



SAFETY DATA SHEET

SECTION 01 – IDENTIFICATION

Common / Product Name: Medium Density Fiberboard (MDF) Unisub,
Medium Density Fiberboard (MDF) ChromaLuxe

Revision Date: June 17, 2016

Recommended Use: Various fabricated MDF parts and products

Identification of the Company: Universal Woods Inc.
2600 Grassland Dr.
Louisville, KY 40299-2591
USA
Emergency Telephone No: (502) 491 1477
Other Information Calls: (502) 491 1461

Emergency Information: CHEMTREC 24 HR. Emergency Telephone:
U.S. /North America: (800) 424-9300
International: (703) 527-3887

SECTION 02 – HAZARD(S) IDENTIFICATION

Emergency overview

This product is not hazardous in the form in which it is shipped by the manufacturer but may become hazardous by downstream activities (e.g., grinding, sanding, cutting, pulverizing) that reduce its particle size. Those hazards are described below.

Physical hazards	Not classified.	
Health hazards	Eye irritation	Category 2B
	Sensitization, respiratory	Category 1
	Sensitization, skin	Category 1
	Carcinogenicity	Category 1A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, repeated exposure	Category 1 (respiratory system)

Environmental hazards	Not classified.
OSHA defined hazards	Combustible dust
Label elements	



Signal word Danger

Hazard statement Causes eye irritation. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Causes damage to organs (respiratory system) through prolonged or repeated exposure by inhalation. May cause cancer. If small particles of wood dust are generated during further processing, handling or by other means, may form combustible dust concentrations in air.

Precautionary statement

Prevention Do not handle until all safety precautions have been read and understood. Wear protective gloves. In case of inadequate ventilation wear respiratory protection. Avoid breathing dust. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Prevent dust accumulation and airborne dispersion of dust to minimize flash fire and explosion hazard.

Response 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 on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a doctor or other qualified medical professional. In case of fire: Use appropriate media to extinguish.

Storage Store away from strong acids, alkalies, oxidizing agents and drying oils.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

SECTION 03 – COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical name</u>	<u>CAS #</u>	<u>Weight %</u>
WOOD/WOOD DUST	Not Assigned	90-100
POLYMERIC MDI (pMDI)	9016-87-9	1-5
METHYLENE BISPHENOL ISOCYANATE (MDI)	101-68-8	1-3
2,4'-DIPHENYL METHANE DIISOCYANATE	5873-54-1	< 1
Other components below reportable levels		1-3

Other components below reportable levels

The specific chemical identity and/or percentage of composition has been withheld as a trade secret.

Surface finishes are factory applied. These products are classified as an "article" according to 29 CFR 1910.1200(c). They do not release any hazardous chemical under normal conditions of use.

SECTION 04 – FIRST-AID MEASURES

Inhalation	Remove from area of exposure. If the affected person is not breathing, apply artificial respiration. If persistent irritation, severe coughing or breathing difficulty occurs, seek medical attention.
Skin contact	If irritation develops, wash with soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	If wood or wood dust is swallowed, get immediate medical attention or advice -- Do not induce vomiting.
Most important symptoms/effects, acute and delayed	Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort. May cause an allergic skin reaction. Dermatitis. Rash. May cause respiratory irritation. Difficulty in breathing.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

SECTION 05 – FIRE-FIGHTING MEASURES

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂). Apply extinguishing media carefully to avoid creating airborne dust.
Unsuitable extinguishing Media	Heavy water (or jet) stream may cause dust to become airborne and create a flash fire hazard or an explosive atmosphere.
Specific hazards arising from the chemical	Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire

Fire fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

Specific methods

To avoid dust clouds, responders should use the extinguisher from as far away as possible and apply the extinguishing agent as gently as possible. The main considerations with hose stream operation are to avoid creating combustible dust clouds or introducing more air. In particular, the use of solid streams and direct dust pile hits can disperse dust into the air creating a potential flash fire hazard. The best way to apply water is in a medium to wide-pattern, as gently as possible. Responders should use a low nozzle pressure and loft the stream onto the burning material from as far away as the stream will reach. The use of wide-pattern (or "fog") streams at pressures typically used.

General fire hazards

May form combustible dust concentrations in air.

SECTION 06 –ACCIDENTAL RELEASE MEASURES
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Personal precautions, protective equipment and emergency procedures

Use only non-sparking tools. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Vacuum dust with dust ignition proof vacuum or wet sweep small wood pieces and dust; place in appropriate container for disposal. Gather larger pieces by an appropriate method. Reduce airborne dust by use of wet methods (e.g. water mist) and prevent scattering by moistening with water. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

SECTION 07 –HANDLING AND STORAGE

Precautions for safe handling

Dust can form an explosive mixture in air. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated. Minimize dust generation and accumulation. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. If flash fire or explosion hazard is present, wear flame resistant clothing and face/head protection. Dry powders can build static electricity charges when subjected to the friction of

transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Use personal protective equipment as required. Ensure dust collection systems used for conveying combustible wood dusts are protected with and equipped with fire and explosion prevention and protection equipment. See NFPA 664 and NFPA 69 for further requirements, information and guidance.

