

Safety Data Sheet

TERRA™ MDF (NAF)

Section 1: Identification

Product Name	<ul style="list-style-type: none"> • Terra MDF (NAF) 	
Synonyms	<ul style="list-style-type: none"> • Terra NAF MDF; NAUF MDF <p>This SDS is applicable for all Arauco North America Terra NAF MDF manufactured at the sites noted below including NAF MDF panels laminated with thermally fused laminate (TFL)/melamine.</p>	
Product Description	<ul style="list-style-type: none"> • A wood product composed of wood and cured synthetic resins 	
Recommended use	<ul style="list-style-type: none"> • Building Materials –Decorative, Furniture, General Construction 	
Manufacturing Sites	<ul style="list-style-type: none"> • Eugene, OR 	
Supplier	<ul style="list-style-type: none"> • ARAUCO North America <p>5901-B Peachtree Dunwoody Rd NE, Suite 500 Atlanta, GA 30328 USA http://www.arauco-na.com/</p>	
Telephone (General)	<ul style="list-style-type: none"> • 800-261-4890 	
Regional Support Centers	<ul style="list-style-type: none"> • <u>Canadian Regional Center</u> 80 Tiverton Court, Suite 701 Markham L3R 0G4 Canada Tel: (905) 475-9686 Fax: (905) 475-3827 	<ul style="list-style-type: none"> • <u>US Eastern Regional Center</u> 515 River Crossing Drive, Suite 110 Fort Mill, SC 29715 Tel: (877) 273-7680 Fax: (800) 808-1454
	<ul style="list-style-type: none"> • <u>US Western Regional Center</u> 2550 NE Old Salem Road Albany, OR 97321 Tel: (888) 650-6302 Fax: (541) 928- 4116 	

Section 2: Hazard Identification

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

Classification of the substance or mixture

OSHA HCS 2012

- This product is generally an article but is regulated under OSHA for the release of wood dust during mechanical operations releasing dust. The free formaldehyde levels are below OSHA reporting requirements. The classifications below are based upon wood dust.

Skin Irritation 2

Skin Sensitization 1

Eye Mild Irritation 2B

Respiratory Sensitization 1

Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation

Carcinogenicity 1A

Combustible Dust

Label elements

OSHA HCS 2012

DANGER



- Hazard statements**
- Causes skin irritation
 - May cause an allergic skin reaction
 - Causes eye irritation
 - May cause respiratory irritation
 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
 - May cause cancer via inhalation of respirable dust
 - May form combustible dust concentrations in air.

Precautionary statements

- Prevention**
- Obtain special instructions before use.
 - Do not handle until all safety precautions have been read and understood.
 - Do not breathe dust.
 - Contaminated work clothing should not be allowed out of the workplace.
 - In case of inadequate ventilation wear respiratory protection.
 - Wash thoroughly after handling.
 - Do not eat, drink or smoke when using this product.
 - Use only outdoors or in a well-ventilated area.
 - Wear protective gloves/protective clothing/eye protection.
- Response**
- IF ON SKIN: Wash with plenty of soap and water.
 - If skin irritation or rash occurs: Get medical advice/attention.
 - Take off contaminated clothing and wash it before reuse.
 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.
 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
 IF exposed or concerned: Get medical advice/attention.

Storage/Disposal • Store away from water and ignition sources. It is recommended to store the product in an area with relative humidity and temperature that approximates end use conditions.
 Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Other hazards

OSHA HCS 2012

- This product is not considered hazardous under the U.S. OSHA 29 CFR 1910.1200 Hazard Communication Standard.

Other information

NFPA • Health = 1, Flammability = 1, Reactivity = 0, Special Information = None

HMIS • Health = *1, Flammability = 1, Reactivity = 0, PPE = E

* Chronic Health Hazard

E = Safety glasses, gloves, and a dust respirator

Section 3 - Composition/Information on Ingredients

Mixtures

These wood products are composed of wood and cured synthetic resins. See Section 8 for exposure limits discussion.

Composition			
Chemical Name	Identifiers	%	Hazardous
Wood fibers *	CAS: Not Available	92% TO 96%	Yes
Cured synthetic resin	CAS: Proprietary	2.5% TO 6.0%	No

* Wood contains trace amounts of various chemicals present in the environment which are absorbed by trees through natural growth. A comprehensive listing of species is available upon request.

