



# MATERIAL SAFETY DATA SHEET

## CHROMATE INDUSTRIAL CORPORATION®

5250-A Naiman Parkway, Solon, OH 44139 • 888-567-2206 • www.chromate.com

**FOR CHEMICAL  
EMERGENCY**

Call ChemTrec day/night:  
**1-800-424-9300**

### SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** F/C MXCUP - HARDENER

**DATE PREPARED:** March 4, 2009

**PART NUMBER:** 74514

**CHROMATE INDUSTRIAL CORPORATION**

**PRODUCT TYPE:** EPOXY HARDENER

**5250-A Naiman Parkway, Solon, OH 44139 • (888) 567-2206**

### SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	CAS #	%WT	ACGIH TLV	OSHA PEL	OTHER
ALUMINA TRIHYDRATE	21645-51-2	30-60	10 mg/m <sup>3</sup> Total Dust (as Al)	15 mg/m <sup>3</sup> Total Dust (as Al) 5 mg/m <sup>3</sup> Respirable Dust (as Al)	NONE
POLYMERCAPTAN HARDENER	PROPRIETARY	30-60	NONE	NONE	NONE
PHENOL, 2,4,6-	90-72-2	5-10	NONE	NONE	NONE
TRIS[(DIMETHYLAMINO)METHYL]					
AROMATIC PLASTICIZER	64741-81-7	5-10	NONE	NONE	NONE
STYRENE MONOMER	100-42-5	1-5	20 PPM TWA 40 PPM STEL	100 PPM TWA 200 PPM CEILING	NONE
SILICA, AMORPHOUS, FUMED, CRYSTALLINE-FREE	112945-52-5	1-5	10 mg/m <sup>3</sup> TWA inhalable 3 mg/m <sup>3</sup> TWA respirable	6 mg/m <sup>3</sup> TWA	NONE
ETHYLENE GLYCOL	107-21-1	1-5	100 mg/m <sup>3</sup> CEILING	NONE	NONE
BENZ(A)ANTHRACENE	56-55-3	0.1-1	NONE	NONE	NONE

### SECTION 3 – HAZARD IDENTIFICATION

**HMIS RATING:** HEALTH: 2    **FLAMMABILITY:** 1    **PHYSICAL HAZARD:** 1    **PERSONAL PROTECTION:** See Section 8

#### EMERGENCY OVERVIEW

**Physical state:** Paste

**Color:** Black

**Odor:** Mercaptan

**WARNING:** Causes Eye and Skin Irritation. May cause allergic skin reaction. May cause respiratory tract irritation.

**Relevant routes of exposure:** Eye contact, Ingestion, Inhalation, Skin contact

#### POTENTIAL HEALTH EFFECTS

**Inhalation:** May cause respiratory tract irritation. May cause irritation to nose and throat. Vapors may cause headaches, nausea, dizziness and respiratory tract irritation. Shortness of breath.

**Skin contact:** Allergic skin reaction. Moderate skin irritation. Itching. Redness.

**Eye contact:** Moderate eye irritation. Redness.

**Ingestion:** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Existing Conditions Aggravated by Exposure:** Skin disorders. Skin allergies. Respiratory disorders. Eye disorders.

See Section 11 for additional toxicological information.

### SECTION 4 – FIRST AID MEASURES

**Inhalation:** Remove to fresh air. If symptoms develop and persist, get medical attention.

**Skin contact:** Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and shoes.  
Get medical attention if symptoms occur.

**Eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

**Ingestion:** DO NOT INDUCE VOMITING UNLESS DIRECTED TO DO SO BY MEDICAL PERSONNEL. Keep individual calm. Get medical attention if symptoms develop and persist.

