

# SAFETY DATA SHEET



This Safety Data Sheet (SDS) complies with the requirements of the U.S. Federal Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200, as updated in 2012) and equivalent state Standards. It has also been developed in accordance with the United Nations Globally Harmonized System of Classification of Chemicals (GHS) and the Canadian Workplace Hazardous Materials Information System (WHMIS). Refer to Section 16 of this document for the definition of terms and abbreviations.

## SECTION 1: IDENTIFICATION

### 1.1 PRODUCT IDENTIFICATION

- **PRODUCT NAME: COSMICHROME – Base Coat V-BCL**

### 1.2 PRODUCT USE AND RESTRICTIONS

- **IDENTIFIED USE:** Cosmichrome System; Prepares the product surface for plating treatment.
- **IDENTIFIED USERS:** For sale to, use and storage by personnel trained in handling product safely.

### 1.3 MANUFACTURER INFORMATION

- **MANUFACTURER/SUPPLIER: COSMICHROME**
- **ADDRESS:** 9625 F Ignace; Brossard, Quebec; Canada
- **BUSINESS PHONE:** 450-444-4426 (Monday – Friday, 9:00 am – 5:00 pm)
- **EMERGENCY PHONE:** 1-800-424-9300 (CHEMTREC; 24 hours)  
+1-703-703-527-3887 (CHEMTREC, International and Maritime)

### 1.4 OTHER PRODUCT INFORMATION

- This product is sold and used in relatively small volumes. This SDS has been developed to address safety concerns affecting specific handling situations associated with product use and those involving warehouses and other workplaces where large numbers of product containers are stored or distributed.

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 HAZARD CLASSIFICATION

- Flammable Liquids (Category 2); Skin Corrosion/Irritation (Category 2) Serious Eye Damage/Eye Irritation (Category 2A); Carcinogenicity (Category 2); Toxic to Reproduction (Category 1B); Germ Cell Mutagenicity (Category 2); Specific target organ toxicity - repeated exposure (Category 2) Specific Target Organ Toxicity - Single Exposure (Category 3; Central nervous system, Respiratory System); Aspiration Toxicity (Category 1)

### 2.2 LABEL ELEMENTS

- **Hazard Pictograms:**



- **Signal Word:**

DANGER.

- **Hazard Statements:**

Highly flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. May cause cancer. May damage fertility or an unborn child. Suspected of causing genetic effects. May causes damage to liver, kidneys, stomach and hearing organs after prolonged or repeated exposure.

- **Precautionary Statements**

- **Prevention:**

Keep out of reach of children. Read label before use. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep cool. Do not breathe vapors, mists, or spray. Wash exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Use personal protective equipment as required.

## SECTION 2: HAZARDS IDENTIFICATION (Continued)

- **Response:** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/DOCTOR. IF ON SKIN OR HAIR: Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs, get medical advice/attention. Wash contaminated clothing before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/Doctor if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention. IF exposed or concerned: Get medical attention/advice.  
IN CASE OF FIRE: Use Class B Fire Extinguisher.
- **Storage:** Store container tightly closed in well-ventilated place. Keep cool. Store locked up.
- **Disposal:** Dispose of contents/container in accordance with local/regional/national/international regulations.

### 2.3 OTHER PERTINENT DATA ON HEALTH, PHYSICAL, AND ENVIRONMENTAL HAZARDS

- **Product Acute Toxicity:** Acute Toxicity – Oral (Category 5); Acute Toxicity – Dermal (Category 5); Acute Toxicity - Inhalation (Category 5). May be harmful if swallowed or inhaled.
- **Product Aquatic Toxicity:** Aquatic toxicity, acute (Category 2); Aquatic toxicity, chronic (Category 2). Toxic to aquatic life with long lasting effects. Avoid release into the environment. Collect spillage. Symbol: To the right.



## SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1 IDENTIFICATION OF HAZARDOUS SUBSTANCES IN PRODUCT

NAME	CAS NUMBER	GHS HAZARD CLASSIFICATION FOR COMPONENT	% (w/w)
Ethylbenzene	100-41-4	Flammable liquids (Category 2); Acute toxicity - Inhalation (Category 4); Carcinogenicity (Category 2), Skin irritation (Category 2); Eye Irritation (Category 2A); Specific target organ toxicity - repeated exposure (Category 2); Specific target organ toxicity - single exposure (Category 3; Central nervous system, Respiratory System), Aspiration hazard (Category 1), Acute aquatic toxicity (Category 2), Chronic aquatic toxicity (Category 3)	1-5
Xylenes	1330-20-7	Flammable liquids (Category 3); Acute toxicity - Inhalation (Category 4); Acute toxicity, Dermal (Category 4); Skin irritation (Category 2); Eye Irritation (Category 2A); Specific target organ toxicity - single exposure (Category 3; Respiratory system), Acute aquatic toxicity (Category 2); Chronic aquatic toxicity (Category 2)	10-30
Butyl Acetate	123-86-4	Flammable liquids (Category 3), Specific target organ toxicity - single exposure (Category 3, Central nervous system); Acute aquatic toxicity (Category 3)	5-10
Ethyl Acetate	141-78-6	Flammable liquids (Category 2), Eye irritation (Category 2A), H319; Specific target organ toxicity - single exposure (Category 3, Central nervous system)	10-30
Pentyl Propionate	624-54-4	Flammable liquids (Category 3)	10-30
Toluol	108-88-3	Flammable liquids (Category 2); Skin irritation (Category 2); Reproductive toxicity (Category 2); Specific target organ toxicity - single exposure (Category 3; Central nervous system); Specific target organ toxicity - repeated exposure (Category 2); Aspiration hazard (Category 1); Acute aquatic toxicity (Category 2)	0.1-1
Aliphatic Hydrocarbon	8052-41-3	Flammable liquids (Category 3); Skin Corrosion/Irritation (Category 3); Serious Eye Damage/Irritation (Category 2B); Specific target organ toxicity - single exposure (Category 3, Central Nervous System); Aspiration Hazard (Category 1).	0.1-1
Polyurethane Catalyst	77-58-7	Skin corrosion (Category 1C); Serious eye damage (Category 1); Skin sensitization (Category 1); Germ cell mutagenicity (Category 2); Reproductive toxicity (Category 1B); Specific target organ toxicity - single exposure (Category 1); Specific target organ toxicity - repeated exposure (Category 1); Acute aquatic toxicity (Category 1) Chronic aquatic toxicity (Category 1)	< 1
Naphtha (Light aromatics fraction)	64742-47-8	Aspiration toxicity (Category 1)	1-5
Isobutyl Alcohol	78-83-1	Flammable liquids (Category 3); Skin irritation (Category 2); Serious eye damage (Category 1); Specific target organ toxicity - single exposure (Category 3, Respiratory system, Central nervous system)	0.1-1
Dipropylene Glycol Monomethyl Ether	34590-94-8	Combustible liquid.	0.1-1

