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:	MIL-PRF-85582D-TYPE I-CLASS C1 BASE	Revision Date:	06/21/2011
Identification Number:	44GN007	Print Date:	
Product Use/Class:	EPOXY PRIMER BASE COMPONENT/MIL-PRF-85582, TYPE I, CLASS C1 (BARIUM CHROMATE)	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. 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. Contact with eyes may cause blurred vision and irritation.

Effects Of Overexposure - Skin Contact: Direct skin contact may cause irritation. Symptoms may include swelling, burning, redness, itching, and rash. Prolonged or repeated skin contact may cause dermatitis, drying, and defatting due to the solvent properties. May cause allergic skin reaction. May cause severe skin irritation. It is possible for one of the components to pass through the skin, and the component may add to the toxic effects of either ingestion or inhalation.

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. Exposure may cause a sore throat, runny nose, difficult breathing, shortness of breath, or coughing. Inhalation of decomposition products in high concentration may cause shortness of breath (lung edema). Inhalation may cause headaches, difficult breathing, and loss of consciousness. A component maybe harmful if inhaled.

Effects Of Overexposure - Ingestion: Ingestion may cause irritation to mucous membranes. May result in 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. Ingestion may cause nervous system effects, which may include headache, dizziness, numbness, staggering gait, or confusion.

Effects Of Overexposure - Chronic Hazards: Prolonged contact will cause drying and cracking of the skin, due to defatting action. Skin sensitization, asthma, or other allergic responses may develop. Kidney and liver damage may occur from prolonged or repeated overexposures. Repeated and prolonged exposure may cause delayed effects involving the blood, gastrointestinal, nervous, and reproductive systems. Exposure to a component may cause kidney damage, coma, difficult breathing, liver damage, blood abnormalities (breakage of red blood cells), blood in the urine, or death.

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

Section 3 - Composition / Information On Ingredients

Component	CAS Number	Weight % Reporting Ranges
BARIUM CHROMATE	10294-40-3	10-30
2-BUTOXYETHANOL	111-76-2	10-30
TITANIUM DIOXIDE	13463-67-7	5-10
AROMATIC HYDROCARBON	64742-95-6	5-10
1,2,4 TRIMETHYLBENZENE	95-63-6	3-7
BISPHENOL A EPOXY RESIN, AVG. MOL. WT. < 700	25085-99-8	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 symptoms develop 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 for at least 15 minutes. If symptoms develop (such as irritation), consult a physician or get medical attention. Wash contaminated clothing thoroughly before reuse or discard.
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 maybe 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. Never give anything by mouth to an unconscious person. Consult a physician.

Section 5 - Fire Fighting Measures

Flash Point (°F): 116 TCC LOWER EXPLOSIVE LIMIT (%): 1.0 UPPER EXPLOSIVE LIMIT (%): 10.
Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam, Water Spray, Dry Sand, Dry Powder
Unusual Fire And Explosion Hazards: Keep containers tightly closed. Isolate from heat, sparks, electrical equipment and open flame. Closed containers may burst if exposed to extreme heat or fire. Application to hot surfaces requires special precautions. Toxic gases may form when product burns. Vapors are heavier than air and may travel/spread along the floors/ground. Vapors may flow along surfaces or they can be moved by ventilation, to a distant source of ignition. Do not use a cutting or welding torch near or on a drum of product, because vapors may ignite explosively, even if the drum is empty and contains only product residue. Peroxides of unknown stability and that are explosive may form.
Special Firefighting Procedures: In the event of fire, wear self-contained breathing apparatus. Firefighters should wear full protective clothing. In the event of fire, cool tanks with 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. Dispose of as hazardous waste. Dike to prevent entering any sewer or waterway. Soak up with vermiculite or inert absorbent material and dispose of as hazardous waste. Only trained personnel wearing protective equipment should handle spill cleanup. Avoid personal contact.

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. Protect material from direct sunlight.

Section 8 - Exposure Controls / Personal Protection

Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
BARIUM CHROMATE		N.E.	5 ug/m3 Cr(+6)	N.E.
2-BUTOXYETHANOL	25 ppm	N.E.	25 ppm	N.E.
TITANIUM DIOXIDE	10 mg/m3	N.E.	15 mg/m3	N.E.
AROMATIC HYDROCARBON	100 ppm	N.E.	N.E.	N.E.
1,2,4 TRIMETHYLBENZENE	25 ppm	150 mg/m3	100 ppm	N.E.
BISPHENOL A EPOXY RESIN, AVG. MOL. WT. < 700				

