

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 THINNER**
- CHEMICAL NAME/CLASS: Solvent Mixture.

1.2 RELEVANT IDENTIFIED USES OF THE MIXTURE OR USES ADVISED AGAINST

- IDENTIFIED USE: Electroplating Operations
- 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(CHEMTEL; 24 hours)

1.4 OTHER PERTINENT INFORMATION

- This product is used as part of metal finishing and polishing processes in relatively small VOLUME. This SDS has been developed to address safety concerns affecting small volume handling situations and those involving warehouses and other workplaces where large numbers of these items are stored or distributed.

SECTION 2: HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:

REGULATION	CLASSIFICATION
US OSHA HCS CANADA WHMIS	Flammable liquids (Category 3); Acute toxicity, Oral (Category 4); Acute toxicity, Inhalation (Category 4); Skin irritation (Category 2); Eye irritation (Category 2A); Carcinogenicity (Category 2); Reproductive toxicity (Category 1B); Specific target organ toxicity - single exposure (Category 1; Immune System), Specific target organ toxicity - single exposure (Category 3, Respiratory system); Specific target organ toxicity - repeated exposure (Category 2, Inhalation; Hearing Organs, Thymus); Aspiration hazard (Category 1)

2.2 LABEL ELEMENTS:

- BASED ON GLOBALLY HARMONIZED SYSTEM

Symbol: To the right.



Signal Word: DANGER.

SECTION 2: HAZARDS IDENTIFICATION (Continued)

Hazard statement(s):

- H226: Flammable liquid and vapor.
- H304: May be fatal if swallowed and enters airways.
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H302+H312+H332: Harmful if swallowed, in contact with skin, or inhaled.
- H335: May cause respiratory irritation.
- H351 Suspected of causing cancer.
- H360: May damage fertility or the unborn child.
- H370 Causes damage to immune system.
- H373: May cause damage to organs (thymus, hearing organs) through prolonged or repeated exposure if inhaled.

Precautionary statement(s):

- 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 skin thoroughly after handling.
- P271: Use only outdoors or in a well-ventilated area.
- P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor.
- P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304 + P340 + P312: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
- P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308 + P313: If exposed or concerned: Get medical advice/ attention. P331 Do NOT induce vomiting.
- P332 + P313: If skin irritation occurs: Get medical advice/ attention.
- P337 + P313: If eye irritation persists: Get medical advice/ attention.
- P362: Take off contaminated clothing and wash before reuse.
- P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
- P403 + P233 +P235: Store in a well-ventilated place. Keep container tightly closed. Keep cool.
- P405: Store locked up.
- P501: Dispose of contents/ container to an approved waste disposal plant.

2.3 OTHER PERTINENT DATA ON CHEMICAL AND PHYSICAL HAZARDS:

- **HAZARDOUS MATERIALS IDENTIFICATION SYSTEM**

Health	2*	HMIS Personal Protective Equipment Rating: Occupational Use situations: B/C; Safety glasses and gloves/ body protection suitable to specific circumstances of use should be considered. *Respiratory irritation; Carcinogenicity; Reproductive Toxicity; Specific Target Organ Toxicity/Single and Repeated Exposure
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**

- Acute aquatic toxicity (Category 2) Chronic aquatic toxicity (Category 3).
- H401: Toxic to aquatic life. H412: Harmful to aquatic life with long lasting effects.
- P273: Avoid release to the environment.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 SUBSTANCES/MIXTURES

CHEMICAL	CAS NUMBER	GHS HAZARD CLASSIFICATION FOR CHEMICAL	% (w/w)
Methyl Cellosolve	109-86-4	Flammable liquids (Category 3); Acute toxicity, Oral (Category 4); Acute toxicity, Inhalation (Category 4); Acute toxicity, Dermal (Category 4); Reproductive toxicity (Category 1B); Specific target organ toxicity - single exposure (Category 1; Immune System), Specific target organ toxicity - repeated exposure (Category 2, Thymus)	40-60
Ethyl Benzene	100-41-4	Flammable liquids (Category 2); Acute toxicity, Inhalation (Category 4); Carcinogenicity (Category 2); Specific target organ toxicity - repeated exposure (Category 2; Hearing Organs); Aspiration hazard (Category 1); Acute aquatic toxicity (Category 2); Chronic aquatic toxicity (Category 3)	5-10
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)	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 or develop after exposure ends.