## SECTION 4: FIRST AID MEASURES

### 4.1 DESCRIPTION OF FIRST AID MEASURES

- **BASIC FIRST AID BY EXPOSURE ROUTE:**

<u>AREA EXPOSED</u>	<u>TREATMENT</u>
<b>Eye Contact:</b>	Flush with copious amounts of water for 15 minutes. "Roll" eyes during flush. Check for and remove contact lenses. Seek medical attention if irritation persists.
<b>Skin Contact:</b>	Flush area with warm, running water for several minutes. Seek medical attention if irritation persists.
<b>Inhalation:</b>	Obtain fresh air. See medical attention if symptoms persist.
<b>Ingestion:</b>	If conscious only: Rinse mouth with water. Drink several cups of water. Do not induce vomiting. Contact a Poison Control Center or physician for instructions.

**Additional Steps:**

### 4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

- **ACUTE HEALTH EFFECTS:**

<u>AREA EXPOSED</u>	<u>EFFECTS</u>
<b>Eye Contact:</b>	May cause mild to moderate eye irritation, depending on duration of contact.
<b>Skin Contact:</b>	May cause mild skin irritation, depending on duration of contact.
<b>Inhalation:</b>	May cause mild respiratory tract irritation; symptoms may include coughing and sneezing depending on volume of mist/spray inhaled. Inhalation of vapors can cause central nervous system effects (i.e., drowsiness, dizziness).
<b>Ingestion:</b>	May cause gastrointestinal system irritation; symptoms may include pain, diarrhea, nausea and vomiting if large volumes are ingested. Ingestion of the product may also cause central nervous system effects. This product presents a hazard via aspiration: Inhalation may cause life-threatening damage to lungs. Ingestion may also cause adverse effects on the liver, and kidneys.

- **CHRONIC HEALTH EFFECTS:** Upon prolonged or repeated exposure the following health effects may occur: Dry skin. Skin rash/inflammation. Impairment of the nervous system. Tremor. Impaired memory. Impaired concentration. Brain affection. Disturbances of heart rate. Adverse effects on the central nervous system, reproductive system, hearing organs and stomach.
- **TARGET ORGANS:** Skin, eyes, reproductive system, hearing organs, respiratory system, kidneys, liver, stomach, and central nervous system.

### 4.3 INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

- **GENERAL INFORMATION: For all exposures:** In case of accident, or if you feel unwell, seek medical advice immediately. Take this document and a copy of the label to the healthcare professional.
- **RECOMMENDATIONS TO PHYSICIANS:** Treat symptomatically.
- **MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:** Medical conditions impacting the target organs can be aggravated upon overexposure.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1 EXTINGUISHING MEDIA

- **RECOMMENDED FIRE EXTINGUISHING MEDIA:** Dry Powder, Foam, Carbon Dioxide, Halon, or any other suitable for flammable liquids.
- **UNSUITABLE FIRE EXTINGUISHING MEDIA:** Water-based sprays.

### 5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

- **NFPA FLAMMABILITY CLASSIFICATION:**

**NFPA Rating:**



**NFPA Hazard Classification:** Class I-B Flammable Liquid.

- **UNUSUAL HAZARDS IN FIRE SITUATIONS:**

<u>POTENTIAL HAZARD</u>	<u>DESCRIPTION FOR PRODUCT</u>
<b>Decomposition:</b>	Generates extremely irritating vapors, carbon dioxide, carbon monoxide, tin compounds.
<b>Incompatibilities:</b>	See Section 10 (Reactivity and Stability).
<b>Explosion Sensitivity to Mechanical Impact:</b>	Not applicable.
<b>Explosion Sensitivity to Static Discharge:</b>	Static electrical sparks can ignite vapors.

## SECTION 5: FIREFIGHTING MEASURES (Continued)

### 5.3 ADVICE FOR FIREFIGHTERS

- Self-Contained Breathing Apparatus and full protective equipment for fire response should be worn in any situation. Move containers from fire area if it can be done without risk to personnel. Otherwise, use water spray to keep fire-exposed containers cool.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES

- **RESPONSE TO INCIDENTAL RELEASES:** Personnel who have received basic chemical safety training can generally handle small-scale releases. Gloves and safety glasses must be worn when cleaning-up spills. Use caution during clean-up; contaminated floors and items may be slippery.
- **RESPONSE TO NON-INCIDENTAL RELEASES:** Generally, releases of this product will be no larger than the loss of one shipment of material. Subsequently, personnel can follow the instructions for incidental releases.