All products produced at Arauco NA mills are certified to the Composite Panel Association's Eco-certified Composite (ECC) Sustainability Standard which requires adherence to the strict California Air Resources Board (CARB) Composite Wood Formaldehyde Air Toxic Control Measure (CARB ATCM 93120.12).

CALIFORNIA RESIDENTS: This product contains one or more chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

Section 4: First-Aid Measures

Description of first aid measures

Inhalation • IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

Skin • IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Eye • IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and

easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion • Health effects are not known or expected to occur under normal use. Low hazard for usual industrial or commercial handling.

Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

Section 5: Fire-Fighting Measures

Extinguishing media

Suitable Extinguishing Media • SMALL FIRES: Dry chemical, CO₂, water spray or regular foam.
LARGE FIRE: Water spray, fog or regular foam.

Unsuitable Extinguishing Media • No data available

Firefighting Procedures • No special procedures. Fire-fighting procedures for wood products are well known.

Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards • MDF is not an explosion hazard. Sawing, sanding, or machining MDF could result in the by-product wood dust. Wood dust may present a strong to severe explosion hazard if a dust cloud contacts an ignition source.
• Airborne concentrations of 40 grams per cubic meter are often used as the lower explosive limit (LEL) for wood dusts. OSHA interprets the explosive level as having no visibility within five feet or less.

Hazardous Combustion Products • Burning of MDF can result in carbon dioxide, carbon monoxide, oxides of nitrogen, aldehydes, cyanides and other hazardous gases and particles.

Section 6 - Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal Precautions • Do not breathe dust.

Emergency Procedures • No emergency procedures are expected to be necessary if material is used under ordinary conditions as recommended.

Environmental precautions

- No known significant environmental effects.

Methods and material for containment and cleaning up

Containment/Clean-up Measures • Not applicable for product in purchased form. Dust generated from sawing, sanding, drilling or routing this product may be vacuumed or shoveled for recovery or disposal. Wood dust clean-up and disposal activities should be accomplished in a manner to minimize creation of airborne dust.

Section 7 - Handling and Storage

Precautions for safe handling

Handling • No special precautions for handling product. Use good safety and industrial hygiene practices. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

Conditions for safe storage, including any incompatibilities

Storage

- Avoid storage where exposure to water could occur or near a source of ignition. It is recommended to store the product in an area with relative humidity and temperature that approximates end use conditions. Keep away from sources of ignition - No Smoking.

Incompatible Materials or Ignition Sources • Keep away from ignition sources.

Section 8 - Exposure Controls/Personal Protection

Control parameters

Exposure Limits/Guidelines • No data available.

Exposure Limits/Guidelines				
	Result	ACGIH	NIOSH	OSHA
Wood dust	TWAs	1 mg/m ³ TWA <i>as Wood dust, all soft and hard woods</i>	1 mg/m ³ TWA <i>as Wood dust, all soft and hard woods</i>	15 mg/m ³ , total dust (5 mg/m ³ , respirable fraction) (as nuisance dust)

Exposure controls

Engineering Measures/Controls

- Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values. Due to the explosive potential of wood dust when suspended in air, precautions should be taken during sanding, sawing or machining of wood products to prevent sparks or other ignition sources in ventilation equipment. Use of totally enclosed motors is recommended.

Personal Protective Equipment

Pictograms



Respiratory

- Use of a NIOSH/MSHA approved dust respirator is recommended where airborne dust levels exceed appropriate PELs and TLVs.

Eye/Face

- Wear safety glasses.

Hands

- Wear protective gloves - Rubberized cloth, canvas or leather gloves.

Skin/Body

- Wear long sleeves and/or protective coveralls.

General Industrial Hygiene Considerations

- Practice good housekeeping and avoid creating/breathing dust. Do not allow dust to collect. Maintain, clean, and fit test respirators in accordance with OSHA regulations.

