Material Safety Data Sheet

For Coatings, Resins and Related Materials

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals

24 Hour Emergency: 1-800-123-4567 CHEMTREC: 1-800-424-9300
National Response in Canada CANUTEC: 613-996-6666
Outside U.S. and Canada Chemtrec: 202-483-7616

Section 1 - Chemical Product / Company Information

Product Name:	M22750G-1-H-A CURING AGENT	Revision Date:	10/08/2013
Identification Number:	80X109	Print Date:	
Product Use/Class:	EPOXY TOPCOAT CURING AGENT/MIL-PRF-22750G, TYPE I, CLASS H, GRADE A	NSN:	
Manufacturer:	Deft, Inc. (CAGE CODE 33461) 17451 Von Karman Ave Irvine, Ca. 92614	Information Phone: Emergency Phone:	(949) 474-0400 (800) 424-9300

Section 2 - Hazards Identification

*** Emergency Overview ***: Flammable liquid and vapors. Harmful by inhalation, in contact with skin, and if swallowed. May cause burns to the eyes and skin. Maybe corrosive to the respiratory system, skin, or eyes. Eye irritant. May cause liver and kidney damage. Contact with eyes or skin causes irritation.

Effects Of Overexposure - Eye Contact: Exposure to liquid, aerosol, or vapors may cause irritation, tearing, redness, and swelling accompanied by a stinging sensation. Direct eye contact may cause irritation. Curing agent used in this formulation is a severe eye irritant. May cause corneal edema and conjunctivitis. Benzyl alcohol, a component of this formulation, can cause severe eye irritation and eye tissue injury as a result of direct eye contact.

Effects Of Overexposure - Skin Contact: Direct skin contact may cause irritation. Symptoms may include drying and cracking of skin, swelling, redness, pain, numbness, rash, burning, blistering, and skin burns. Material may pass through the skin and cause effects similar to breathing or ingestion. Prolonged or repeated skin contact may cause dermatitis, drying, and defatting due to the solvent properties. Contact maybe corrosive to the skin and may cause sensitization. Direct contact with benzyl alcohol, a component of tihis formulation, may cause allergic skin reaction (blistering, scaling, rash).

Effects Of Overexposure - Inhalation: Inhalation may cause irritation to the respiratory tract (nose, mouth, mucous membranes) & acute nervous system depression characterized by the following progressive steps: headache, nausea, weakness, dizziness, staggering gait, confusion, fatigue, drowsiness, unconsciousness, or coma. Harmful by inhalation. Inhalation may cause a dry nasal passageway, headaches, difficult breathing, loss of consciousness, tightness of the chest, shortness of breath, and a sore throat and cough. Curing agent of this formulation is a severe respiratory irritant. Lung inflammation or other lung injury may occur if secondary butyl alcohol enters the lungs through vomiting or swallowing. Exposure to benzyl alcohol, a component of this formulation, may aggravate preexisting medical conditions of the respiratory tract, lungs, and skin.

Effects Of Overexposure - Ingestion: May result in irritation and possible corrosive action in the mouth, stomach tissue and digestive tract. Vomiting may cause aspiration of the solvent, resulting in chemical pneumonitis. Ingestion may cause nausea, vomiting, abdominal pain, and diarrhea.

Effects Of Overexposure - Chronic Hazards: Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. Kidney and liver damage may occur from prolonged or repeated overexposures. Exposure may cause mild, temporary changes in the liver, and low blood pressure. In animal studies, exposure to a component(s) has been shown to cause damage to the fetus, only at a level of exposure that would also harm the pregnant animal. The relevance of these findings to humans is unknown.

Primary Route(s) Of Entry: Skin Contact, Inhalation, Eye Contact

Section 3 - Composition / Information On Ingredients

Component	CAS Number	Weight % Reporting Ranges
2-BUTANOL (SECONDARY BUTANOL)	78-92-2	30-60
BENZYL ALCOHOL	100-51-6	15-40
4,4'-METHYLENEBISCYCLOHEXANAMINE	1761-71-3	5-10
TRIETHYLENTETRAMINE	112-24-3	1-5

ALL INGREDIENTS ARE ON THE TSCA INVENTORY LIST, UNLESS OTHERWISE NOTED IN SECTION 8.