Conditions for safe storage, including any incompatibilities

Store flat, supported and protected from direct contact with the ground. Store away from incompatible materials (see Section 10 of the SDS). Store in a cool dry place.

SECTION 08 –EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
METHYLENE BIPHENOL ISOCYANATE (MDI) (CAS 101-68-8)	Ceiling	0.2 mg/m ³	
WOOD/WOOD DUST	PEL	0.02 ppm 5 mg/m ³ 15 mg/m ³	Respirable fraction. Total dust.

ACGIH

Components	Type	Value	Form
WOOD/WOOD DUST	TWA	1 mg/m ³	Inhalable fraction

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
METHYLENE BIPHENOL ISOCYANATE (MDI) (CAS 101-68-8)	TWA	0.005 ppm	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
METHYLENE BIPHENOL ISOCYANATE (MDI) (CAS 101-68-8)	Ceiling	0.2 mg/m ³	
	TWA	0.02 ppm 0.05 mg/m ³ 0.005 ppm	
WOOD/WOOD DUST	TWA	1 mg/m ³	Dust

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines	The raw material manufacturer voluntarily elects to adhere to exposure limits contained in OSHA's 1989 Air Contaminants Standard although certain limits were vacated in 1992. The present OSHA exposure limits governing wood dust is 15 mg/m ³ (Total Dust) and 5 mg/m ³ (Respirable Fraction).
Appropriate engineering Controls	Due to the fire and explosive potential of dust when suspended in air, precautions should be taken when material is used in any operation which may generate dust. Local exhaust, general dilution ventilation in enclosed areas, and explosion proof equipment is recommended. Use wet methods, if appropriate, to reduce airborne dust concentrations.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Safety glasses or goggles are recommended when using this product. Ensure compliance with OSHA's PPE standard (29 CFR 1910.132 and .133) for eye and face protection.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
Other	Impervious protective clothing and gloves recommended to prevent drying or irritation of skin. Ensure compliance with OSHA's PPE standards (29 CFR 1910.132 (general) and 138 (hand protection)). Safety shower/eye wash fountain is recommended in the workplace area (29 CFR 1910.151 (c)).
Respiratory protection	A NIOSH approved dust mask or filtering facepiece is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2).
Thermal hazards	Wear appropriate thermal protective clothing (i.e. flame resistant clothing and head/face protection), when potential flash fire or explosion hazards are present.
General hygiene Considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

SECTION 09 –PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Rigid boards or panels
Physical state	Solid.
Form	Solid wood

Color	Various
Odor	Not available.
Odor threshold	Not available.
pH	Not applicable
Melting point/freezing point	Not applicable
Initial boiling point and boiling range	Not available.
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	40 g/cm ³ for wood dust (Note: The LEL is equivalent to the Minimum Explosive Concentration (MEC) for the combustible dust. The MEC will vary with particle size of the wood dust. Recommend MEC testing for specific wood dust particle sizes generated or handled.)
Flammability limit - upper (%)	Not available
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not applicable
Vapor density	Not applicable
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not applicable
Auto-ignition temperature	399.92 - 500 °F (204.4 - 260 °C) for wood
Decomposition temperature	Not available
Viscosity	Not available.
Other information	
Bulk density	Not applicable
Dust explosion properties	
St class	1
Flash point class	Combustible
Specific gravity	Variable

SECTION 10 –STABILITY AND REACTIVITY

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Dust accumulation, dispersion of dust in air, high temperatures, open flame, sparks, or other sources of ignition.
Incompatible materials	Strong acids, alkalies, oxidizing agents and drying oils.
Hazardous decomposition products	Thermal decomposition may emit irritating fumes or gases of carbon monoxide, carbon dioxide, aldehydes, or organic acids.

SECTION 11 –TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	Inhalation of dusts may cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if dust inhaled. Prolonged inhalation may be harmful.
Skin contact	May cause an allergic skin reaction.
Eye contact	Causes eye irritation.
Ingestion	Not applicable under normal conditions of use. May result in obstruction or temporary irritation of the digestive tract.

Symptoms related to the physical, chemical and toxicological characteristics

Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort. May cause an allergic skin reaction. Dermatitis. Rash. May cause respiratory irritation. Difficulty in breathing.

Information on toxicological effects

Acute toxicity May cause an allergic skin reaction. May cause respiratory irritation.

Product	Species	Test Results	Acute Inhalation
WOOD PRODUCTS (PMDI BONDED)	Rat	12 mg/l, 4 Hours estimated	LC50

Product	Species	Test Results	Acute Inhalation
METHYLENE BISPHENOL ISOCYANATE (MDI) (CAS 101-68-8)	Rat	0.369 mg/l, 4 Hours	LC50

*Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye Irritation Causes eye irritation.

Respiratory or skin sensitization

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

Skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Wood dust generated from sawing, sanding or machining this product may cause nasal dryness, irritation, coughing and sinusitis. The International Agency for Research on Cancer (IARC), and National Toxicology Program (NTP) classifies wood dust as a carcinogen. This classification is based on the increased occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust. The evaluation noted insufficient evidence to associate cancers of the oropharynx, hypopharynx, lung, lymphatic and

hematopoietic systems, stomach, colon, or rectum with exposure to wood dust.