Notes
BARIUM CHROMATE CAS# 10294-40-3 - Contains 20.5 weight % Hexavalent Chromium. IARC Group 1 carcinogenic to humans. NTP group 1 known carcinogen. ACGIH category A2 (2002) suspected human carcinogen. Inhalation of 30 mg/m3 of Hexavalent Chromium is immediately dangerous to life or health. Ingestion of high concentration may cause intense thirst, shock, dizziness, oliguria, severe circulatory collapse, vomiting, anuria, or abdominal pain. Death may occur due to uremia. Ingestion in one uptake of approximately 1-16 g

can be lethal to humans.
2-BUTYOXYETHANOL CAS# 111-76-2 - This component has been shown to cause harm to the fetus in laboratory animals. It only caused harm at levels of overexposure that would also harm the pregnant animal. It has been shown to cause cancer in laboratory animals. The relevance to humans is unknown. It also has been shown to cause reversible kidney effects, reversible liver effects, and blood abnormalities in laboratory animals. Congestion in the spleen, liver, kidneys, and lungs resulted from acute lethal exposure in animal studies.
TITANIUM DIOXIDE CAS# 13463-67-7 - ACGIH/TLV & OSHA/PEL exposure limits are for the total dust. IARC Group 2B possibly carcinogenic to humans. Titanium Dioxide is considered by NIOSH to be a potential occupational carcinogen under Hazard Communication Standard, 29 CFR 1910.1200. This was based on NIOSH's interpretation of the study by Lee, Trochimowicz, and Reinhardt [1985], "Pulmonary Response of Rats Exposed to Titanium Dioxide (TiO2) by Inhalation for Two Years." "The authors of this study concluded that based on the excessive dust loading and overwhelmed clearance mechanism in the lungs of rats exposed chronically at 250 mg/m3 (6 hrs/day, 5 days/week for 2 years), the biological relevance of lung tumors to man appears to be negligible."

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 or fresh air supplied) is necessary. Observe OSHA regulations for respirator use. Ventilation should be provided to keep exposure levels below the OSHA permissible limits.
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. 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):	308 - 343	Vapor Density:	> 1 (AIR = 1)
Odor:	2-BUTOXYETHANOL & AROMATIC HYDROCARBON SOLVENTS	Odor Threshold:	N.D.
Appearance:	Green liquid	Evaporation Rate:	ND
Solubility in H2O:	ND		
Freeze Point:	N.D.	Specific Gravity:	1.520
Vapor Pressure, mm Hg:	3.6	PH:	N.A.
Physical State:	Liquid	Viscosity:	> 18 #2 ZAHN CUP SECONDS

(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 (reacts) with oxidizing agents (strong oxidizers), strong acids (including exothermic reactions with strong acids), strong alkalis, strong reducing agents, epoxy resins, isocyanate functional materials, heat, aluminum, and salts of strong bases. Material is incompatible with oxidizing agents. Material is incompatible with acids and bases. Reacts with amines and mercaptans.
Hazardous Decomposition: Thermal decomposition can lead to the generation and release of gases and vapors including carbon monoxide, carbon dioxide, and oxides of nitrogen. Chromium oxides when burned. Thermal decomposition may generate irritating gases and vapors. Ketones, organic acids, and aldehydes may form.
Hazardous Polymerization: Polymerization may occur.
Stability: Stable under recommended storage conditions.

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, D007.
Hazardous Waste Characteristics: Ignitability.

Section 14 - Transportation Information

DOT Proper Shipping Name: Paint Packing Group: III

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
BARIUM CHROMATE	10294-40-3	23.0360
2-BUTOXYETHANOL	111-76-2	13.2399
1,2,4 TRIMETHYLBENZENE	95-63-6	4.2413

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:

Component	CAS Number
ZINC CHROMATE	11103-86-9

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
MAGNESIUM SILICATE	14807-96-6
POLYAMIDE RESIN	68082-29-1

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

Component	CAS Number
MAGNESIUM SILICATE	14807-96-6
POLYAMIDE RESIN	68082-29-1

California Proposition 65:
Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

Component	CAS Number	Percent By Weight
BARIUM CHROMATE	10294-40-3	23.0360
CUMENE (ISOPROPYL BENZENE)	98-82-8	0.3938
SILICA, CRYSTALLINE (QUARTZ)	14808-60-7	0.0623
STRONTIUM CHROMATE	7789-06-2	0.0231
ZINC CHROMATE	11103-86-9	0.0231

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards.

Component	CAS Number	Percent By Weight
BARIUM CHROMATE	10294-40-3	23.0360
STRONTIUM CHROMATE	7789-06-2	0.0231
ZINC CHROMATE	11103-86-9	0.0231

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, D1A, D2A, D2B

Section 16 - Other Information

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

NFPA Fire Rating: 2

NFPA Health Rating: 2
NFPA Specific Hazard Rating: ND
NFPA Stability Rating: 1

VOLATILE ORGANIC COMPOUNDS, GR/LTR: 390
VOLATILE ORGANIC COMPOUNDS, LB/GAL: 3.25
VOLATILE ORGANIC COMPOUNDS MIXED, GR/LTR: <= 340
VOLATILE ORGANIC COMPOUNDS MIXED, LB/GAL: <= 2.83
VOLATILE ORGANIC COMPOUNDS, LB/LB-SOLID: <= 0.34
VOLATILE ORGANIC COMPOUNDS OF MATERIAL (SCAQMD RULE 443.1), GR/LTR: 390
VOLATILE ORGANIC COMPOUNDS OF MATERIAL (SCAQMD RULE 443.1), LB/GAL: 3.25
VOLATILE HAPs PER WEIGHT SOLIDS, LB./LB. 0.00733
REASON FOR REVISION: ADDED NSN TO FORMAT
REGULATORY CODE: 44GN007
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.