



CHEMICAL GROUP – RESIN DIVISION

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MATERIAL SAFETY DATA SHEET

SECTION 1: MATERIAL IDENTIFICATION AND USE

Material name	MF415
Manufacturer	Tembec Chemical Group – Resin Division
Address	2112 Sylvan Ave. P.O.Box 2570 Toledo, OH 43606
Telephone	Product Information: BTL: 419-244-5856 Emergency Contact: CHEMTREC: 800-424-9300 International: 202-483-8616 *Note: Call Emergency numbers only in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals.
Supplier	Tembec Chemical Group – Resin Division
Chemical Name	Melamine Formaldehyde Resin Powder
Product Codes	MF415
CAS Registry No.	Melamine Resin: CAS 9003-08-1 Formaldehyde: CAS 50-00-0
Chemical Family	Melamine Resins
Chemical Formula	$C_3N_6H_5-[CH_2-C_3N_6H_4-CH_2-CH_3N_6H_4-CH_2-O-CH_2-]_n$
Molecular weight	Not Available
Material use	Wood Adhesives, UF Resin Fortifier, Coatings, paper laminates
NFPA ratings	Health; 1, Flammability; 1 Reactivity; 0
NPCA-HMIS ratings	Health; 1, slight hazard. Flammability; 1, slight hazard. Reactivity; 0, slight hazard. Protection; 0 Personal protection rating to be supplied by user depending upon usage conditions.
Canadian WHMIS	

SECTION 2: HAZARDOUS INGREDIENTS

Melamine Formaldehyde Resin	Cas No.: 9003-08-1 EINECS (EC)#: Not found
Concentration	Percent: 90 - 100%
Exposure limits	Percent: 90 - 100% OSHA PEL/TWA: 15<total dust-mg/m^3> / 5<respir dust-mg/m^3> ACGIH TLV: 10 / 5 Carcinogen(OSHA, NTP, LARC): no



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Free Formaldehyde:	Cas No.: 50-00-0 EINECS (EC) No. 200-001-8
Concentration	<0.9%
Exposure limits	Percent: < 0.9% <u>OSHA</u> : PEL/TWA (8 hr) : 0.75 ppm, TWA action level 0.5 ppm, STEL (15 min.) 2 ppm <u>ACGIH</u> : TLV: 0.75 ppm, STEL (15 min.) 2 ppm, TLV ceiling 0.3 ppm Carcinogen(OSHA, NTP, LARC): YES LD 50: 500 mg/kg orally in rats. LD 50: 270 mg/kg, skin, rabbits.

SECTION 3: PHYSICAL DATA

Appearance and odour	white flowing powder / slight formaldehyde
Odor Threshold	slight formaldehyde
Vapor Pressure (mm Hg, 20 C)	(mm Hg, 68 F) - <1
Vapor density (air = 1)	Not available
Evaporation Rate	not applicable
% Volatile by weight	approx. 3% or less (water and free formaldehyde)
Boiling point	not applicable
Melting point	194 - 214°F (90 - 101°C) Does not sublime
Specific Gravity (H2O = 1)	(H2O) = 1 – 0.6 – 0.7 (powder)
pH at 25°C	9 - 10 (50% solution in water)
Solubility in water	slightly soluble
Coefficient of oil/water distribution	Not available

SECTION 4: FIRE AND EXPLOSION DATA

Flammability	Not flammable under normal conditions of use
Means of extinction	Removal of heat (water spray) and displacement of oxygen for combustion
Special procedures	NIOSH approved self contained breathing apparatus. Complete skin protection. Treat as ordinary combustible powder. Possible dust explosion is dispersed in air in large quantities. Protect from breathing combustion gases.
Flash point, °C and method	>200°F Method Closed Cup
Upper explosion limit, % by volume	Not available
Lower explosion limit, % by volume	Not available



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Auto ignition temperature	Not available.
Hazardous combustion products	Carbon Dioxide-CO ₂ , Carbon Monoxide-CO, Oxides of Nitrogen, Formaldehyde
Explosion data	Not applicable.
Rate of burning	Not applicable.
Extinguishing Media	water fog, CO ₂ , foam, dry chemical
Sensitivity to static discharge	Not applicable.

SECTION 5: REACTIVITY DATA

Stability	Stable
Hazardous Polymerization	Does not occur
Incompatibility	Strong oxidizing agents.
Conditions to avoid	Heat, ignition sources, open flames, storage at elevated temperatures and prolonged periods of time. Contact with incompatible substances.
Hazardous Decomposition products	Not established.