As needed, respond to non-incident chemical releases of this product (such as the simultaneous destruction of several pallets of this product) by clearing the impacted area and contacting appropriate emergency personnel.

In the unlikely event of a multi-container release of the product, and there is no other hazardous condition in the area, the use of an air-purifying respirator with organic vapor cartridge, face-shield, safety glasses, and double gloves (e.g. nitrile over latex gloves), and body protection is recommended if splashes/sprays/mists can be generated during clean-up or the concentration of vapors is high. Use Self-Contained Breathing Apparatus if concentration of oxygen is less than 19.5% or is unknown.

- **RESPONSE PROCEDURES FOR ANY RELEASE:** Absorb spilled liquid with polypads or other suitable absorbent materials. If appropriate, wash all contaminated areas and items with a detergent/water solution. Rinse contaminated items and area thoroughly.

### 6.2 ENVIRONMENTAL PRECAUTIONS

- **IN CASE OF SPILL:** Collect spillage promptly. Avoid response actions that can cause a release of a significant amount of the substance into the environment. Avoid accidental dispersal of spilled material into soil, waterways and sewers.

### 6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP

- **SPILL RESPONSE EQUIPMENT:** Polypad or other absorbent material.

### 6.4 REFERENCE TO OTHER SECTIONS

- See Section 8 (Exposure Controls/Personal Protection) for personal protective equipment recommendations.
- See Section 13 (Disposal Recommendations) for information on waste disposal.

## SECTION 7: HANDLING AND STORAGE

### 7.1 PRECAUTIONS FOR SAFE HANDLING

- **HYGIENE PRACTICES:** Keep out of reach of children. Follow good chemical hygiene practices. Do not smoke, drink, eat, or apply cosmetics in the chemical use area. Avoid inhalation of vapors, mists, sprays. Use in well-ventilated area. Avoid contact with skin or eyes. Remove contaminated clothing promptly. Clean up spilled product immediately.
- **HANDLING RECOMMENDATIONS:** Employees must be appropriately trained to use this product safely as needed. Keep containers closed when not in use. Open containers slowly on a stable surface. Use non-sparking tools. Bond and ground containers during transfers of material. If this product is transferred into another container, only use portable containers and dispensing equipment (faucet, pump, drip can) approved for flammable liquids. Never perform any welding, cutting, soldering, drilling, or other hot work on an empty container or piping until all liquid, vapors, and residue have been cleared.

### 7.2 CONDITIONS FOR SAFE STORAGE

- **STORAGE PRACTICES:** Post warning and "NO SMOKING" signs in storage and use areas, as appropriate. Have appropriate extinguishing equipment in the storage area (e.g., sprinkler system, portable fire extinguishers). Ensure all containers are correctly labeled. Store containers away from direct sunlight, sources of intense heat, or where freezing is possible.

## SECTION 7: HANDLING AND STORAGE (Continued)

Store this product away from incompatible chemicals (See Section 10, Stability and Reactivity). Empty containers may contain residual material; therefore, empty containers should be handled with care. Material should be stored in secondary containers, or in a diked area, as appropriate. Storage and use areas should be covered with impervious materials. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged.

- **INCOMPATIBILITIES:** See Section 10 (Stability and Reactivity).

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 CONTROL PARAMETERS

- **AIRBORNE EXPOSURE LIMITS:** The following substances, listed in Section 3, have specific exposure limits -

COMPONENT	ACGIH TLV	OSHA PEL	NIOSH REL	OTHER
Ethylbenzene	20 ppm TWA; 125 ppm STEL	100 ppm	100 ppm TWA; 125 ppm STEL	NE
Xylenes	100 ppm TWA; 150 ppm STEL	100 ppm TWA	100 ppm TWA; 150 ppm STEL	NE
Butyl Acetate	TWA = 150 ppm; STEL = 200 ppm	TWA = 150 ppm	TWA = 150 ppm; STEL = 200 ppm	NE
Toluol	TWA = 20 ppm (Skin)	TWA = 200 ppm; C = 300 ppm; 500 ppm [10 minute peak/8 hr shift]	100 ppm	NE
Aliphatic Hydrocarbon	TWA = 100 ppm	TWA = 500 ppm	TWA = 350 mg/m <sup>3</sup> ; C = 1800 mg/m <sup>3</sup> (15 minute)	NE
Polyurethane Catalyst (as Tin, organic compounds)	TWA= 0.1 mg/m <sup>3</sup> STEL = 0.2 mg/m <sup>3</sup> ; Skin	TWA= 0.1 mg/m <sup>3</sup>	TWA= 0.1 mg/m <sup>3</sup> Skin	NE
Isobutyl Alcohol	TWA = 50 ppm	TWA = 100	TWA = 50	NE
Dipropylene Glycol Monomethyl Ether	TWA = 100ppm; STEL = 150 ppm	TWA = 100 ppm	TWA = 100 ppm; STEL = 150 ppm	NE

- **BIOLOGICAL OCCUPATIONAL EXPOSURE LIMITS:** The following BEIs have been established for components of this product.
  - **ETHYLBENZENE:** Sum of mandelic acid and phenylglyoxylic acid in urine; 0.15 g/g creatinine; end of shift.
  - **TOLUOL:** Toluene in blood (prior to last shift in workweek = 0.02 mg/L; Toluene in urine (end of shift) = 0.03 mg/L; o-Cresol in urine (end of shift) = 0.3 mg/g creatinine
  - **XYLENES:** Methylhippuric acids in urine; 0.15 g/g creatinine; end of shift.

