

# 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 of the Substance/Mixture and of the Company/Undertaking

### 1.1 PRODUCT IDENTIFIER:

- PRODUCT NAME: **CERAMITATION PART B CATALYST**

### 1.2 RELEVANT IDENTIFIED USES OF THE MIXTURE OR USES ADVISED AGAINST

- IDENTIFIED USE: Decorative Enamel Coating
- USES ADVISED AGAINST: None Specified

### 1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

- MANUFACTURER/SUPPLIER: **KROHN INDUSTRIES, INC.**
- ADDRESS: 303 Veterans Blvd.; Carlstadt, NJ; 07072
- BUSINESS PHONE: 201-933-9696
- EMERGENCY PHONE: 1-800-255-3924/813-248-0573 (CHEMTEL; 24 hours/International)

### 1.4 OTHER PERTINENT INFORMATION

- This product is used in conjunction with Ceramitation – Part A.

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:

REGULATION	CLASSIFICATION
OSHA HAZARD COMMUNICATION (GHS)	Flammable Liquids (Category 2); Skin Corrosion/Irritation (Category 2); Serious Eye Damage/Eye Irritation (Category 2A); Specific target organ toxicity - repeated exposure (Category 2); Specific target organ toxicity - single exposure (Category 3; Central nervous system); Germ cell mutagenicity (Category 2), Carcinogenicity (Category 1B), Reproductive toxicity (Category 2); Aspiration hazard (Category 1)

### 2.2 LABEL ELEMENTS:

#### 3 OSHA/CLP – BASED ON GLOBALLY HARMONIZED SYSTEM

**Symbol:** To the right.

**Signal Word:** Danger.



#### Hazard Statements

H225: Highly flammable liquid and vapor. H315: Causes skin irritation. H319: Causes serious eye irritation. May cause H336: drowsiness or dizziness. H373: May cause damage to stomach and hearing organs through prolonged or repeated inhalation exposure. H341 Suspected of causing genetic defects. H350: May cause cancer. H361 Suspected of damaging fertility or the unborn child. H304: May be fatal if swallowed and enters airways.

## SECTION 2: HAZARDS IDENTIFICATION (Continued)

### Precautionary Statements

#### Prevention

P102: Keep out of reach of children. P103: Read label before use. P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking. P233: Keep container tightly closed. P240: Ground/bond container and receiving equipment. P242: Use only non-sparking tools. P243: Take precautionary measures against static discharge. P260: Do not breathe vapors, mists, or spray. P264: Wash hands thoroughly after handling. P271: Use only outdoors or in a well-ventilated area. P280: Wear protective gloves/protective clothing/eye protection/face protection. Keep cool.

#### Response

P301+320+330+331: IF SWALLOWED: Do NOT induce vomiting. Immediately call a POISON CENTER/DOCTOR. P303+361+353 IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. P332+313: If skin irritation occurs, get medical advice/attention. P363: Wash contaminated clothing before reuse. P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P312: Call a POISON CENTER/Doctor if you feel unwell. P305:351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+313: If eye irritation persists, get medical advice/attention. P308+313: IF exposed or concerned: Get medical attention/advice. P370+378: IN CASE OF FIRE: Use CO<sub>2</sub>, dry chemical or foam extinguisher.

#### Storage

P403+233: Store in well-ventilated place. Keep cool. P405: Store locked up.

#### Disposal

P501: Dispose of contents/container in accordance with local/regional/national/ international regulations.

### HAZARDOUS MATERIALS IDENTIFICATION SYSTEM

Health	2*	<u>HMIS Personal Protective Equipment Rating:</u> Occupational Use situations: B/C; Safety glasses and gloves/ body protection suitable to specific circumstances of use should be considered. * Reproductive Toxicity, Target Organ Effects
Flammability	3	
Physical Hazard	0	
Protective Equipment	B/C	

### CANADIAN REGULATORY STATUS

- WHMIS 2015: See Previous Section.
- This SDS contains all the information required by the Hazardous Products Regulations.