SECTION 6: HEALTH HAZARD INFORMATION

Inhalation	Dust or vapor causes irritation. May aggravate colds, allergies, asthma, emphysema, and psoriasis. Vapors may be carcinogenic (see below). <i>First Aid & Protection:</i> Wear NIOSH approved respirator appropriate for concentration of organic vapors and dusts. Remove to fresh air. Use artificial respiration if needed.
Skin contact	Repeated contact can cause sensitization and dermatitis due to formaldehyde. <i>First Aid & Protection:</i> Wear protective gloves, clothing, boots, and/or head covering as needed to prevent exposure. Recommend polychloroprene-nitrile rubber. Provide convenient safety showers. Wash affected areas for 15 minutes with soap and water while removing contaminated clothing.
Eye contact	Can cause severe eye irritation <i>First Aid & Protection:</i> Flush with water for 15 minutes while holding eyelids open. Get medical attention if irritation persists.
Ingestion	May cause stomach and intestinal irritation, vomiting, diarrhea, sweating, weakness, and headache. Avoid swallowing. <i>First Aid & Protection:</i> Wear face shield if face contact is likely. Rinse mouth. Drink large quantities of water and induce vomiting. Do not give liquids to a drowsy, convulsive, or unconscious person.
Chronic Hazard: Formaldehyde is listed as probable carcinogen by IARC and EPA, suspected carcinogen by NTP and OSHA. Evidence is based upon animal testing and data on humans is inadequate. Formaldehyde vapor has been found to be carcinogenic to animals, and is considered possibly carcinogenic to humans by inhalation. While the amount of formaldehyde in this product is small (<1%), exposures should be minimized or avoided and recommended personal protection measures should be followed.	
ALL CASES: GET PROMPT MEDICAL ATTENTION IF EFFECTS PERIST.	



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Primary Routes of Entry: Eye, Inhalation, Skin

SECTION 7: PREVENTATIVE MEASURES

Spill and leak procedures: Provide adequate protective equipment and ventilation. Collect material for reclaim or place in covered waste container. Avoid generating dust. Floors may be slippery. RQ=100 lbs. formaldehyde, = 11,000 lbs.

Storage and Handling: Avoid eye contact and generating of dust. Provide adequate protective equipment and ventilation. At material handling areas provide local exhaust to mechanical dust collection system. Clean up and dust accumulations. Remove sources of ignition. Keep container closed when not in use. Store in cool dry place.

Exposure Control / Personal Protection: At material handling operation, provide local exhaust to a mechanical dust collection system. Mechanical (general) – Required

Eyes – Dust Proof Goggles if dust is generated.

Respirators – Not required under conditions of normal use and when ventilation is adequate. Use NIOSH / MSHA approved respirators if dust is generated.

Skin – Not required under conditions of normal use. Protective gloves (polychloroprene – nitrile rubber recommended), clothing, boots and/or head covering as needed to prevent dust exposure. Wear a face shield if face contact is likely.

Other – Eye wash station and safety shower.

Work/Hygienic Practices – Clean up any dust accumulations.

Empty Containers: Do not cut or weld on empty containers, or expose them to ignition sources before thoroughly cleaning. Clean before disposal.

Storage	Store at 68°F (20°C). Store in a cool, dry, well ventilated area. Keep elevated above floor and make no contact to walls to allow air flow. Avoid direct sunlight, heat sources, open flames, ignition sources, and incompatible substances.
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Handling	Avoid prolonged or repeated contact with eyes or skin. Avoid inhalation of vapours from product. Use proper personal protective equipment and ventilation. Observe good housekeeping practices.
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SECTION 8: REGULATORY AND TRANSPORTATION

Shipping information
 US DOT: Non Hazardous Material
 Transport Canada: Non Hazardous Material
 TDG Classification: None
 Shipping name and description;
 Synthetic resins powder and pellets; melamine resin; Harmonized Tariff #: 3909200000; DOT Non Hazardous Material; Reportable Spill Quantity approximately 11,000 lbs. (100 lbs. formaldehyde)
 Harmonized System Tariff #: 390920 0000
 UN# = Not Applicable
 Class 55

TSCA - This materials used in this product are listed in TSCA. No secondary actions have produced a material not listed in TSCA.
 SARA Title III - Formaldehyde <0.9% Reportable for S.313 Form R. Reportable for S311, 312 Delayed (chronic)



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SECTION 9: FIRST AID MEASURES

Eye contact	Flush with water for 15 minutes. Get prompt medical attention if effects persist.
Skin contact	Wash affected areas for 15 minutes with soap and water while removing contaminated clothing. If skin problems occur get medical attention. Launder clothing before using them again.
Inhalations	Remove to fresh air. Use artificial respiration if needed. Get medical attention.
Ingestion	Rinse mouth. Drink large quantities of water and induce vomiting. Do not give liquids to a drowsy, convulsive, or unconscious person.

SECTION 10: PREPARATION INFORMATION AND DATE

Prepared by: Andy Fairchild, Technical Dep't	Technical Group, Tembec Chemical Group – Resin Division
Date approved: 25 July 2007	
<p>Sources: Government Regulations, Merck Index 10th ED., recognized safety practices, technical experience and knowledge of the product, and scientific, technical and general literature. The data and information contained herein is believed to be accurate and complete to best of our knowledge at Tembec Chemical Group. No warranty or representation for which Tembec Chemical Group assumes legal responsibility is implied. The information refers only to the controlled product described herein and does not relate to use of the product with any other materials and processes. Tembec Chemical Group encourages our customers to consider, investigate, and verify information for their uses. Tembec Chemical Group assumes no responsibility for damage to property or equipment or injury to recipient or third party persons as a result of misuse or handling of this quality product. Customers are encouraged to conduct appropriate testing before use of product. The user must assure that use of information contained herein is done according to local, provincial, state and federal regulations and laws.</p>	