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 serious eye irritation, depending on duration of contact.

Skin Contact

May cause mild to moderate 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). Inhalation of vapors, especially in high concentrations for prolonged periods, may also cause adverse effects on the immune system, thymus, and hearing organs.

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 immune system, liver, and kidneys.

- **CHRONIC HEALTH EFFECTS:** Prolonged or repeated exposure can cause adverse effects on the reproductive system, thymus, and hearing organs.

- **TARGET ORGANS:** Skin, eyes, reproductive system, respiratory system, immune system, thymus, and hearing organs.

4.3 INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

- **RECOMMENDATIONS TO PHYSICIANS:** Treat symptoms and eliminate exposure.
- **MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:** Medical conditions impacting the target organs can be adversely impacted by overexposure to this product.

SECTION 5: FIREFIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

- **RECOMMENDED FIRE EXTINGUISHING MEDIA:** Dry Powder, Foam, Carbon Dioxide, or any other suited to flammable liquids.
- **UNSUITABLE FIRE EXTINGUISHING MEDIA:** None known.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

- **NFPA FLAMMABILITY CLASSIFICATION:** Class IC 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 (e.g., under 1 quart). 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-incidental 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-incidental 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 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

- **AIRBORNE EXPOSURE LIMITS:**

COMPONENT	ACGIH TLV	OSHA PEL	NIOSH REL	OTHER
Methyl Cellosolve	0.1 ppm TWA; Skin	25 ppm TWA; Skin	0.1 ppm TWA; Skin	IDLH: 200 ppm; CA-PEL-TWA: 5ppm;
Ethyl Benzene	20 ppm TWA	100 ppm	100 ppm TWA; 125 ppm STEL	IDLH: 800 ppm; CA-PEL-TWA: 5ppm; CA-PEL-STEL: 30 ppm
Xylenes	100 ppm TWA; 150 ppm STEL	100 ppm TWA	100 ppm TWA; 150 ppm STEL	IDLH: 900 ppm; CA-PEL-TWA: 150 ppm; CA-PEL-STEL: 300 ppm

- **BIOLOGICAL OCCUPATIONAL EXPOSURE LIMITS:** The following BEIs have been established for the following components of this product:
 - **METHYL CELLOSOLVE:** 1 mg/g creatinine; end of shift at end of work week.
 - **ETHYL BENZENE:** Sum of mandelic acid and phenylglyoxylic acid in urine; 0.15 g/g creatinine; end of shift.
 - **XYLENES:** Methylhippuric acids in urine; 0.15 g/g creatinine; end of shift.

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.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (Continued)

- **HAND PROTECTION:** Nitrile or neoprene gloves should be used. If necessary, refer to U.S. OSHA 29 CFR 1910.138, or the appropriate standards of Canada.
- **EYE PROTECTION:** Splash goggles or safety glasses. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, or the appropriate standards of Canada.
- **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