**NOTES TO PHYSICIAN:** None.

N/A — NOT APPLICABLE  
N/L — NOT LISTED

N/D — NOT DETERMINED

N/E — NONE ESTABLISHED

N/R — NOT REGULATED

**SECTION 5 – FIRE-FIGHTING MEASURE**

**Flash Point:** >93°C (200°F) Tagliabue closed cup (TCC)

**Auto-ignition Temperature:** N/A

**FLAMMABLE/EXPLOSIVE: LIMITS-LOWER (LEL)%:** N/A  
**LIMITS-UPPER (UEL) %:** N/A

**Extinguishing Media:** Foam, dry chemical or carbon dioxide.

**Special Fire-Fighting Procedures:** Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

**Unusual Fire or Explosion Hazards:** Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.

**Hazardous Combustion Products:** Oxides of carbon. Irritating organic fragments.

**SECTION 6 – ACCIDENTAL RELEASE MEASURES**

**Environmental Precautions:** Prevent product from entering drains or open waters.

**Clean-Up Methods:** Remove all ignition sources. Immediately contact emergency personnel. Scrape up as much material as possible. Clean residue with soap and water. Store in a closed container until ready for disposal.

**SECTION 7 – HANDLING AND STORAGE**

**Handling:** Keep away from heat, spark and flame. Do not breathe mist or vapors. Keep container closed. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

**Storage:** Store in original container until ready to use. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

**Incompatible Products:** Refer to Section 10.

**SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Engineering Controls:** Use local exhaust ventilation to maintain airborne concentrations below established exposure limits.

**Respiratory Protection:** Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists.

**Skin Protection:** Chemical resistant, impermeable gloves.

**Eye/Face Protection:** Chemical splash goggles or safety glasses with side shields.

**SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

**Physical State:** Paste

**Odor:** Mercaptan

**pH:** N/A

**Melting Point/Range:** N/A

**Vapor Density:** N/A

**Solubility in Water:** Slightly Soluble

**VOC Content:** 14.3%; 200 grams/liter 0.038% (value for resin and hardener together)

**Color:** Black

**Vapor Pressure:** Nil

**Boiling Point/Range:** > 149°C (300°F)

**Specific Gravity:** 1.40

**Evaporation Rate:** N/A

**Partition Coefficient (n-Octanol/Water):** N/A

**SECTION 10 – STABILITY AND REACTIVITY DATA**

**Stability:** Stable

**Hazardous Polymerization:** Will not occur.

**Hazardous Decomposition Products:** None.

**Incompatibility:** Strong acids. Strong bases. Strong oxidizers.

**Conditions to Avoid:** Excessive heat. Storage with incompatible materials.

**SECTION 11 – TOXICOLOGICAL INFORMATION**

**CARCINOGEN STATUS**

HAZARDOUS COMPONENTS	CAS #	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
ALUMINA TRIHYDRATE	21645-51-2	NO	NO	NO
POLYMERCAPTAN HARDENER	PROPRIETARY	NO	NO	NO
PHENOL, 2,4,6-TRIS- [(DIMETHYLAMINO)METHYL]	90-72-2	NO	NO	NO
AROMATIC PLASTICIZER	64741-81-7	NO	NO	NO
STYRENE MONOMER	100-42-5	NO	GROUP 2B	YES
SILICA, AMORPHOUS, FUMED, CRYSTALLINE-FREE	112945-52-5	NO	NO	NO
ETHYLENE GLYCOL	107-21-1	NO	NO	NO
BENZ(A)ANTHRACENE	56-55-3	Suspect Carcinogen	GROUP 2A	YES

**LITERATURE REFERENCED TARGET ORGAN & OTHER HEALTH EFFECTS**

HAZARDOUS COMPONENTS	CAS#	HEALTH EFFECTS/TARGET ORGANS
ALUMINA TRIHYDRATE	21645-51-2	Irritant, Lung, Respiratory
POLYMERCAPTAN HARDENER	PROPRIETARY	NO DATA
PHENOL, 2,4,6- TRIS[(DIMETHYLAMINO)METHYL]	90-72-2	Allergen, Irritant
AROMATIC PLASTICIZER	64741-81-7	No Target Organs
STYRENE MONOMER	100-42-5	Blood, Ear, Eyes, Irritant, Liver, Mutagen, Nervous System, Some evidence of carcinogenicity
SILICA, AMORPHOUS, FUMED, CRYSTALLINE-FREE	112945-52-5	Nuisance dust
ETHYLENE GLYCOL	107-21-1	Blood, Bone Marrow, Central nervous system, Developmental, Eyes, Irritant, Kidney, Liver, Metabolic
BENZ(A)ANTHRACENE	56-55-3	Blood, Immune system, Irritant, Liver, Mutagen, Respiratory, Skin, Some evidence of carcinogenicity