IARC Monographs. Overall Evaluation of Carcinogenicity

METHYLENE BISPHENOL ISOCYANATE (MDI) (CAS 101-68-8)	3 Not classifiable as to carcinogenicity to humans.
POLYMERIC MDI (pMDI) (CAS 9016-87-9)	3 Not classifiable as to carcinogenicity to humans.
WOOD/WOOD DUST (CAS Not Assigned)	1 Carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

WOOD/WOOD DUST (CAS Not Assigned) Known to Be Human Carcinogen.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	May cause respiratory irritation
Specific target organ toxicity - repeated exposure	Causes damage to organs (respiratory system) through prolonged or repeated exposure.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

SECTION 12 –ECOLOGICAL INFORMATION

Ecotoxicity:	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13 –DISPOSAL CONSIDERATIONS

Disposal instructions	Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.
Local disposal regulations	Dispose in accordance with all applicable regulations.

Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused Products	Dispose of in accordance with local regulations.
Contaminated packaging	Empty packaging/container can be disposed in accordance with all applicable regulations.

SECTION 14 –TRANSPORT INFORMATION

DOT: Not regulated as dangerous goods.
IMDG: Not regulated as dangerous goods.
IATA: Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15 –REGULATORY INFORMATION

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
 Not regulated.

TSCA Chemical Action Plans, Chemicals of Concern

2,4'-DIPHENYL METHANE DIISOCYANATE (CAS 5873-54-1) Methylene Diphenyl Diisocyanate (MDI) And Related Compounds Action Plan [RIN 2070-ZA15]

METHYLENE BISPHENOL ISOCYANATE (MDI) (CAS 101-68-8) Methylene Diphenyl Diisocyanate (MDI) And Related Compounds Action Plan [RIN 2070-ZA15]

POLYMERIC MDI (pMDI) (CAS 9016-87-9) Methylene Diphenyl Diisocyanate (MDI) And Related Compounds Action Plan [RIN 2070-ZA15]

CERCLA Hazardous Substance List (40 CFR 302.4)

METHYLENE BISPHENOL ISOCYANATE (MDI) (CAS 101-68-8) Listed.

SARA 304 Emergency release notification
 Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
 Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA) Hazard categories

Immediate Hazard - Yes

Delayed Hazard - Yes
 Fire Hazard - Yes
 Pressure Hazard - No
 Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Chemical Name	CAS number	% by wt.
POLYMERIC MDI (pMDI)	9016-87-9	1-5
METHYLENE BISPHENOL ISOCYANATE (MDI)	101-68-8	1-3

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

METHYLENE BISPHENOL ISOCYANATE (MDI) (CAS 101-68-8)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

2,4'-DIPHENYL METHANE DIISOCYANATE (CAS 5873-54-1)

METHYLENE BISPHENOL ISOCYANATE (MDI) (CAS 101-68-8)

US. Massachusetts RTK - Substance List

METHYLENE BISPHENOL ISOCYANATE (MDI) (CAS 101-68-8)

US. New Jersey Worker and Community Right-to-Know Act

METHYLENE BISPHENOL ISOCYANATE (MDI) (CAS 101-68-8)

POLYMERIC MDI (pMDI) (CAS 9016-87-9)

WOOD/WOOD DUST (CAS Not Assigned)

US. Pennsylvania Worker and Community Right-to-Know Law

METHYLENE BISPHENOL ISOCYANATE (MDI) (CAS 101-68-8)

WOOD/WOOD DUST (CAS Not Assigned)

US. Rhode Island RTK

METHYLENE BISPHENOL ISOCYANATE (MDI) (CAS 101-68-8)

POLYMERIC MDI (pMDI) (CAS 9016-87-9)

US. California Proposition 65

California Proposition 65. WARNING: This product contains chemicals known to the state of California to cause cancer. Drilling, sawing, sanding or machining wood products generates wood dust and titanium dioxide particles, both chemicals are known to the state of California to cause cancer. Avoid inhaling

such dust and particles; use a dust mask or other safeguards for personal protection.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance
WOOD/WOOD DUST (CAS Not Assigned) Listed: December 18, 2009

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

SECTION 16 –OTHER INFORMATION

Issuing Date: 6-17-16

Further information Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

HMIS® ratings Health: 2*
Flammability: 1
Physical hazard: 0

NFPA ratings Health: 2
Flammability: 1
Instability: 0

Disclaimer This SDS is intended to quickly provide useful information to the user(s) of this material or product. It is not intended to serve as a comprehensive discussion of all possible risks or hazards, and it assumes a reasonable use of the product. The information contained in this SDS is believed to be accurate as of the date of preparation of this SDS and has been compiled from sources believed to be reliable. It is offered for your consideration, investigation and verification. The user or handler (or their employer) should consider the specific conditions in which this material will be used, handled, or stored and determine what specific safety or other precautions are required. The condition or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this reason, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use, or disposal of the product.