Environmental Exposure Controls

- No data available

Section 9 - Physical and Chemical Properties

Information on Physical and Chemical Properties

Material Description

Physical Form	Solid A panel product manufactured from wood fibers bonded with synthetic resins or other bonding system	Appearance/Description	MDF panel.
Color	Straw yellow (light brown)	Odor	No distinctive odor.
Taste	No data available.	Odor Threshold	Not relevant
General Properties			
Boiling Point	Not relevant	Melting Point	Not relevant
Decomposition Temperature	No data available	pH	Not relevant
Specific Gravity/Relative Density	Not relevant	Density	No data available
Bulk Density	No data available	Water Solubility	Insoluble
Viscosity	No data available	Explosive Properties	No data available
Oxidizing Properties:	No data available		
Volatility			
Vapor Pressure	Not relevant	Vapor Density	No data available
Evaporation Rate	Not relevant	VOC (Vol.)	0 %
Flammability			
Flash Point	Not relevant	UEL	Not relevant
LEL	Not relevant	Burning Time	No data available
Autoignition	425 to 475 F(218.3 to 246.1 C)	Flammability (solid, gas)	No data available

Section 10: Stability and Reactivity

Reactivity

- The product is stable.

Chemical stability

- Stable

Possibility of hazardous reactions

- Hazardous polymerization not indicated. Hazardous polymerization will not occur.

Conditions to avoid

- Exposure to water, ignition source, high relative humidity and high temperature.

Incompatible materials

- Incompatible Materials: Acids (strong), Oxidizers (strong)

Hazardous decomposition products

- Hazardous decomposition may occur Thermal and/or thermal oxidative decomposition can produce irritating and toxic fumes and gases, generating carbon oxides, nitrogen oxides, HCN, aldehydes and organic acids.

Section 11 - Toxicological Information

Information on toxicological effects

Other Material Information

- Not applicable for product in purchased form. No Individual component information is available.

GHS Properties	Classification
----------------	----------------

Acute toxicity	OSHA HCS 2012•Acute Toxicity - Data lacking (Oral, dermal, inhalation)
Aspiration Hazard	OSHA HCS 2012•Data lacking
Carcinogenicity	OSHA HCS 2012•Carcinogenicity 1A
Germ Cell Mutagenicity	OSHA HCS 2012•Data lacking
Skin corrosion/Irritation	OSHA HCS 2012•Skin Irritation 2
Skin sensitization	OSHA HCS 2012•Skin Sensitizer 1
STOT-RE	OSHA HCS 2012•Specific Target Organ Toxicity Repeated Exposure 2
STOT-SE	OSHA HCS 2012•Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation
Toxicity for Reproduction	OSHA HCS 2012•Data lacking
Respiratory sensitization	OSHA HCS 2012•Respiratory Sensitizer 1
Serious eye damage/Irritation	OSHA HCS 2012•Eye Mild Irritation 2B

Target Organs	• Skin/Dermal, Lungs, Respiratory System
Route(s) of entry/exposure	• Inhalation, Skin, Eye
Medical Conditions Aggravated by Exposure	• Dusts may aggravate asthma or other respiratory disorders.

Potential Health Effects

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs include:

Inhalation

Acute (Immediate)	• May cause respiratory irritation.
Chronic (Delayed)	• Repeated and prolonged exposure may cause cancer. Repeated and prolonged exposure may cause sensitization of the respiratory system.

Skin

Acute (Immediate)	• May cause irritation.
Chronic (Delayed)	• Repeated and prolonged exposure may cause sensitization.

Eye

Acute (Immediate)	• May cause irritation.
Chronic (Delayed)	• No data available.

Ingestion

Acute (Immediate)	• Under normal conditions of use, no health effects are expected.
Chronic (Delayed)	• Under normal conditions of use, no health effects are expected.

Carcinogenic Effects

- Wood dust is listed by NTP known to be a Human Carcinogen (10th Report), IARC Monographs: Wood dust, Group 1 - IARC Group 1: Carcinogenic to humans; sufficient evidence of carcinogenicity. This classification is primarily based on studies showing an association between occupational exposure to wood dust and adenocarcinoma of the nasal cavities and paranasal sinuses. IARC did not find sufficient evidence of an association between occupational exposure to wood dust and cancers of the hypopharynx, oropharynx, lymphatic and hematopoietic systems, lungs, stomach, colon or rectum.

Carcinogenic Effects				
	CAS	OSHA	IARC	NTP
Wood dust as Wood dust, all soft and hard woods	Not Available	Not Listed	Group 1-Carcinogenic	Known Human Carcinogen

Section 12 - Ecological Information

Toxicity

- No information available at this time. As with all foreign substances do not allow to enter the storm drainage systems. These wood products are not expected to pose an ecological hazard as a result of their intended use.