### 8.2 EXPOSURE CONTROLS

- **GENERAL GUIDELINES:** This product is intended for use with the Cosmichrome System. Consult a trained specialist BEFORE handling this product.
- **ENGINEERING CONTROLS:** Ensure area has adequate ventilation to ensure airborne concentration of vapors is maintained below threshold limit values noted above.
- **RESPIRATORY PROTECTION:** An air-purifying respirator with an organic vapor cartridge/high-efficiency particulate filter is recommended for use during spray applications of this product.
- **HAND PROTECTION:** Neoprene or nitrile gloves are recommended. Ensure gloves are intact prior to use.
- **EYE PROTECTION:** Safety glasses with side shields or safety goggles are recommended.
- **BODY PROTECTION:** Body protection appropriate to task is recommended (e.g., lab coat, Tyvek suit).

### 8.3 PERSONAL PROTECTION SYMBOLS



## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

- **APPEARANCE AND DISTINGUISHING CHARACTERISTICS:**

<u>PROPERTY</u>	<u>DATA</u>
State:	Liquid.
Color:	Grey.
Odor:	Solvent-like.
Odor Threshold:	The highest known value is 16.55 ppm (Xylene (1)) Weighted average: 10.11 ppm
pH:	Not applicable.

- **PHYSICAL DATA:**

<u>PROPERTY</u>	<u>DATA</u>
Melting Point/Freezing Point:	May start to solidify at -73°C (-99.4°F) based on data for: Naphtha (light aromatics fraction). Weighted average: -84.17°C (-119.5°F)
Initial Boiling Point/Boiling Range:	The lowest known value is 77°C (170.6°F) (Ethyl Acetate ). Weighted average: 129.8°C (265.6°F)
Flash Point:	Less than 23°C (73°F)
Evaporation Rate (nBuAc=1):	> 1.
Flammability:	Class IB Flammable Liquid
Upper/Lower Explosive Limits	7%/1.1% (Estimated, based on Xylene)
Vapor Pressure:	The highest known value is 73 mm of Hg (@ 20°C) (Ethyl Acetate ). Weighted average: 32.26 mm of Hg (@ 20°C)
Vapor Density	The highest known value is 4.6 (Air = 1) (Propylene glycol monomethyl ether acetate). Weighted average: 3.61 (Air = 1)
Relative Density (Density):	0.97 (0.97 g/mL).
Solubility:	Easily soluble in methanol, diethyl ether. Soluble in n-octanol. Insoluble in cold water, hot water.
Partition Coefficient/n-octanol/water:	Not determined.
Autoignition Temperature:	Not determined.
Decomposition Temperature:	Not determined.
Viscosity:	Not determined.

### 9.2 OTHER USEFUL INFORMATION ON PROPERTIES

- **VOC (less water & exempt):** 454 g/L. **VOC % By WEIGHT:** 48.5%.

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 REACTIVITY AND CHEMICAL STABILITY

- The product is not reactive under typical conditions of use or handling.
- Normally stable under standard temperatures and pressures.

### 10.2 POSSIBILITY OF HAZARDOUS REACTIONS

- Product is not self-reactive, water-reactive, or air-reactive; it will not undergo hazardous polymerization.

### 10.3 CONDITIONS TO AVOID

- Avoid contact with incompatible chemicals and adverse storage conditions.

### 10.4 INCOMPATIBLE MATERIALS

- Extremely reactive or incompatible with oxidizing agents. Highly reactive with organic materials, acids. Reactive with reducing agents, metals, alkalis.

### 10.5 HAZARDOUS DECOMPOSITION PRODUCTS

- Thermal decomposition of this product generates carbon dioxide, carbon monoxide, and tin compounds.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 INFORMATION ON ACUTE TOXICITY

- **PRODUCT TOXICOLOGY DATA:** The following are calculated estimates for the product:
  - Acute Toxicity Estimate (Oral) > 4000 mg/kg
  - Acute Toxicity Estimate (Dermal) > 4000 mg/kg
  - Acute Toxicity Estimate (Inhalation): > 30 mg/L

## SECTION 11: TOXICOLOGICAL INFORMATION (Continued)

- **SUBSTANCE TOXICOLOGY DATA:** The following data are available for the hazardous components in this product listed in Section 3 (Composition/Information on Ingredients).

**ETHYLBENZENE**

LD50 (Oral, Rat) = 3500 mg/kg  
LD50 (Dermal, Rabbit) = 15,433 mg/kg

**XYLENES**

LD50 (Oral, Mouse) = 2119 mg/kg  
LD50 (Dermal, Rabbit) > 1700 mg/kg  
LC50 (Inhalation, Rat) = 5000 4 hours

**BUTYL ACETATE**

LD50 (Oral, Rat) = 10,700 - 14,130 mg/kg  
LC50 (Inhalation, Rat) = 4 h - > 21.0 mg/l  
LD50 (Dermal, Rabbit) = 17,600 mg/kg

**ETHYL ACETATE**

LD50 (Oral, Rat) = 5,620 mg/kg  
LC50 (inhalation, mouse) = 2 hours/ 45,000 mg/m<sup>3</sup>  
LD<sub>50</sub> (Dermal, Rabbit) = > 18,000 mg/kg