### AQUATIC TOXICITY

- This product is classified as Aquatic Toxicity – Acute (Category 3); Aquatic Toxicity – Chronic (Category 3); H413: Harmful to aquatic life with long-lasting effects. P273: Avoid release to the environment.

## SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1/3.2 SUBSTANCES/MIXTURES

CHEMICAL	CAS NUMBER	GHS HAZARD CLASSIFICATION FOR CHEMICAL	% (w/w)
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)	20-25
VM&P Naphtha	8032-32-4	Flammable liquids (Category 2); Skin irritation (Category 2), Specific target organ toxicity - single exposure (Category 3, Central nervous system); Aspiration hazard (Category 1); Acute aquatic toxicity (Category 2); Chronic aquatic toxicity (Category 2)	5.8-8.5
Ethyl Benzene	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)	4.9-7.5
1-Butanol	71-36-3	Flammable liquids (Category 3); Acute toxicity, Oral (Category 4); Skin irritation (Category 2); Serious eye damage (Category 1); Specific target organ toxicity - single exposure (Category 3, Respiratory system, Central nervous system)	0.8-2
Chlorendic Acid	115-28-6	Serious eye damage (Category 1); Carcinogenicity (Category 2)	< 1.2
Pigment with Cadmium Sulfate	1306-23-6	Acute toxicity, Oral (Category 4), Germ cell mutagenicity (Category 2), Carcinogenicity (Category 1B), Reproductive toxicity (Category 2), Specific target organ toxicity - repeated exposure (Category 2), Chronic aquatic toxicity (Category 4)	0-2%
No other component of this product contributes health of physical hazards at the concentrations present in solution.			Balance

## SECTION 4: FIRST AID MEASURES

### 4.1 DESCRIPTION OF FIRST AID MEASURES

#### AREA EXPOSED

##### Eye Contact

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.

##### Skin Contact

Flush area with warm, running water for several minutes. Seek medical attention if irritation persists.

##### Inhalation

Obtain fresh air. See medical attention if symptoms persist.

##### Ingestion

If conscious only: Rinse mouth with water. Do not induce vomiting. Contact a Poison Control Center or physician for instructions.

### 4.2 MOST IMPORTANT ACUTE AND CHRONIC EXPOSURE SYMPTOMS

#### • ACUTE HEALTH EFFECTS:

#### AREA EXPOSED

##### Eye Contact

May cause mild to moderate eye irritation, depending on duration of contact.

##### Skin Contact

May cause mild skin irritation, depending on duration of contact.

##### Inhalation

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).

##### Ingestion

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, kidneys, and optic nerves (which may result in blindness).

- **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, stomach, and hearing organs.

- **TARGET ORGANS:** Skin, eyes, central nervous system, stomach, and hearing organs.

### 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:** None reported.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1 EXTINGUISHING MEDIA

- **RECOMMENDED FIRE EXTINGUISHING MEDIA:** Dry Powder, Foam, Carbon Dioxide, Halon, or any other suited to flammable liquids.
- **UNSUITABLE FIRE EXTINGUISHING MEDIA:** Water spray.

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

- **NFPA FLAMMABILITY CLASSIFICATION:** Class IB Flammable Liquid.
- **UNUSUAL HAZARDS IN FIRE SITUATIONS:** When involved in a fire, this material may produce irritating vapors and toxic gases (e.g., carbon monoxide, carbon dioxide).
  - Sensitivity to Mechanical Impact: Not sensitive.
  - Explosion Sensitivity to Static Discharge: Static electrical sparks can ignite vapors.



### 5.3 ADVICE FOR FIREFIGHTERS

- Wear Self Contained Breathing Apparatus and full protective equipment for fire response. Move containers from fire area if it can be done without risk to personnel. Otherwise, use water spray to keep fire-exposed containers cool. Contaminated equipment should be rinsed thoroughly with water before returning to service.