Section 4 - First Aid Measures

First Aid - Eye Contact: If material gets into eyes, flush with water immediately for 15 minutes. Hold eyelids open to rinse out the entire eye. Consult a physician. If eyes are irritated from airborne exposure, move to fresh air.
First Aid - Skin Contact: Remove contaminated clothing and shoes. In case of contact, immediately flush skin with plenty of water and wash affected areas thoroughly with soap and water. Wash contaminated clothing thoroughly before reuse or discard. If shock occurs, take measures to treat condition.
First Aid - Inhalation: Move to fresh air in case of accidental inhalation of vapors. Give oxygen or artificial respiration if needed. Asthmatic type symptoms may develop and may be immediate or delayed by several hours. In the case of inhalation of aerosol/mist, consult a physician, if necessary.
First Aid - Ingestion: Do not induce vomiting. Do not give anything to an unconscious person. Obtain medical help.

Section 5 - Fire Fighting Measures

Flash Point (°F): 72 LOWER EXPLOSIVE LIMIT (%): ND UPPER EXPLOSIVE LIMIT (%): ND
Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam, Water Fog, Dry Sand, Dry Powder, Water Mist
Unusual Fire And Explosion Hazards: Keep containers tightly closed. Isolate from heat, sparks, electrical equipment and open flame. Fire or intense heat may cause violent rupture of packages. Application to hot surfaces requires special precautions. Toxic gases may form when product burns. Remove all sources of ignition.
Special Firefighting Procedures: In the event of fire, wear self-contained breathing apparatus. Firefighters should wear full protective clothing. Flammable. Cool fire-exposed containers using water spray.

Section 6 – Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Evacuate all non-essential personnel. Remove all sources of ignition. Ventilate area. Contain and remove spilled material with inert absorbent and non-sparking tools. Use personal protective equipment as necessary. Dike to prevent entering any sewer or waterway. Dike to prevent entering any sewer or waterway. Transfer liquid to a holding container.

Section 7 - Handling and Storage

Handling: Prevent prolonged breathing of vapors or spray mist. Avoid contact with eyes and skin. Do not take internally. Do not handle until the manufacturers safety precautions have been read and understood. Handle in accordance with good industrial hygiene and safety practice. Keep away from heat and sources of ignition. Use safety precautions with empty containers. Empty containers may contain hazardous materials (product residues) in the form of solids, liquids, or vapors. Always use grounding leads when transferring from one container to another.
Storage: Store in buildings designed to comply with OSHA 1910.106. Avoid storing near high temperatures, fire, open flames, and spark sources. Keep containers upright to prevent leakage and tightly closed in a dry, cool, and well-ventilated place.

Section 8 - Exposure Controls / Personal Protection

Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
2-BUTANOL (SECONDARY BUTANOL)	100 ppm	N.E.	100 ppm	N.E.
BENZYL ALCOHOL	N.E.	N.E.	N.E.	N.E.
4,4'-METHYLENEBISCYCLOHEXANAMINE	N.E.	N.E.	N.E.	N.E.
TRIETHYLENTETRAMINE	N.E.	N.E.	N.E.	N.E.

Notes
BENZYL ALCOHOL CAS# 100-51-6 - In laboratory studies, Benzyl alcohol has been shown to cause harm to the fetus of animals. Significance of these findings in humans is unknown.

Engineering Controls: Local ventilation of emission sources may be necessary to maintain ambient concentrations below permissible OSHA exposure limits. Remove all ignition sources (heat, sparks, flame, and hot surfaces).
Respiratory Protection: A respirator that is recommended or approved for use in an organic vapor

environment (air purifying, fresh air supplied, or NIOSH certified respirator for organic vapors, mists, and fumes) is necessary if OSHA/ACGIH permissible exposure limits are exceeded. Observe OSHA regulations for respirator use. Ventilation should be provided to keep exposure levels below OSHA/ACGIH permissible exposure levels.
Skin Protection: Solvent-resistant gloves.
Eye Protection: Wear safety eyewear (safety glasses, safety glasses with side-shields, chemical goggles, or face shields) to prevent eye contact.
Other protective equipment: Long sleeve and long leg clothing is recommended. Remove and wash contaminated clothing before reuse or discard. Safety shower and eyewash station should be located in immediate work area. Wear boots that are chemical-resistant.
Hygienic Practices: Wash hands before breaks, eating, smoking, using washroom, and at the end of the workday.