**PENTYL PROPIONATE**

LD50 (Oral, Rat) > 14,000 mg/kg  
LD50 (Dermal, Rabbit) > 14,000 mg/kg

**TOLUENE**

LD50 (Oral, Rat) = > 5,580 mg/kg  
LC50 (Inhalation, Rat) = 4 h/ 12,500 - 28,800 mg/m<sup>3</sup>  
LD50 (Dermal, Rabbit) = 12,196 mg/kg

**ALIPHATIC HYDROCARBON**

LD (Oral, Rat) > 5,000 mg/kg  
LC (Inhalation, Rat) > 5500 mg/m<sup>3</sup>/4 hours  
LC (Inhalation, Dog) > 8000 mg/m<sup>3</sup>/8 hours  
LCLo (Inhalation, Cat) > 17000 mg/m<sup>3</sup>/7 hours  
LD (Skin, Rabbit) > 3000 mg/kg

**POLYURETHANE CATALYST**

LD50 (Oral, Rat) = 2,071 mg/kg  
LD50 (Dermal, Rat) > 2,000 mg/kg

**NAPHTHA**

LD50 (Oral, Rat) > 5000 mg/kg  
LD50 (Dermal, Rabbit) > 2000 mg/kg  
LC50 Inhalation- rat > 5 mg/L – 4 hours

**ISOBUTYL ALCOHOL**

LD50 (Oral, Rat – female) = 3,350 mg/kg  
LC50 (Inhalation, Rat - male and female) = 4 hours/ 24.6 mg/l  
LD50 (Dermal, Rabbit - female) = 2,460 mg/kg  
LD50 (Intraperitoneal, Rat) = 720 mg/kg

**DIPROPYLENE GLYCOL MONOMETHYL ETHER**

LD50 (Oral - Rat - male and female) > 5,000 mg/kg  
LD50 (Dermal - Rabbit – male) = 9,510 mg/kg

- **DEGREE OF IRRITATION:** The product can cause serious eye irritation and skin irritation. The following information is for the components of this product present in greater than 1% concentration.

**ETHYLBENZENE**

Skin corrosion/irritation - Rabbit/Moderate skin irritation; 24 hours  
Serious eye damage/eye irritation – Rabbit/Mild eye irritation

**BUTYL ACETATE**

Skin corrosion/irritation -Rabbit/No skin irritation - 4 hours  
Serious eye damage/eye irritation – Rabbit/ No eye irritation

**ETHYL ACETATE**

Skin corrosion/irritation – Rabbit/ Mild skin irritation

**PENTYL PROPIONATE**

Serious eye damage/eye irritation - Rabbit/Result: Mild eye irritation

**NAPHTHA**

Skin corrosion/irritation – Rabbit/ Result: No skin irritation - 4 hours  
Serious eye damage/eye irritation - Rabbit/ No eye irritation

- **SENSITIZATION:** This product is not classified as a skin or respiratory system sensitizer.
- **REVIEW OF ACUTE SYMPTOMS AND EFFECTS BY ROUTE OF EXPOSURE:** See Section 2 (Hazards Information) and Section 4 (First-Aid Measures) for additional details.
  - **Eyes:** Causes serious eye irritation.
  - **Skin:** Causes skin irritation.
  - **Inhalation:** Causes respiratory system irritation and central nervous system effects.
  - **Ingestion:** Can cause digestive distress, target organ effect, and may be aspirated..

### 11.2 **INFORMATION ON CHRONIC TOXICITY**

- **CARCINOGENICITY STATUS:** This table summarizes the carcinogenicity listing for the components of this product. "NO" indicates that the substance is not considered to be, or suspected to be, a carcinogen by the listed agency. If a component is not listed, it has no status as a carcinogen on any of the lists.

CHEMICAL	IARC	NTP	NIOSH	OSHA	OTHER
Ethylbenzene	2B – Possibly Carcinogenic to Humans	NO	NO	NO	EPA – D: Not Classifiable as to Human Carcinogenicity; LV – A3: Confirmed Animal Carcinogen
Xylenes	3 - Unclassifiable	NO	NO	NO	EPA –I; Data Inadequate; TLV-A4: Not Classifiable as a Human Carcinogen
Toluene	IARC-3: Unclassifiable as to Carcinogenicity in Humans	NO	NO	NO	TLV-4: Not Classifiable as a Human Carcinogen; EPA II – Inadequate Evidence

## SECTION 11: TOXICOLOGICAL INFORMATION (Continued)

- **REPRODUCTIVE TOXICITY INFORMATION:** The following data are available, in terms of reproductive toxicity effects, for components of this product:
  - **TOLUENE:** Reproductive Effects - TLo, Inhalation, Rat, 800.0 MG/M3, 6 H, female 14-20 day(s) after conception. Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Effects on Newborn: Behavioral.
  - **ETHYLBENZENE:** May cause adverse reproductive effects and birth defects (teratogenic) based on animal test data.
  - **XYLENES:** Detected in maternal milk in humans. Passes through the placental barrier in animal. Embryotoxic and/or fetotoxic in animal. May cause adverse reproductive effects (male and female fertility [spontaneous abortion and fetotoxicity]) and birth defects based on animal data.
- **MUTAGENIC EFFECTS:** The components of this product are not reported to cause mutagenic effects under typical circumstances of exposure at the concentrations present in this product. The Polyurethane Catalyst is reported to cause potential germ cell mutagenicity effects (in vitro tests only).
- **SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE:** The following organs can be impacted after single exposures to this product: Central nervous system, and respiratory system.
- **SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE:** The following organs can be impacted after repeated exposures to this product: Reproductive system, kidneys, and liver.
- **ASPIRATION HAZARD:** This product presents an aspiration hazard if swallowed. It may be fatal if swallowed and enters airways.