## 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. For small releases, the minimum Personal Protective Equipment should be rubber gloves and rubber apron, splash goggles or safety glasses. Use caution during clean-up; avoid stepping into spilled liquid, as contaminated surfaces can be very slippery.
- **RESPONSE TO NON-INCIDENTAL RELEASES:** Generally, releases of this product will be no larger than the loss of one shipment of material (therefore, 1 quart or less). 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.
  - **ADDITIONAL PRECAUTIONS:** Remove all sources of ignition. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. Ensure adequate fire protection.
  - **RESPIRATORY PROTECTION:** For non-incident releases of this product, minimum Personal Protective Equipment should be Level C: triple-gloves, chemical resistant apron, boots, and splash goggles and air purifying respirator equipped with an organic vapor. Level B protection should be used when oxygen levels are below 19.5% or are unknown, or if there are high concentrations of vapors in the environment.
- **RESPONSE PROCEDURES FOR ANY RELEASE:** Absorb spilled liquid with polypads or other suitable absorbent materials. Rinse equipment/area thoroughly with detergent/water solution, if necessary.

### 6.2 ENVIRONMENTAL PRECAUTIONS

- Avoid response actions that can cause a release of a significant amount of the substance (into the environment).

### 6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

- **SPILL RESPONSE EQUIPMENT:** Broom/dustpan or Polypad/sponge.

### 6.4 REFERENCES TO OTHER SECTIONS

- **SECTION 8:** For exposure levels and detailed personal protective equipment recommendations.
- **SECTION 13:** For waste handling guidelines.

## 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, INCLUDING ANY INCOMPATIBILITIES

- **STORAGE RECOMMENDATIONS:** 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. 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.

### 7.3 SPECIFIC END USES

- **RECOMMENDATIONS:** Place product away from children and animals.
- **INDUSTRIAL-SECTOR SPECIFIC SOLUTIONS:** PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT -- Follow practices indicated in Section 6 (Accidental Release Measures).

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 CONTROL PARAMETERS

- **U.S. NATIONAL EXPOSURE LIMITS:** The following airborne exposure limits have been established for components listed in Section 3.

COMPONENT	ACGIH TLV	OSHA PEL	NIOSH REL	OTHER
n-Butyl Acetate	Not applicable.	TWA = 150 ppm	TWA = 150 ppm; STEL = 200 ppm	IDLH = 1700 ppm CA TWA = 150 ppm; CA STEL = 200 ppm
VM&P Naphtha	NE	NE	TWA = 350 mg/m <sup>3</sup> ; C = 1800 mg/m <sup>3</sup> (15 minutes)	NE
Ethyl Benzene	TWA = 20 ppm	TWA = 100 ppm	TWA = 100 ppm; STEL = 125 ppm	IDLH = 800 ppm CA TWA = 5 ppm; CA STEL = 30 ppm
1-Butanol	TWA = 20 ppm	TWA = 100 ppm	C = 50 ppm (skin)	IDLH = 1400 ppm CA C = 50 ppm (skin)
Cadmium Sulfide (Cadmium and compounds, as Cd)	TWA = 0.01 mg/m <sup>3</sup> /0.002 mg/m <sup>3</sup> (Respirable Fraction)	TWA = 0.005 mg/m <sup>3</sup> (see 29 CFR 1910.1027)	Apply OSHA PEL	IDLH = 9 mg/m <sup>3</sup> (as Cd) CA TWA = 0.005 mg/m <sup>3</sup>

- **BIOLOGICAL OCCUPATIONAL EXPOSURE LIMITS:** The following BEIs have been established for the following components of this product:
  - **ETHYL BENZENE:** Sum of mandelic acid and phenylglyoxylic acid in urine; 0.15 g/g creatinine; end of shift.\
  - **CADMIUM:** Cadmium in urine = 5 µg/g creatinine; Cadmium in blood = 5 µg/L.