Persistence and degradability

- No data available

Bioaccumulative potential

- No data available

Mobility in Soil

- No data available

Section 13 - Disposal Considerations

Waste treatment methods

- Product waste**
- Burn in a municipal incinerator. Dispose of in an approved landfill. Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

- Packaging waste**
- No data available.

Section 14 - Transport Information

	UN number	UN proper shipping name	Transport hazard class(es)	Packing group	Environmental hazards
DOT	No Data Available	No Data Available	No Data Available	No Data Available	No Data Available
TDG	No Data Available	No Data Available	No Data Available	No Data Available	No Data Available

Special precautions for user

- No special precautions.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

- No data available

Other information

DOT • Not regulated as a hazardous material.

TDG • Not regulated as a dangerous good.

Section 15 - Regulatory Information

Safety, health and environmental regulations/legislation specific for the mixture

SARA Hazard Classifications

- Acute, Chronic

Inventory			
Component	CAS	Canada DSL	TSCA
MDF TERRA	Not Applicable	Not listed. All components are on the Canada DSL or are excluded from listing.	Not listed. All components are on the TSCA inventory or are excluded from listing.

Canada

Labor

Canada - WHMIS - Classifications of Substances

• MDF TERRA and ingredients (unless listed below) N/A Not listed or below de minimis reporting quantities

Canada - WHMIS - Ingredient Disclosure List

• MDF TERRA and ingredients (unless listed below) N/A Not listed or below de minimis reporting quantities

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

• MDF TERRA and ingredients (unless listed below) N/A Not Listed

Environment

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• MDF TERRA and ingredients (unless listed below) N/A Not Listed

U.S. - CERCLA/SARA - Section 304 Extremely Hazardous Substances EPCRA RQs

• MDF TERRA and ingredients (unless listed below) N/A Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA TPQs

• MDF TERRA and ingredients (unless listed below) N/A Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• MDF TERRA and ingredients (unless listed below) N/A Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

• MDF TERRA and ingredients (unless listed below) N/A Not Listed
 • Wood dust as Wood dust, all soft and hard woods N/A carcinogen, initial date 12/18/09

Section 16 - Other Information

Classification method for mixtures • Cut-off values/concentration limits of ingredients.

Last Revision Date • February 7, 2014

Preparation Date • June 1, 2015

Disclaimer/Statement of Liability • The information contained in this Safety Data Sheet is based on the experience of occupational health and safety professionals and comes from sources believed to be accurate or otherwise technically correct. It is the user's responsibility to determine if the product is suitable for its proposed application(s) and to follow necessary safety precautions. The user has the responsibility to make sure that this sheet is the most up-to-date issue.

• Arauco North America is a trade name used by Flakeboard Company Limited,



Safety Data Sheet

WOOD AND WOOD PRODUCTS

*Building Materials
Structural,
Industrial or Decorative*

PAGE
10 of

Flakeboard America Limited, Arauco Panels USA LLC, and other North America affiliates, each of which is an independent company and is not liable or responsible for acts or obligations of its affiliates.

GHS Product Hazard Label

TERRA MDF (NAF)

According to OSHA 29 CFR 1910.1200 HCS



DANGER

This product is generally an article but is regulated under OSHA for the release of wood dust during mechanical operations releasing dust. No adverse health effects are expected if the product is handled in accordance with the product label and the product Safety Data Sheet. Symptoms or effects that may arise if the product is mishandled and overexposure occurs include:

Causes skin irritation.

May cause an allergic skin reaction.

Causes eye irritation.

May cause respiratory irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause cancer via inhalation of respirable dusts.

May form combustible dust concentrations in air.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dust.

In case of inadequate ventilation wear respiratory protection.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If eye irritation persists: Get medical advice/attention.

IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

IF exposed or concerned: Get medical advice/attention.

Store away from water and sources of ignition. It is recommended to store the product in an area with relative humidity and temperature that approximates end use conditions.

Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

California Proposition 65 Notification Requirement

Warning

Drilling, sawing, or machining wood products generates wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection.

ARAUCO North America, 5901-B Peachtree Dunwoody Rd NE, Suite 500
Atlanta, GA 30328
General Information: 800-261-4890