

# 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:	DMS 1786M, COMPOSITION D	Revision Date:	06/29/2012
Identification Number:	44GN054	Print Date:	
Product Use/Class:	EPOXY PRIMER BASE COMPONENT/DMS 1786M, COMPOSITION D	NSN:	
Manufacturer:	Deft, Inc. (CAGE CODE 33461) 17451 Von Karman Ave Irvine, Ca. 92614	Information Phone:	(949) 474-0400
		Emergency Phone:	(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. 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 irritation.

**Effects Of Overexposure - Skin Contact:** Skin irritant. Symptoms may include drying and cracking of skin, swelling, redness, rash, burning, and skin burns. 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. Direct contact of strontium chromate with the skin may cause irritation, corrosion, forming ulcers with hard edges which heal slowly.

**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 difficult breathing, shortness of breath, or coughing. Inhalation may cause headaches and loss of consciousness. Inhalation of decomposition products in high concentration may cause shortness of breath (lung edema). Lung inflammation or other lung injury may occur if secondary butyl alcohol enters the lungs through vomiting or swallowing. Acute toxicity (30 mg/m<sup>3</sup>) of strontium chromate, a component of this formulation, may cause dyspnea, a sore throat, labored breathing, or coughing. Exposure to high concentrations may cause delayed pulmonary edema, depression, or damage to deep lung tissue. Repeated or prolonged exposure to chromates may cause nasal irritation from rhinitis to painless ulceration of the mouth and nose mucous membranes with bleeding and perforation of the nasal septum and a foul smelling nasal discharge. Hepatitis, with or without jaundice, gastritis, ulcers of the stomach and intestine, nausea, vomiting, anorexia, fatigue, lassitude, rheumatic pain, and liver and kidney damage are possible.

**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. May cause nausea, vomiting, and diarrhea. Extended exposure to chromates have caused leucocytosis, leukopenia, monocytosis, eosinophilia, and other blood changes.

**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. STRONTIUM CHROMATE IS CLASSIFIED AS NTP GROUP 1 KNOWN CARCINOGEN. 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.



STRONTIUM CHROMATE IS CLASSIFIED IARC GROUP 1: CARCINOGENIC TO HUMANS. PRODUCT CONTAINS TITANIUM DIOXIDE PIGMENT, WHICH HAS AN IARC CLASSIFICATION OF 2B POSSIBLY CARCINOGENIC TO HUMANS. STRONTIUM CHROMATE, CAS 7789-06-2, IS ON REACH SVHC CANDIDATE LIST.

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

### Section 3 - Composition / Information On Ingredients

Component	CAS Number	Weight % Reporting Ranges
STRONTIUM CHROMATE	7789-06-2	15-40
sec-BUTYL ALCOHOL	78-92-2	10-30
TITANIUM DIOXIDE	13463-67-7	5-10
BISPHENOL A EPOXY RESIN, AVG. MOL. WT. < 700	25085-99-8	5-10
BARIUM CHROMATE	10294-40-3	0.5-1.5

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

### 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.

**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): 72 LOWER EXPLOSIVE LIMIT UPPER EXPLOSIVE LIMIT (%): ND  
(%): ND

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.

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. 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.

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
STRONTIUM CHROMATE	0.0005 mg/m.3	N.E.	5 ug/m3 Cr(+6)	N.E.
sec-BUTYL ALCOHOL	100 ppm	N.E.	100 ppm	N.E.
TITANIUM DIOXIDE	10 mg/m3	N.E.	15 mg/m3	N.E.
BISPHENOL A EPOXY RESIN, AVG. MOL. WT. < 700				
BARIUM CHROMATE		N.E.	5 ug/m3 Cr(+6)	N.E.

### Notes



STRONTIUM CHROMATE CAS# 7789-06-2 - contains 25.5 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.

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 (TiO<sub>2</sub>) 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." As of September 2, 2011 As Known To The State Of California To Cause Cancer: titanium dioxide (airborne, unbound particles of respirable size)

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.

**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):	211 - 211	Vapor Density:	Heavier than air
Odor:	SECONDARY BUTYL ALCOHOL SOLVENT	Odor Threshold:	N.D.
Appearance:	Green liquid	Evaporation Rate:	ND
Solubility in H <sub>2</sub> O:	ND		
Freeze Point:	N.D.	Specific Gravity:	1.497
Vapor Pressure, mm Hg:	4.5	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 with oxidizing agents. Material reacts with oxidizing agents, epoxy resins, and isocyanate functional materials. Avoid strong reducing agents and strong acids (including exothermic reactions with strong acids). 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.

**Hazardous Polymerization:** Polymerization may occur.

**Stability:** Stable under recommended storage conditions and up to melting point.

#### 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:	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 311 and 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:

<b>Component</b>	<b>CAS Number</b>	<b>Percent By Weight</b>
STRONTIUM CHROMATE	7789-06-2	28.2086
sec-BUTYL ALCOHOL	78-92-2	22.1326
BARIUM CHROMATE	10294-40-3	0.8724

**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.

<b>Component</b>	<b>CAS Number</b>
MAGNESIUM SILICATE	14807-96-6
COPOLYMER OF TALL OIL DIMERIZED FATTY ACIDS AND TRIETHYLENETETRAAMINE	68082-29-1

**Pennsylvania Right-to-Know:**

The following non-hazardous ingredients are present in the product at greater than 3%.

<b>Component</b>	<b>CAS Number</b>
MAGNESIUM SILICATE	14807-96-6
COPOLYMER OF TALL OIL DIMERIZED FATTY ACIDS AND TRIETHYLENETETRAAMINE	68082-29-1
ALIPHATIC AMINE	32610-77-8

**California Proposition 65:**

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

<b>Component</b>	<b>CAS Number</b>	<b>Percent By Weight</b>
STRONTIUM CHROMATE	7789-06-2	28.2086
TITANIUM DIOXIDE	13463-67-7	7.7549
BARIUM CHROMATE	10294-40-3	0.8724
SILICA, CRYSTALLINE (QUARTZ)	14808-60-7	0.0465
CARBON BLACK	1333-86-4	0.0155

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

<b>Component</b>	<b>CAS Number</b>	<b>Percent By Weight</b>
STRONTIUM CHROMATE	7789-06-2	28.2086
BARIUM CHROMATE	10294-40-3	0.8724

**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, 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: 335****VOLATILE ORGANIC COMPOUNDS, LB/GAL: 2.80****VOLATILE ORGANIC COMPOUNDS MIXED, GR/LTR: <= 350****VOLATILE ORGANIC COMPOUNDS MIXED, LB/GAL: <= 2.92****VOLATILE ORGANIC COMPOUNDS, LB/LB-SOLID: <= 0.29****VOLATILE ORGANIC COMPOUNDS OF MATERIAL (SCAQMD RULE 443.1), GR/LTR: 335****VOLATILE ORGANIC COMPOUNDS OF MATERIAL (SCAQMD RULE 443.1), LB/GAL: 2.80****VOLATILE HAPs PER WEIGHT SOLIDS, LB./LB. 0****REASON FOR REVISION: UPDATED PROPOSITION 65****REGULATORY CODE: 44GN054****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.