### 8.2 EXPOSURE CONTROLS

- **ENGINEERING CONTROLS:** Use this product in well-ventilated environment. Safety showers, eye wash stations, and hand-washing equipment should be available.
- **RESPIRATORY PROTECTION:** None needed under normal conditions of use. Use NIOSH approved respirators if ventilation is inadequate to control mists or sprays. For situations in which significant amounts of splashes, sprays, or mists could be generated, wear an air-purifying respirator with an organic vapor filter.
- **HAND PROTECTION:** Nitrile or neoprene gloves should be used. If necessary, refer to U.S. OSHA 29 CFR 1910.138, or applicable state, local, or national standards.
- **EYE PROTECTION:** Splash goggles or safety glasses. If necessary, refer to U.S. OSHA 29 CFR 1910.133, or applicable state, local, or national standards.
- **BODY PROTECTION:** Use a body protection appropriate to task (e.g., lab coat, coveralls, or apron). Care should be taken to select protection for potentially exposed areas when prolonged exposure could occur in occupational settings.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>(a) <b>APPEARANCE:</b> Liquid of various colors.</li> <li>(b) <b>ODOR:</b> Ester-like odor.</li> <li>(c) <b>ODOR THRESHOLD:</b> Not determined.</li> <li>(d) <b>pH:</b> Not applicable.</li> <li>(e) <b>MELTING POINT/FREEZING POINT:</b> &lt; 0 °F (&lt; -18° C).</li> <li>(f) <b>INITIAL BOILING POINT AND BOILING RANGE:</b> 240-277 °F (166-136 °C).</li> <li>(g) <b>FLASH POINT:</b> 19 °C (66 °F) (Seta Closed Cup)</li> <li>(h) <b>EVAPORATION RATE (nBuAc=1):</b> 0.46-1.2</li> <li>(i) <b>FLAMMABILITY:</b> Class IB Flammable Liquid.</li> <li>(j) <b>UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:</b> 11.2%/0.9%</li> </ul> | <ul style="list-style-type: none"> <li>(k) <b>VAPOR PRESSURE (mmHg @ 20°C):</b> 4.4-9.</li> <li>(l) <b>VAPOR DENSITY (AIR = 1):</b> &gt; 1</li> <li>(m) <b>RELATIVE DENSITY (water=1):</b> 1.186-1.222 @ 25°C.</li> <li>(n) <b>SOLUBILITY:</b> Negligible.</li> <li>(o) <b>PARTITION COEFFICIENT: N-OCTANOL/WATER:</b> Not determined,</li> <li>(p) <b>AUTO-IGNITION TEMPERATURE:</b> Not determined.</li> <li>(q) <b>DECOMPOSITION TEMPERATURE:</b> Not determined.</li> <li>(r) <b>VISCOSITY:</b> 4.7 – 6.3 Stokes @ 25°C.</li> <li>(s) <b>EXPLOSIVE PROPERTIES:</b> Not applicable.</li> <li>(t) <b>OXIDIZING PROPERTIES:</b> Not an oxidizer.</li> </ul> |
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### 9.2 OTHER INFORMATION

- **VOC (less water & exempt):** 281 g/L. **WEIGHT% VOC:** 39-41%.

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 REACTIVITY

- Not reactive under typical conditions of use or handling.

### 10.2 CHEMICAL STABILITY

- Normally stable under standard temperatures and pressures.

### 10.3 POSSIBILITY OF HAZARDOUS REACTIONS

- This product is not self-reactive or air-reactive.
- This product will not undergo hazardous polymerization.

### 10.4 CONDITIONS TO AVOID

- Avoid contact with incompatible chemicals and adverse storage conditions. Keep away from sources of ignition.

### 10.5 INCOMPATIBLE MATERIALS

- This product is not compatible with strong oxidizing agents or strong acids.

### 10.6 HAZARDOUS DECOMPOSITION PRODUCTS

- Products of thermal decomposition of this product can include carbon monoxide, carbon dioxide.

## SECTION 11: TOXICOLOGICAL INFORMATION

### • **ACUTE TOXICITY:**

- **TOXICOLOGY DATA:** The following toxicology data are available for this product.