### 11.3 OTHER USEFUL TOXICOLOGY INFORMATION

- **TOXICOLOGICALLY SYNERGISTIC PRODUCTS:** None known.
- **ADDITIONAL TOXICOLOGY:** Not applicable.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 ENVIRONMENTAL TOXICITY

- Based on available data, this product is anticipated to be harmful or fatal to contaminated terrestrial plants or animals.
- Based on available data, this product is anticipated to be harmful or fatal to contaminated aquatic plants or animals.
- Aquatic toxicity, acute (Category 2); Aquatic toxicity, chronic (Category 2), based on concentrations and composition.
- The following aquatic toxicity data are available for components of this product:

#### **TOLUENE**

EC50 (Daphnia magna): 8.00 mg/l - 24 h  
LC50 (Oncorhynchus mykiss): 7.63 mg/l - 96 hours  
NOEC (Pimephales promelas): 5.44 mg/l - 7 days

#### **ETHYLBENZENE**

Ecotoxicity in water (LC50): 14 mg/l 96 hours [Fish (Trout)] (static). 12.1 mg/l 96 hours [Fish (Fathead Minnow)] (flowthrough)].

150 mg/l 96 hours [Fish (Blue Gill/Sunfish)] (static). 275 mg/l 96 hours [Fish (Sheepshead Minnow)]. 42.3 mg/l 96 hours [Fish (Fathead Minnow)](soft water). 87.6mg/l 96 hours [Shrimp].

LC50 - *Cyprinodon variegatus* (sheepshead minnow) - 88.00 mg/l - 96 hours

LC50 - *Lepomis macrochirus* (Bluegill) - 80.00 mg/l - 96 hours

NOEC - *Cyprinodon variegatus* (sheepshead minnow) - 88 mg/l - 96 hours

LC50 - *Oncorhynchus mykiss* (rainbow trout) - 4.2 mg/l - 96 hours

Toxicity to daphnia and other aquatic invertebrates  
EC50 - Daphnia magna (Water flea) - 2.90 mg/l - 48 hours

#### **POLYURETHANE CATALYST**

EC50 - Daphnia magna (Water flea) - < 0.46 mg/l - 48 hours

#### **BUTYL ACETATE**

LC50 (Lepomis macrochirus): 100 mg/l - 96 hours  
EC50 (Daphnia magna): 1,815 mg/L - 24 hours

#### **ETHYL ACETATE**

LC50 (Pimephales promelas): 220.00 - 250.00 mg/l - 96 hours  
LC50 (Oncorhynchus mykiss ): 350.00 - 600.00 mg/l - 96 hours  
LC50 (Daphnia magna): 2,300.00 - 3,090.00 mg/l - 24 hours

#### **ISOBUTYL ALCOHOL**

LC50 - Pimephales promelas (fathead minnow) - 1,430 mg/l - 96 hours

EC50 - Daphnia pulex (Water flea) - 1,100 mg/l - 48 hours

EC50 - Pseudokirchneriella subcapitata - 1,799 mg/l - 72 hours

Growth inhibition IC50 - Sludge Treatment - > 1,000 mg/l - 16 hours

#### **DIPROPYLENE GLYCOL MONOMETHYL ETHER**

LC50 - Poecilia reticulata (guppy) - > 1,000 mg/l - 96 hours

EC50 - Daphnia magna (Water flea) - 1,919 mg/l - 48 hours

Growth inhibition EC50 - Pseudokirchneriella subcapitata - > 969 mg/l - 72 hours

### 12.2 PERSISTENCE AND DEGRADABILITY

- When released into the soil, the components of this product are expected to biodegrade, dissipate in soils via oxidation, or otherwise chemically degrade or photo-decompose via solar radiation. Specific environmental fate data for components of this product are as follows:
  - **BUTYL ACETATE:** Aerobic - Exposure time 28 days. Result: 83 % - Readily biodegradable.
  - **ISOBUTYL ALCOHOL:** Aerobic - Exposure time 28 days. Result: 70 - 80 % - Readily biodegradable.
  - **POLYURETHANE CATALYST:** Not readily biodegradable.
  - **DIPROPYLENE GLYCOL MONOMETHYL ETHER:** Aerobic - Exposure time 28 days. Result: 76 % - Readily biodegradable.



## SECTION 12: ECOLOGICAL INFORMATION (Continued)

### 12.3 BIOACCUMULATIVE POTENTIAL

- This product is not anticipated to bioaccumulate significantly.

### 12.4 MOBILITY IN SOIL

- It is to be expected this product will have small mobility in soil. Some of the components may get into the soil and, ultimately, the ground water. Product spreads on the water surface.

### 12.5 OTHER ADVESE ENVIRONMENTAL EFFECTS

- None reported.

## SECTION 13: DISPOSAL CONSIDERATION

### 13.1 WASTE TREATMENT METHODS

- Dispose of in accordance with local, state and national regulations.
- Do not mix wastes of this product with other waste streams.

### 13.2 DISPOSAL CONSIDERATIONS

- **EPA RCRA WASTE CODE:** D001, applicable to wastes consisting only of this product.


### 13.3 DISPOSITION OF EMPTY CONTAINERS

- Empty containers may contain residual liquid; therefore, empty containers should be handled with care.
- Empty containers should be discarded properly.