**SECTION 12 – ECOLOGICAL INFORMATION**

Ecological Information: N/A

**SECTION 13 – DISPOSAL CONSIDERATIONS**

INFORMATION PROVIDED IS FOR UNUSED PRODUCT ONLY.

Recommended Method of Disposal: Dispose of according to Federal, State and local governmental regulations.

EPA Hazardous Waste Number: Not a RCRA hazardous waste.

**SECTION 14 – TRANSPORT INFORMATION**

**U.S. DEPARTMENT OF TRANSPORTATION GROUND (49 CFR):**

Proper Shipping Name: Not Regulated

Identification Number: None

Hazard Class or Division: None

Packing Group: None

**INTERNATIONAL AIR TRANSPORTATION (ICAO/IATA):**

Proper Shipping Name: Not Regulated

Identification Number: None

Hazard Class or Division: None

Packing Group: None

**WATER TRANSPORTATION (IMO/IMDG):**

Proper Shipping Name: Not Regulated

Identification Number: None

Hazard Class or Division: None

Packing Group: None

Marine pollutant: None known

**SECTION 15 – REGULATORY INFORMATION****UNITED STATES REGULATORY INFORMATION**

**TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

**TSCA 12 (b) Export Notification:** None

**CERCLA/SARA Section 302 EHS:** None above reporting de minimus.

**CERCLA/SARA Section 311/312:** Immediate Health Hazard, Delayed Health Hazard

**CERCLA/SARA 313:** This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Benz{a}anthracene (CAS# 56-55-3). Ethylene glycol (CAS# 107-21-1) . Styrene monomer (CAS# 100-42-5)

**California Proposition 65:** This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

**CANADA REGULATORY INFORMATION**

**CEPA DSL/NDL Status:** Contains one or more components listed on the Non-Domestic Substances list.

**WHMIS Hazard Class:** D.2.B

**SECTION 16 – OTHER INFORMATION****DISCLAIMER:**

The data contained herein are furnished for information only and are believed to be reliable. However, Chromate Industrial Corporation does not assume responsibility for any results obtained by persons over whose methods Chromate Industrial Corporation has no control. It is the user's responsibility to determine the suitability of Chromate Industrial Corporation's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Chromate Industrial Corporation's products.

In light of the foregoing, Chromate Industrial Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Chromate Industrial Corporation's products.

Chromate Industrial Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.



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### SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** RED LION F/C MXCUP - RESIN

**DATE PREPARED:** March 4, 2009

**PART NUMBER:** 74514a

**CHROMATE INDUSTRIAL CORPORATION**

**PRODUCT TYPE:** EPOXY RESIN

**5250-A Naiman Parkway, Solon, OH 44139 • (888) 567-2206**

### SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	CAS #	%WT	ACGIH TLV	OSHA PEL	OTHER
EPICHLOROHYDRIN-4, 4'-ISOPROPYLIDENE DIPHENOL RESIN	25068-38-6	30-60	NONE	NONE	NONE
ALUMINA TRIHYDRATE	21645-51-2	30-60	10 mg/m <sup>3</sup> Total Dust (as Al)	15 mg/m <sup>3</sup> Total Dust (as Al) 5 mg/m <sup>3</sup> Respirable Dust (AS AL)	NONE
TITANIUM DIOXIDE	13463-67-7	5-10	10 mg/m <sup>3</sup> TWA	15 mg/m <sup>3</sup> TWA Total Dust	NONE