#### PRODUCT

Acute Toxicity Estimate (oral) 6985 mg/kg

Acute Toxicity Estimate (dermal) 18591 mg/kg

Acute Toxicity Estimate (inhalation-dust/mist) 641 mg/L

Acute Toxicity Estimate (inhalation-vapor) 69 mg/L

Unknown acute toxicity: 58.6 % of the mixture consists of ingredient(s) of unknown toxicity

#### BUTYL ACETATE

LD50 (oral, rat) = 10,700 - 14,130 mg/kg

LC50 (inhalation, rat) = 4 hours - > 21.0 mg/l

LD50 (dermal-rabbit) = 17,600 mg/kg

#### VM&P NAPHTHA

LD50 (oral, rat) - > 2,000 mg/kg

LC50 (inhalation, rat) - 4 hours - > 25.3 mg/l

LD50 (dermal-rabbit) > 3,350 mg/kg

#### ETHYL BENZENE

LD50 (oral, rat) = 3500 mg/kg

LD50 (dermal-rabbit) = 15,433 mg/kg

#### 1-BUTANOL

LD50 (oral, rat) = 790 mg/kg

LC50 (inhalation, rat) = 4 hours - 8000 ppm

LD50 (dermal, rabbit) = 3,400 mg/kg

#### CHORENDIC ACID

LD50 (oral, rat) = 1770 mg/kg

LC50 (inhalation, rat) = > 790mg/m<sup>3</sup>/4hours

#### CADMIUM SULFIDE

LD50 (oral, rat) = 7080 mg/kg

- **DEGREE OF IRRITATION:** Serious eye irritant. Skin irritant. See Section 4 (First Aid Measures) for more details.
- **SENSITIZATION:** This product is not reported to be a skin or respiratory sensitizer.
- **REVIEW OF ACUTE SYMPTOMS AND EFFECTS:** See Section 2 (Hazards Information) and Section 4 (First-Aid Measures) for further details.
  - **EYES:** Can cause mild to serious eye irritation, depending on duration of contact.
  - **SKIN:** May cause mild to moderate irritation upon prolonged exposure.
  - **INHALATION:** Mists and vapors of this product may cause mild nasal irritation, and may cause central nervous system effects.
  - **INGESTION:** Although not anticipated to be a significant route of occupational over-exposures, ingestion of this product may cause gastrointestinal problems and central nervous system effects.

## SECTION 11: TOXICOLOGICAL INFORMATION (Continued)

- **CHRONIC TOXICITY:**

- **CARCINOGENICITY STATUS:** The following 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.

CHEMICAL	IARC	NTP	NIOSH	OSHA	OTHER
Ethyl Benzene	2B – Possibly Carcinogenic to Humans	NO	NO	NO	EPA – D: Not Classifiable as to Human Carcinogenicity; TLV – A3: Confirmed Animal Carcinogen; MAK -4: Substances with Carcinogenic Potential
Chlorendic Acid	2B – Possibly Carcinogenic to Humans	R – Reasonably Anticipated to be a Carcinogen	NO	NO	NO
Cadmium Sulfide	IARC-1 Carcinogenic to Human	NTP-K Known Human Carcinogen	NIOSHA-Ca	Carcinogen	EPA-B1: Limited evidence of carcinogenicity from epidemiological studies.

- **REPRODUCTIVE TOXICITY INFORMATION:** Components of this product are reported to cause reproductive effects under typical circumstances of exposure associated with use of the product as directed. The following reproductive toxicity data are available for components of this product.
  - **ETHYL BENZENE:** May cause adverse reproductive effects and birth defects (teratogenic) based on animal test data.
- **MUTAGENIC EFFECTS:** The components of this product are not reported to cause reproductive effects under typical circumstances of exposure at the concentrations present in this product.
- **SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE:** The following organs can be impacted after single exposures to this product: Central nervous system.
- **SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE:** The following organs can be impacted after single exposures to this product: Stomach and hearing organs.
- **ASPIRATION HAZARD:** This product presents an aspiration hazard if swallowed.
- **OTHER INFORMATION**
  - **TOXICOLOGICALLY SYNERGISTIC PRODUCTS:** None known.
  - **ADDITIONAL TOXICOLOGY:** None known.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 TOXICITY