## SECTION 14: TRANSPORT INFORMATION

### 14.1 HAZARDOUS MATERIALS TRANSPORTATION REGULATIONS

- **DEPARTMENT OF TRANSPORTATION HAZARDOUS MATERIALS SHIPPING REGULATIONS:**

UN/NA Number	Proper Shipping Name	Packing Group	Hazard Class	Label	North American Emergency Response Guide #	Marine Pollutant Status
UN1263	Paint	II	3		153	Marine Pollutant based on Hazard Classification.

- **LIMITED QUANTITY EXCEPTIONS [49 CFR 173.150(b)]:** Limited quantities for Class 8, Packing Group II materials have inner packaging not over 1.0 L [0.3 gal] (liquids) net capacity each, packed in strong outer packaging.
- **CANADIAN TRANSPORTATION INFORMATION:** This product is regulated by Transport Canada as dangerous goods under Canadian transportation standards. Refer to above information.
- **IATA DESIGNATION:** This product is regulated as dangerous goods by the International Air Transport Association.

Basic Description	Passenger and Cargo Aircraft				Cargo Aircraft Only	
	Limited Quantity		Packing Instruction	Max. Qty per PKG	Packing Instruction	Max. Qty per PKG
	Packing Instruction	Max. Qty per PKG				
UN 1263, Paint , 3, PG II	Y341	1L	353	5L	364	4L

- **IMO DESIGNATION:** This product is regulated as dangerous goods by the International Maritime Organization.

Basic Description	Limited and Excepted Quantity Provisions		Packing		EmS
	Limited Quantities	Excepted Quantities	Instructions	Provisions	
UN 1263, Paint , 3, PG II	5L	E2	P001	--	F-E, S-E

## SECTION 14: TRANSPORT INFORMATION (Continued)

### 14.2 ENVIRONMENTAL HAZARDS

- Based on the volume of product shipped, product is typically excepted from regulations related to Marine Pollutants because of the limited hazards to the environment.

### 14.3 SPECIAL PRECAUTIONS FOR TRANSPORTERS

- Avoid release into the environment and collect spillage if it occurs.

### 14.4 TRANSPORT IN BULK

- Not applicable.

## SECTION 15: REGULATORY INFORMATION

### 15.1 OTHER IMPORTANT U.S. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS

- U.S. SARA THRESHOLD PLANNING QUANTITY:** Not applicable.
- U.S. SARA HAZARD CATEGORIES (SECTION 311/312, 40 CFR 370-21):** ACUTE: Yes; CHRONIC: Yes; FIRE: Yes; REACTIVE: No; SUDDEN RELEASE: No.
- U.S. CERCLA REPORTABLE QUANTITY (RQ):** Toluene = 1000 lb; Xylenes = 100 lb Ethylbenzene = 1000 lb; Butyl Acetate = 5000 lb; Ethyl Acetate = 5000 lb.
- U.S. SARA 313:** Toluene; Xylenes, Ethylbenzene are subject to the reporting requirements of SARA Title III, Section 313.
- U.S. TSCA INVENTORY STATUS:** All components of this product are listed on the TSCA Inventory.
- U.S. CLEAN AIR ACT (SECTION 112r):** Not applicable.

### 15.2 OTHER IMPORTANT U.S. STATE REGULATIONS FOR COMPONENTS

- CALIFORNIA SAFE DRINKING WATER ACT (PROPOSITION 65) STATUS:** This product contains Toluene and Ethylbenzene. WARNING – This product contains chemicals known to the state of California to cause cancer, birth defects and other reproductive harm.
- STATE HAZARDOUS SUBSTANCES LIST:**

COMPONENT	NJ Right to Know	PA Right to Know	MA Right to Know	OTHER
Ethylbenzene	LISTED	LISTED	LISTED	ND
Xylenes	LISTED	LISTED	LISTED	ND
Butyl acetate	LISTED	LISTED	LISTED	ND
Ethyl Acetate	LISTED	LISTED	LISTED	ND
Pentyl Propionate	LISTED	LISTED	NOT LISTED	ND
Toluol	LISTED	LISTED	LISTED	ND
Aliphatic Hydrocarbon	LISTED	LISTED	LISTED	ND
Polyurethane Catalyst	LISTED	LISTED	NOT LISTED	ND
Naphtha (Light aromatics fraction)	LISTED	LISTED	LISTED	ND
Isobutyl Alcohol	LISTED	LISTED	LISTED	ND
Dipropylene Glycol Monomethyl Ether	LISTED	LISTED	LISTED	ND

### 15.3 OTHER IMPORTANT CANADIAN SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS

- ADDITIONAL WHMIS INFORMATION:** The following information is offered during the transition period for implementation of new regulations.
  - WHMIS 2015:** See Section 2.
  - WHMIS 1988:** It is classified as B2: Flammable Liquid; D2A/B – Materials Causing Other Toxic Effects (Very Toxic/Toxic).. See symbols to right.
  - This SDS contains all the information required by the HPR.
- CANADIAN DSL/NDL INVENTORY STATUS:** Listed components of this product are on the DSL/NDL Inventory.
- CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS:** Xylene, polyurethane catalyst, and toluene (toluol), are on the CEPA Priority Substances Lists.



## SECTION 16: OTHER INFORMATION

### 16.1 INDICATION OF CHANGE

- **DATE OF REVISION:** March 9, 2016
- **SUPERCEDES:** February 5, 2016.
- **CHANGE INDICATED:** Update of VOC information.

