



Guararapes Painéis S.A.
 Rua Avelino Mandelli S/Nº Km 1 Bairro Aeroporto
 Caçador - SC - Brasil
 Tel + 55 (49) 3561 6700
 Fax + 55 (49) 3561 6711
 info@guararapes.com.br
 www.guararapes.com.br



MATERIAL SAFETY DATA SHEET (MSDS)
Medium Density Fiberboard - MDF/HDF
CARB 93120 phase 2 compliant & TSCA Title VI Compliant for formaldehyde
 Ver. 02 Jan. 18 - By Gerson Aldo de Souza

Hazard Ingredients

Under some conditions the following hazardous material may be released from MDF and/or products manufactured from same. Wood dust may also be developed from machining of various wood products

Ingredient Name	(CAS #)	ACGIH / TLV	OSHA / PEL
Formaldehyde *	50-00-0	Ceiling 0.3 ppm	TWA 0.75 ppm STEL 2.0 ppm
Wood Dust	NAP	TWA 5 mg/m ³	TWA 5 mg/m ³
		STEL 10 mg/m ³	STEL 10 mg/m ³

* The thermal heating process cures the resin and just small amount of Formaldehyde may be found on the final product. This amount reduces dramatically over time. Final product contains less than 0.015% of free formaldehyde in weight
 As per final product certification release formaldehyde is lower than 0.13 ppm for HDF and 0,11 ppm for MDF

NOTE :

OSHA = Occupational Safety & Health Administration
 ACGIH = American Conference of Governmental Industrial Hygienists.
 PEL = Permissible Exposure Limit.
 TWA = Time-Weighted Average.
 TLV = Threshold Limit Value.
 STEL = Short-Term Exposure Limit.
 NAP = Not applicable properties
 CAS # = Chemical Abstract Society Number

Physical / Chemical Characteristics

Appearance and odor	Straw Yellow to Light Brown. No Distinctive Odor
Specific gravity (H ₂ O = 1)	Variable but generally under 1.
Boiling point	NAP
Melting point	NAP
Vapor pressure	NAP
Vapor density	NAP
Solubility in water	NAP
Evaporation rate	NAP

Fire and Explosion Hazard Data

Flash point (method used)	NAP
Extinguishing media	Water Spray, CO ₂ and Sand
Auto-Ignition temperature	218 - 246 °C
Flammable limits in air	Formaldehyde LEL = 7% and UEL 73%
Special fire fighting procedures	Fire fighting procedures for wood are well known
Unusual fire e exposition hazards	Dry and warm environments or the presence of an ignition source may cause wood dust to explode. According to NFPA (National Forest Product Association) 40 g/m ³ is the minimum wood dust concentration for explosion

Reactivity Data

Stability	Stable
Incompatibility	Strong Oxidizing agents, drying oils and strong acids
Hazardous decomposition	Toxic fumes and gases like carbon dioxide (CO ₂), olefinic e paraffinic compounds, trace amount of organic acids, ketones and alcohols
Hazardous polymerization	Will not occur



Guararapes Painéis S.A.
Rua Avelino Mandelli S/Nº Km 1 Bairro Aeroporto
Caçador - SC - Brasil
Tel + 55 (49) 3561 6700
Fax + 55 (49) 3561 6711
info@guararapes.com.br
www.guararapes.com.br



MATERIAL SAFETY DATA SHEET (MSDS)
Medium Density Fiberboard - MDF/HDF
CARB 93120 phase 2 compliant & TSCA Title VI Compliant for formaldehyde
Ver. 02 Jan. 18 - By Gerson Aldo de Souza

Health Hazard Data

Signs and Symptoms of Exposure

1. Formaldehyde

Acute Exposure May cause temporary irritation of eyes, skin, and respiratory system.
May cause sensitization

Chronic Exposure Rats exposed to 14 ppm developed nasal cancer
EPA, IARC and NTP has classified it as probable human carcinogen

2. Wood Dust

Acute Exposure **Skin Contact:** causes irritation and sensitization
Dermatitis has been reported in humans
Rats exposed to 14 ppm developed nasal cancer. Nature of wood and origin of dust has to be taken in consideration

Eye Contacts: causes eye irritation. Conjunctivitis has been reported in humans. Nature of wood and origin of dust has to be taken in consideration

Inhalation: causes irritation and sensitization. May cause some difficulties on breathing such as bronchitis, nasal discharge, respiratory track obstruction and more. May sensitize the respiratory system and cause asthmatic symptoms and signs

Chronic Exposure Exposure to dust may cause asthmatic symptoms and signs
Chronic exposure to some species of wood and sensitivity of some workers may cause outbreak of some allergies that can become a potential hazard to these individuals
Irritancy to skin, respiratory system and eyes
Sensitization of skin and respiratory system

Emergency First Aids Procedures

Inhalation Remove to fresh air. If persistent irritation breathing difficulties or rash occurs, seek medical advice

Eyes Remove to fresh air. Flush eyes immediately with clear water for 10'.
If irritation persists, get medical attention

Skin Remove to fresh air. Wash skin with mild soap or detergent and water, or flush affected area for few minutes. If a rash or persistent irritation occurs get a medical advice before return to work where wood dust is present

Note

EPA = Environment Protection Agency
IARC = International Agency for Research and Cancer
NTP = National Toxicology Program



Guararapes Painéis S.A.
Rua Avelino Mandelli S/Nº Km 1 Bairro Aeroporto
Caçador - SC - Brasil
Tel + 55 (49) 3561 6700
Fax + 55 (49) 3561 6711
info@guararapes.com.br
www.guararapes.com.br



MATERIAL SAFETY DATA SHEET (MSDS)
Medium Density Fiberboard - MDF/HDF
CARB 93120 phase 2 compliant & TSCA Title VI Compliant for formaldehyde
Ver. 02 Jan. 18 - By Gerson Aldo de Souza

Precautions for Safe Handling and Use

Precautions to be taken in handling and storing	Provide adequate ventilation to reduce possible build-up of formaldehyde gas particularly when high temperatures occurs
Steps to be taken in case material is released or spilled	See above for formaldehyde. Sweep and vacuum spills of dust for recovery or disposal; avoid creating dust conditions
Waste disposal method	Incinerate or landfill in accordance with local, provincial, federal or state regulation

Control Measures

Ventilation	Recommended
Local exhaust	Necessary to remove wood dust
Mechanical	Ventilate to ensure removal of wood dust and formaldehyde under ACGIH - TLV
Special	Self-contained breathing apparatus (SCBA) recommended when suppressing fire
Respiratory protection	NIOSH approved respirator
Protective gloves	Recommended to avoid mechanical irritation when handling the panels
Eye protection	Safety glasses or goggles are highly recommended when cutting or sanding the panels
Work/hygienic practices	Good housekeeping practices to avoid excessive accumulation of wood dust

Disclaimer

Guararapes Painéis S.A. believes the information contained in this MSDS to be accurate at the time of its preparation and has been compiled using sources believed to be reliable. However Guararapes Painéis S.A. makes no warranty either expressed or implied concerning accuracy of completeness of the information presented. It is the responsibility of the user to comply with local, provincial, state and federal regulations concerning use of this product. It is the further responsibility of the buyer to research and understand safe methods of storing, handling and disposal of this product.