SPECIFIC GRAVITY** - Variable (Dependent on wood species and moisture content)  
**VAPOR DENSITY** - Not Applicable  
**% VOLATILES BY VOLUME** - Not Applicable  
**MELTING POINT** - Not Applicable  
**VAPOR PRESSURE** - Not Applicable  
**SOLUBILITY IN H<sub>2</sub>O (% BY WT.)** - Insoluble  
**EVAPORATION RATE (Butyl Acetate = 1)** - Not Applicable  
**pH** - Not Applicable  
**APPEARANCE AND ODOR** - Light to dark colored solid. Color and odor are dependent on the wood species and time since board was manufactured.

#### SECTION IV - FIRE AND EXPLOSION DATA

**FLASH POINT** - Not Applicable  
**AUTO IGNITION TEMPERATURE** - 425 - 475 deg F  
**FLAMMABLE LIMITS** - Not Applicable  
**FIRE EXTINGUISHING MEDIA** - Water Spray, Carbon Dioxide  
**SPECIAL FIRE FIGHTING PROCEDURES** - Fire fighting procedures for wood products are well known.

**UNUSUAL FIRE AND EXPLOSION HAZARDS** - MDF does not present a fire or explosion hazard. Sawing, sanding, or machining MDF could result in the creation of wood dust. Wood dust may present a strong to severe explosion hazard if a dust cloud contacts an ignition source. According to data contained in NFPA Standards, .04 ounce per cubic foot is the minimum explosive concentration for wood flour.

#### SECTION V - HEALTH HAZARD DATA

**WOOD DUST/FIBER:** May cause nasal dryness, irritation and mucostasis. Coughing, wheezing, sneezing, sinusitis and prolonged colds have also been reported. Depending on species, may cause respiratory sensitization and/or irritation. IARC classifies wood dust as a carcinogen to humans (Group 1). This classification is based primarily on IARC's evaluation of increased risk in the occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust. IARC did not find sufficient evidence to associate cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach, colon or rectum with exposure to wood dust.

**SIGNS AND SYMPTOMS OF EXPOSURE:** Acute - may cause temporary irritation of skin, eyes, or respiratory system. If irritation persists consult a physician. Chronic - rats exposed to 14 ppm formaldehyde developed nasal cancer. The NCI epidemiology study of 26,000 workers found little, if any, evidence linking formaldehyde exposure to cancer. The EPA has classified formaldehyde a B-1 Probable Human Carcinogen. Formaldehyde is listed by the IARC and the NTP as an animal carcinogen.

#### EMERGENCY FIRST AID PROCEDURES

**INHALATION, EYES, SKIN** - Remove to fresh air  
**INGESTION** - N/A

#### SECTION VI - REACTIVITY DATA

**STABILITY** - Stable  
**CONDITIONS TO AVOID** - High relative humidity and high temperature increases the rate of formaldehyde emissions.  
**INCOMPATIBILITY (materials to avoid)** - Strong oxidizing agents, strong acids  
**HAZARDOUS DECOMPOSITION PRODUCTS** - Thermal and/or thermal-oxidative decomposition can product irritating and potentially toxic fumes and gases, including CO, aldehydes and organic acids.  
**HAZARDOUS POLYMERIZATION** - Will not occur.



## MEDIUM DENSITY FIBERBOARD

### MATERIAL SAFETY DATA SHEET

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#### **SECTION VII - SPECIAL PRECAUTION PROCEDURES**

**PRECAUTIONS AND SAFE HANDLING:** Provide adequate ventilation to reduce the possible build-up of formaldehyde vapors.

**STEPS TO BE TAKEN IF SPILLED OR RELEASED:** See above.

**WASTE DISPOSAL METHOD:** Recycle, incinerate or landfill in accordance with local, state, and federal regulations.

#### **SECTION VIII - SPECIAL PROTECTION INFORMATION** **RESPIRATORY PROTECTION**

Not required. However, the wearing of NIOSH approved breathing protection for exposure to wood dust may be necessary. Respirators are required if air contaminants exceed OSHA PEL.

##### **VENTILATION**

Necessary to remove dust in sanding, sawing and machine processes.

Ventilate to assure formaldehyde concentration is less than the OSHA PEL.

##### **EYE PROTECTION**

Wear appropriate eye protection or safety goggles if wood dust exposure is likely.

#### **SECTION IX - REGULATORY INFORMATION**

**CALIFORNIA PROPOSITION 65** - Safe Drinking Water and Toxic Enforcement Act: Title 22 California Code of Regulations California Proposition 65 provides for labeling and disclosure of the presence of a chemical(s) known to the State of California to cause cancer or reproductive toxicity. This product contains Formaldehyde in extremely low levels and may, depending on conditions, emit Formaldehyde. Based on a preponderance of data and the recognition by OSHA that 0.75 ppm TWA is a safe employee exposure level, we do not feel that exposure to this product presents significant risk to users.

**MINNESOTA** - This product has not been tested for compliance with the Minnesota statutes for formaldehyde emissions. It cannot be used in the state for applications covered by Sections 144.495 and 325F.18 concerning the emission of Formaldehyde.

**SARA 313** - This product does not contain chemical(s) in concentrations which should require reporting under SARA 313.

**ODS:** During the manufacture of this product there is no intended use of listed ozone depleting chemicals as defined in applicable EPA regulations.

**IMPORTANT:** Temple-Inland Forest Products Corporation believes the information contained in this MSDS to be accurate at the time of preparation and has been compiled using sources believed to be reliable. However, the Company makes no warrant, either expressed or implied concerning the accuracy or completeness of the information presented. It is the responsibility of the user to comply with local, state, or federal regulations concerning use of this product. It is the further responsibility of the buyer to research and understand safe methods of use, storage, handling and disposal of this product.