- Based on available data, this product can be harmful or fatal to contaminated terrestrial plants or animals.
- This product is classified as Aquatic Toxicity, Acute (Category 3); Aquatic Toxicity, Chronic (Category 3).
- The following aquatic toxicity data are available for components of this product:

**1-BUTANOL**

LC50 (Pimephales) - 1,840 mg/l – 96 hours  
 EC50 (Daphnia magna) 1,983 mg/l - 48 hours

**CADMIUM SUOFIDE**

LC50 (Pimephales promelas): 0.108 mg/l - 96.0 hours  
 EC50 (Daphnia magna): 0.16 mg/l - 48 hours

**BUTYL ACETATE**

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

## SECTION 12: ECOLOGICAL INFORMATION (Continued)

### 12.3 BIOACCUMULATIVE POTENTIAL

- The components of this product are not anticipated to bioaccumulate in any significant quantities.

### 12.4 MOBILITY IN SOIL

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


## SECTION 13: DISPOSAL CONSIDERATION

### 13.1 WASTE TREATMENT METHODS

- WASTE HANDLING RECOMMENDATIONS:** Prepare, transport, treat, store, and dispose of waste product according to all applicable local, U.S. State and U.S. Federal regulations, the applicable Canadian standards, or the appropriate standards of the nations of the European Community.
- PRECIOUS METAL RECLAMATION:** When applicable and practical, users of the product may wish to utilize precious metal reclamation services for final disposition of wastes.

## SECTION 14: TRANSPORT INFORMATION

### 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
UN1886	RESIN SOLUTION	II	3		127	Not applicable.

- CANADIAN TRANSPORTATION INFORMATION:** This product is regulated by Transport Canada as dangerous goods under Canadian transportation standards. Refer to above information.
- IATA DESIGNATION:** Regulated as dangerous goods by the International Air Transport Association.
- IMO DESIGNATION:** Regulated as dangerous goods by the International Maritime Organization.

### 14.2 ENVIRONMENTAL HAZARDS

- None described, as related to transportation.

### 14.3 SPECIAL PRECAUTIONS FOR USERS

- Not applicable.

### 14.4 TRANSPORT IN BULK

- Not applicable.

## SECTION 15: REGULATORY INFORMATION

### 15.1 SAFETY, HEALTH, AND ENVIRONMENTAL REGULATIONS SPECIFIC FOR THE SUBSTANCE OR MIXTURE.

#### OTHER IMPORTANT U.S. REGULATIONS

- U.S. SARA THRESHOLD PLANNING QUANTITY:** Not applicable.
- U.S. SARA HAZARD CATEGORIES (SECTION 311/312, 40 CFR 370-21):** Flammable Liquids; Skin Corrosion/Irritation; Serious Eye Damage/Eye Irritation; Specific target organ toxicity - repeated exposure/single exposure; Germ cell mutagenicity; Carcinogenicity; Reproductive toxicity; Aspiration hazard.



## SECTION 15: REGULATORY INFORMATION (Continued)

- **U.S. CERCLA REPORTABLE QUANTITY (RQ):** 1-Butanol = 5000 lb.; n-Butyl Acetate = 5000 lb.; Ethyl Benzene = 1000 lb.
- **U.S. SARA 313:** 1-Butanol; Ethyl Benzene, Chlorendic Acid; Cadmium Sulfide.
- **U.S. TSCA INVENTORY STATUS:** All components of this product are listed on the TSCA
- **CALIFORNIA SAFE DRINKING WATER ACT (PROPOSITION 65) STATUS:**



**WARNING:** This product can expose you to Ethyl Benzene and Chlorendic Acid and Cadmium compounds, chemicals known to the state of California to cause cancer, birth defects, and reproductive harm. For more information, go to [www.p65Warnings.ca.gov](http://www.p65Warnings.ca.gov)

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- **INTERNATIONAL REGULATIONS**

- **CANADIAN DSL/NDSL INVENTORY STATUS:** The listed components of this product are on the DSL/NDSL Inventory.
- **CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS:** The components of this product are not on the CEPA Priorities Substances Lists.