Section 9 - Physical and Chemical Properties

Boiling Range (°F):	211 - 211	Vapor Density:	> 1 (AIR = 1)
Odor:	SECONDARY BUTANOL & BENZYL ALCOHOL SOLVENTS	Odor Threshold:	N.D.
Appearance:	Amber liquid	Evaporation Rate:	ND
Solubility in H2O:	ND		
Freeze Point:	N.D.	Specific Gravity:	0.930
Vapor Pressure, mm Hg:	8.6	PH:	N.A.
Physical State:	Liquid	Viscosity:	> 100 cps (mPa-s)

(See section 16 for abbreviation legend)

Section 10 - Stability and Reactivity

Conditions To Avoid: Avoid high temperatures. Epoxy resins under uncontrolled conditions. Do not breathe vapors or spray mist.
Incompatibility: Material is incompatible with oxidizing agents and strong acids. Epoxy resins under uncontrolled conditions.
Hazardous Decomposition: Thermal decomposition can lead to the generation and release of gases and vapors including carbon monoxide, carbon dioxide, oxides of nitrogen, and hydrocarbons.
Hazardous Polymerization: Will not occur.
Stability: Stable under recommended storage conditions. Benzyl alcohol, a component of this formulation, is incompatible with aluminum, iron, strong mineral acids, and strong oxidizing agents.

Section 11 - Toxicological Information

Product LD50: N.E. Product LC50: N.E.

Section 12 - Ecological Information

Ecological Information: No Information.

Section 13 - Disposal Information

Disposal Information: Dispose of waste in accordance with federal, state, and local environmental regulations. Empty containers will contain product residue and flammable vapors. Handle as hazardous material. Do not incinerate closed containers. EPA Hazardous Waste Number/Code: D001. Hazardous Waste Characteristics: Ignitability.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Paint	Packing Group:	II
DOT Technical Name:	N.A.	Hazard Subclass:	N.A.
DOT Hazard Class:	FLAMMABLE LIQUID 3	Resp. Guide Page:	N.A.
DOT UN/NA Number:	UN-1263	IATA:	REGULATED

Section 15 - Regulatory Information

CERCLA – SARA Hazard Category
This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories: IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:
This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Component	CAS Number	Percent By Weight

2-BUTANOL (SECONDARY BUTANOL)	78-92-2	37.5000

Toxic Substances Control Act:
This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:
None

U.S. State Regulations: As follows –
New Jersey Right-to-Know:
The following materials are non-hazardous, but are among the top five components in this product.

Component	CAS Number
POLYAMIDE RESIN	TRADE SECRET
AMINE	129733-57-9

Pennsylvania Right-to-Know:
The following non-hazardous ingredients are present in the product at greater than 3%.

Component	CAS Number
POLYAMIDE RESIN	TRADE SECRET
AMINE	129733-57-9

California Proposition 65:
Warning: The following ingredients present in the product are known to the state of California to cause Cancer:
None

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards.
None

International Regulations: As follows –
CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.
CANADIAN WHMIS CLASS: B2, D1B, D2B

Section 16 - Other Information

HMIS Ratings:
Health: 2 Flammability: 3 Reactivity: 0 Personal Protection: G

NFPA Fire Rating: 3
NFPA Health Rating: 2
NFPA Specific Hazard Rating: NA
NFPA Stability Rating: 1

VOLATILE ORGANIC COMPOUNDS, GR/LTR: 589
VOLATILE ORGANIC COMPOUNDS, LB/GAL: 4.92
VOLATILE ORGANIC COMPOUNDS MIXED, GR/LTR: <= 340
VOLATILE ORGANIC COMPOUNDS MIXED, LB/GAL: <= 2.8
VOLATILE ORGANIC COMPOUNDS, LB/LB-SOLID: <= 1.73
VOLATILE ORGANIC COMPOUNDS OF MATERIAL (SCAQMD RULE 443.1), GR/LTR: 589
VOLATILE ORGANIC COMPOUNDS OF MATERIAL (SCAQMD RULE 443.1), LB/GAL: 4.92
VOLATILE HAPs PER WEIGHT SOLIDS, LB./LB. 0
REASON FOR REVISION: UPDATED EXTINGUISHING MEDIA
REGULATORY CODE: 80X109
LAYOUT CODE: A2004R
Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined
The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.