### SECTION 3 – HAZARD IDENTIFICATION

**HMIS RATING: HEALTH:** 2

**FLAMMABILITY:** 1

**PHYSICAL HAZARD:** 1

**PERSONAL PROTECTION:** See Section 8

#### EMERGENCY OVERVIEW

**Physical state:** Paste

**Color:** White

**Odor:** Mild

**WARNING:** May cause allergic skin reaction. May cause eye, skin and respiratory tract irritation.

**Relevant routes of exposure:** Eye contact, Ingestion, Inhalation, Skin contact

#### POTENTIAL HEALTH EFFECTS

**Inhalation:** Mild respiratory tract irritation. May cause irritation to nose and throat.

**Skin contact:** Allergic skin reaction. Moderate skin irritation. Itching. Redness.

**Eye contact:** Moderate eye irritation. Redness.

**Ingestion:** Not expected under normal conditions of use.

**Existing Conditions Aggravated by Exposure:** Skin disorders. Skin allergies. Respiratory disorders. Eye disorders.

See Section 11 for additional toxicological information.

### SECTION 4 – FIRST AID MEASURES

**Inhalation:** Remove to fresh air. If symptoms develop and persist, get medical attention.

**Skin contact:** Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and shoes.

Get medical attention if symptoms occur.

**Eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

**Ingestion:** *DO NOT INDUCE VOMITING UNLESS DIRECTED TO DO SO BY MEDICAL PERSONNEL.* Keep individual calm. Get medical attention if symptoms develop and persist.

**NOTES TO PHYSICIAN:** None.

N/A — NOT APPLICABLE  
N/L — NOT LISTED

N/D — NOT DETERMINED

N/E — NONE ESTABLISHED

N/R — NOT REGULATED

**SECTION 5 – FIRE-FIGHTING MEASURE**

**Flash Point:** >93°C (200°F) Tagliabue closed cup (TCC)

**Auto-ignition Temperature:** N/A

**FLAMMABLE/EXPLOSIVE: LIMITS-LOWER (LEL)%:** N/A  
**LIMITS-UPPER (UEL) %:** N/A

**Extinguishing Media:** Foam, dry chemical or carbon dioxide.

**Special Fire-Fighting Procedures:** Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

**Unusual Fire or Explosion Hazards:** Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.

**Hazardous Combustion Products:** Oxides of carbon. Irritating organic fragments.

**SECTION 6 – ACCIDENTAL RELEASE MEASURES**

**Environmental Precautions:** Prevent product from entering drains or open waters.

**Clean-Up Methods:** Remove all ignition sources. Immediately contact emergency personnel. Scrape up as much material as possible. Clean residue with soap and water. Store in a closed container until ready for disposal.

**SECTION 7 – HANDLING AND STORAGE**

**Handling:** Keep away from heat, spark and flame. Do not breathe mist or vapors. Keep container closed. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

**Storage:** Store in original container until ready to use. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

**Incompatible Products:** Refer to Section 10.

**SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Engineering Controls:** Use local exhaust ventilation to maintain airborne concentrations below established exposure limits.

**Respiratory Protection:** Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists.

**Skin Protection:** Chemical resistant, impermeable gloves.

**Eye/Face Protection:** Chemical splash goggles or safety glasses with side shields.

See Section 2 for exposure limits.

**SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

**Physical State:** Paste

**Odor:** Mild

**pH:** N/A

**Melting Point/Range:** N/A

**Vapor Density:** N/A

**Solubility in Water:** Slightly Soluble

**VOC Content:** 0.47%; 7.9 grams/liter 0.038% (value for resin and hardener together)

**Color:** White

**Vapor Pressure:** Nil

**Boiling Point/Range:** > 149°C (300°F)

**Specific Gravity:** 1.68

**Evaporation Rate:** N/A

**Partition Coefficient (n-Octanol/Water):** N/A

**SECTION 10 – STABILITY AND REACTIVITY DATA**

**Stability:** Stable

**Hazardous Polymerization:** Will not occur.

**Hazardous Decomposition Products:** None.

**Incompatibility:** Strong acids. Strong bases. Strong oxidizers.

**Conditions to Avoid:** Excessive heat. Storage with incompatible materials.

**SECTION 11 – TOXICOLOGICAL INFORMATION**

**CARCINOGEN STATUS**

HAZARDOUS COMPONENTS	CAS #	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
EPICHLOROHYDRIN-4, 4'-ISOPROPYLIDENE DIPHENOL RESIN	25068-38-6	NO	NO	NO
ALUMINA TRIHYDRATE	21645-51-2	NO	NO	NO
TITANIUM DIOXIDE	13463-67-7	NO	GROUP 2B	YES

**LITERATURE REFERENCED TARGET ORGAN & OTHER HEALTH EFFECTS**

HAZARDOUS COMPONENTS	CAS#	HEALTH EFFECTS/TARGET ORGANS
EPICHLOROHYDRIN-4, 4'-ISOPROPYLIDENE DIPHENOL RESIN	25068-38-6	Allergen, Irritant
ALUMINA TRIHYDRATE	21645-51-2	Irritant, Lung, Respiratory
TITANIUM DIOXIDE	13463-67-7	Irritant, Respiratory

**SECTION 12 – ECOLOGICAL INFORMATION**

Ecological Information: N/A

**SECTION 13 – DISPOSAL CONSIDERATIONS**

INFORMATION PROVIDED IS FOR UNUSED PRODUCT ONLY.

Recommended Method of Disposal: Dispose according to EPA and local governmental regulations.

EPA Hazardous Waste Number: Not a RCRA hazardous waste.

**SECTION 14 – TRANSPORT INFORMATION**

THE SHIPPING CLASSIFICATIONS IN THIS SECTION ARE FOR NON-BULK PACKAGING ONLY (UNLESS OTHERWISE SPECIFIED). SHIPPING CLASSIFICATION MAY BE DIFFERENT FOR BULK PACKAGING.

**U.S. DEPARTMENT OF TRANSPORTATION GROUND (49 CFR):**

Proper Shipping Name: Not Regulated	Hazard Class or Division: None
Identification Number: None	Packing Group: None

**INTERNATIONAL AIR TRANSPORTATION (ICAO/IATA):**

Proper Shipping Name: Not Regulated	Hazard Class or Division: None
Identification Number: None	Packing Group: None

**WATER TRANSPORTATION (IMO/IMDG):**

Proper Shipping Name: Not Regulated	Hazard Class or Division: None
Identification Number: None	Packing Group: None
Marine pollutant: None known	

**SECTION 15 – REGULATORY INFORMATION****UNITED STATES REGULATORY INFORMATION**

**TSCA 8 (b) Inventory Status:** All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

**TSCA 12 (b) Export Notification:** None

**CERCLA/SARA Section 302 EHS:** None above reporting de minimus.

**CERCLA/SARA Section 311/312:** Immediate Health Hazard.

**CERCLA/SARA 313:** None above reporting de minimus.

**California Proposition 65:** This product contains a chemical known to the State of California to cause cancer.

**CANADA REGULATORY INFORMATION**

**CEPA DSL/NDL Status:** Contains one or more components listed on the Non-Domestic Substances list. All other components are listed on or are exempt from listing on the Domestic Substances List.

**WHMIS Hazard Class:** D.2.B

**SECTION 16 – OTHER INFORMATION****DISCLAIMER:**

The data contained herein are furnished for information only and are believed to be reliable. However, Chromate Industrial Corporation does not assume responsibility for any results obtained by persons over whose methods Chromate Industrial Corporation has no control. It is the user's responsibility to determine the suitability of Chromate Industrial Corporation's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Chromate Industrial Corporation's products. In light of the foregoing, Chromate Industrial Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Chromate Industrial Corporation's products. Chromate Industrial Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.