### 15.2 **CHEMICAL SAFETY ASSESSMENT.**

- No information available.

## SECTION 16: OTHER INFORMATION

### 16.1 **INDICATION OF CHANGE.**

- **ORIGINAL DATE OF ISSUE:** September 23, 2019
- **SUPERCEDES:** Not applicable.
- **CHANGE INDICATED:** Not applicable.

### 16.2 **KEY LITERATURE REFERENCES AND SOURCES FOR DATA**

- SAFETY DATA SHEETS FOR COMPONENT PRODUCTS.
- Federal OSHA Hazard Communication Standard: 29 CFR 1910.1200
- TOXNET – <http://toxnet.nlm.nih.gov/>

### 16.3 **CLASSIFICATION AND PROCEDURE USED TO DERIVE THE CLASSIFICATIONS FOR MIXTURES**

- **CLASSIFICATION:** Section 2 (Hazards Information) provides all relevant classification information used for this product. The assignments were based on data available for the component products, calculations, expert judgment, and weight of evidence.

### 16.4 **WARRANTY AND COPYRIGHT**

- **WARRANTY:** The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Krohn Industries. assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, Krohn Industries assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.
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## SECTION 16: OTHER INFORMATION (Continued)

### 16.5 ABBREVIATIONS AND ACRONYMS.

**ALL SECTIONS:** OSHA: U.S. Federal Occupational Safety and Health Administration. WHMIS: Canadian Workplace Hazardous Materials Standard. GHS: Globally Harmonized System of Classification of Chemical Substances

**SECTION 2:** 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.

**SECTION 3:** CAS Number: Chemical Abstract Service Number, which is used by the American chemical Society to uniquely identify a chemical.

**SECTION 5:** NFPA: National Fire Protection Association. NFPA FLAMMABILITY CLASSIFICATION: The NFPA uses the flash point (F.P.) and boiling point (BP) to classify flammable or combustible liquids. Class IA: F.P. below 73°F and BP below 100°F. Class IB: F.P. below 73°F and BP at or above 100°F. Class IC: F.P. at or above 73°F and BP at or above 100°F. Class II: F.P. at or above 100°F and below 140°F. Class IIIA: F.P. at or above 140°F and below 200°F. Class IIIB: F.P. at or above 200°F. NFPA HAZARDOUS MATERIALS RATING: This is a rating system used to summarize physical and health hazards to firefighters. 0 = No Significant Hazard. 1 = Slight Hazard. 2 = Moderate Hazard. 3 = Severe Hazard. 4 = Extreme Hazard.

**SECTION 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; IDLH: Immediately Dangerous to Life and Health Concentrations. *Note*: In July 1992, a court ruling vacated the more protective PELs set by OSHA in 1989. Because OSHA may enforce the more protective levels under the "general duty clause", both the current and vacated levels are presented in this document. ppm: Parts per Million. mg/m<sup>3</sup>: Milligrams per cubic meter. mppcf: Millions of Particles per Cubic Foot. BEI: Biological Exposure Limit.

**SECTION 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.

**SECTION 11:** CARCINOGENICITY STATUS: NTP: National Toxicology Program. IARC: International Agency for Research on Cancer. REPRODUCTIVE TOXICITY INFORMATION: Mutagen: Substance capable of causing chromosomal damage to cells. Embryotoxin: 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: LD<sub>xx</sub> or LC<sub>xx</sub>: 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 assess the toxicity of chemical substances to humans. TD<sub>xx</sub> or TC<sub>xx</sub>: 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.

**SECTION 12:** TLm – Median Tolerance Limit

**SECTION 13:** RCRA: Resource Conservation and Recovery Act. The regulations promulgated under this 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.

**SECTION 15:** CERCLA: Comprehensive Environmental Response Compensation and Liability Act (a.k.a. "Superfund") and SARA: (Superfund Amendment and Reauthorization Act). The regulations promulgated under this Act are located under 40 CFR 300 ff. and provide "community right-to-know" requirements. DSL/NDSL: Canadian Domestic Substances and Non-Domestic Substances Lists.