### 16.2 HAZARDOUS MATERIALS SYSTEM RATING

Health	2*	* Reproductive toxicity, germ cell mutagenicity, carcinogenicity, respiratory irritation, central nervous system effects.
Flammability	3	
Physical Hazard	0	
Protective Equipment	X	(Personal Protective Equipment Rating: Occupational Use situations: X – Selection based on use. See section 8 for details.)

### 16.3 DEFINITIONS

#### SECTION EXPLANATION OF TEMS/ABBREVIATIONS

- ALL** **OSHA:** U.S. Federal Occupational Safety and Health Administration. **WHMIS:** Canadian Workplace Hazardous Materials Standard. **GHS:** Globally Harmonized System of Classification of Chemical Substances. **HCS:** Hazard Communication Standard (U.S.). **HPR:** Hazardous Products Regulations (Canada).
- 3** **CAS Number:** Chemical Abstract Service Number, used by the American chemical Society to uniquely identify a chemical.
- 5** **NFPA:** National Fire Protection Association. **NFPA FLAMMABILITY CLASSIFICATION:** The NFPA uses the flash point (F.I.P.) and boiling point (BP) to classify flammable or combustible liquids. Class IA: F.I.P. below 73°F and BP below 100°F. Class IB: F.I.P. below 73°F and BP at or above 100°F. Class IC: :F.I.P. at or above 73°F and BP at or above 100°F. Class II: : F.I.P. at or above 100°F and below 140°F. Class IIIA: F.I.P. at or above 140°F and below 200°F. Class IIIB: F.I.P. at or above 200°F. **NFPA HAZARDOUS MATERIALS RATING:** This is a rating system used to summarize physical and health hazards to firefighters Blue = Health hazard; Red = Fire Hazard; Yellow = Reactivity Hazard. 0 = No Significant Hazard. 1 = Slight Hazard. 2 = Moderate Hazard. 3 = Severe Hazard. 4 = Extreme Hazard.
- 8** **NE:** Not established. **ACGIH:** American Conference of Government Industrial Hygienists; **TWA:** Time-Weighted Average (over an 8-hour work day); **STEL:** Short-Term Exposure Limit (15 minute average, no more than 4-times daily and each exposure separated by one-hour minimally); **C:** Ceiling Limit (concentration not to be exceeded in a work environment). **PEL:** Permissible Exposure Limit. **NIOSH:** National Institute of Occupational Safety and Health; **REL:** Recommended Exposure Limit. **ppm:** Parts per Million. **mg/m<sup>3</sup>:** Milligrams per cubic meter. **mppcf:** Millions of Particles per Cubic Foot. **BEI:** Biological Exposure Limit.
- 9** **pH:** Scale (0 to 14) used to rate the acidity or alkalinity of aqueous solutions. For example, a pH value of 0 indicates a strongly acidic solution, pH of 7 indicates a neutral solution, and a pH value of 14 indicates an extremely basic solution. **FLASH POINT:** Temperature at which a liquid generates enough flammable vapors so that ignition may occur. **AUTOIGNITION TEMPERATURE:** Temperature at which spontaneous ignition occurs. **LOWER EXPLOSIVE LIMIT (LEL):** The minimal concentration of flammable vapors in air which will sustain ignition. **UPPER EXPLOSIVE LIMIT (UEL):** The maximum concentration of flammable vapors in air which will sustain ignition. ≈: Approximately symbol. **VOC:** Volatile Organic Compound.
- 11** **CARCINOGENICITY STATUS:** **NTP:** National Toxicology Program. **IARC:** International Agency for Research on Cancer. **REPRODUCTIVE TOXICITY INFORMATION:** **Germ Cell Mutagenicity:** Substance capable of causing chromosomal damage to cells. **Embryotoxicity:** Substance capable of damaging the developing embryo in an overexposed female. **Teratogen:** Substance capable of damaging the developing fetus in an overexposed female. **Reproductive toxin:** Substance capable of adversely affecting male or female reproductive organs or functions. **TOXICOLOGY DATA:** **LDxxor LCxx:** The Lethal Dose or Lethal Concentration of a substance which will be fatal to a given percentage (xx) of exposed test animals by the designate route of administration. This value is used to access the toxicity of chemical substances to humans. **TDxxor TCxx:** The Toxic Dose or Toxic Concentration of a substance which will cause an adverse effect to a given percentage (xx) of exposed test animals by the designate route of administration.
- 12** **EC50:** Effect Concentration (on 50% of study group); **BOD:** Biological Oxygen Demand. **NOEC:** No Observable Effect Concentration.
- 13** **RCRA:** Resource Conservation and Recovery Act. The regulations promulgated under this act under Act are found in 40 CFR, Sections 260 ff, and define the requirements of hazardous waste generation, transport, treatment, storage, and disposal. **EPA RCRA Waste Codes:** Defined in 40 CFR Section 261.
- 15** **NJ:** New Jersey. **PA:** Pennsylvania. **MA:** Massachusetts. **ND:** Not determined. **CERCLA:** Comprehensive Environmental Response, Compensation, and Liability Act. **SARA:** Superfund Amendments and Reauthorization Act.
- 16** **HAZARDOUS MATERIALS IDENTIFICATION SYSTEM RATING:** This is a rating system used by industry to summarize physical and health hazards to chemical users and was originally developed by the National Paint and Coating Association. 0 = No Significant Hazard. 1 = Slight Hazard. 2 = Moderate Hazard. 3 = Severe Hazard. 4 = Extreme Hazard.

### 16.4 DISCLAIMER



*To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.*