- | | |
|--|--|
| <p>(a) APPEARANCE: Clear colorless liquid.</p> <p>(b) ODOR: Strong solvent odor.</p> <p>(c) ODOR THRESHOLD: Not determined.</p> <p>(d) pH: Not applicable.</p> <p>(e) MELTING POINT/FREEZING POINT: <0 °C (<32 °F)</p> <p>(f) INITIAL BOILING POINT AND BOILING RANGE: 130-136 °C (266-275 °F).</p> <p>(g) FLASH POINT: 32.5 °C (90.5 °F)</p> <p>(h) EVAPORATION RATE (nBuAc=1): < 1</p> <p>(i) FLAMMABILITY: Class IC Flammable Liquid.</p> <p>(j) UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS: 7%/1.1% (Estimated)</p> | <p>(k) VAPOR PRESSURE (mmHg @ 20°C): Not determined.</p> <p>(l) VAPOR DENSITY (AIR = 1): 3.67 (Estimated)</p> <p>(m) RELATIVE DENSITY (water=1): 0.87</p> <p>(n) SOLUBILITY: Negligible.</p> <p>(o) PARTITION COEFFICIENT: N-OCTANOL/WATER: Not determined.</p> <p>(p) AUTO-IGNITION TEMPERATURE: Not determined.</p> <p>(q) DECOMPOSITION TEMPERATURE: Not determined.</p> <p>(r) VISCOSITY: < 1 Centipoise at (68°F) (Estimated)</p> <p>(s) EXPLOSIVE PROPERTIES: Not applicable.</p> <p>(t) OXIDIZING PROPERTIES: Not an oxidizer.</p> |
|--|--|

9.2 OTHER INFORMATION

- **VOC (less water & exempt):** Not applicable.

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; it will not undergo hazardous polymerization.

10.4 CONDITIONS TO AVOID

- Avoid contact with incompatible chemicals.

10.5 INCOMPATIBLE MATERIALS

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

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

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

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

- **ACUTE TOXICITY:**
 - **PRODUCT ESTIMATED TOXICITY:**
 - Acute Toxicity Estimate (Oral): Between 300 and 2000 mg/kg
 - Acute Toxicity Estimate (Dermal): Between 1000 and 2000 mg/kg
 - Acute Toxicity Estimate (Inhalation): Between 10 and 20 mg/L (Vapors)

SECTION 11: TOXICOLOGICAL INFORMATION

- **COMPONENT TOXICOLOGY DATA:** The following data are available for hazardous components in this product greater than 1% in concentration

METHYL CELLOSOLVE

LD50 (Oral, Rat) = 2,257 mg/
 LC50 (Inhalation, Rat) = 12.4 - 17.8 mg/l
 LD50 (Dermal, Rabbit) = 1,280 mg/kg

XYLENES

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

ETHYL BENZENE

LD50 (oral, rat) = 3500 mg/kg
 D50 (dermal-rabbit) = 15, 433 mg/kg

- **DEGREE OF IRRITATION:** Mild to serious eye or skin irritation, depending on duration of exposure.
- **SENSITIZATION:** Not reported to have skin or respiratory sensitization effects.
- **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.
- **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
Methyl Cellosolve	NO	NO	NO	NO	NO
Ethyl Benzene	2B – Possibly Carcinogenic to Humans	NO	NO	NO	EPA – D: Not Classifiable as to Human Carcinogenicity; TLV – A3: Confirmed Animal Carcinogen
Xylenes	3 - Unclassifiable	NO	NO	NO	EPA –I; Data Inadequate; TLV-A4: Not Classifiable as a Human Carcinogen

- **REPRODUCTIVE TOXICITY INFORMATION:** The following components have been reported to have reproductive effects in test animals.
 - **METHYL CELLOSOLVE:** May cause congenital malformation in the fetus. Presumed human reproductive toxicant. May cause reproductive disorders.
- **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:** Respiratory system; immune system.
- **SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE:** Thymus.
- **ASPIRATION HAZARD:** This product presents an aspiration hazard. It may cause life-threatening lung damage 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 is harmful to contaminated terrestrial plants or animals.
- Based on available data, this product is harmful or fatal to contaminated aquatic plants or animals.
- This product is classified as Acute aquatic toxicity (Category 2) Chronic aquatic toxicity (Category 3).
- There are the following aquatic toxicity data available for components of this product that are over 1 percent in concentration.

METHYL CELLOSOLVE

LC50: > 500 mg/L, 96 hours static (Leuciscus idus)
LC50: = 16000 mg/L, 96hours; static (Oncorhynchus mykiss)
LC50: = 10000 mg/L, 96 hours static (Lepomis macrochirus)
LC50: = 9650 mg/L, 96 hours static (Lepomis macrochirus)

ETHYL BENZENE

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

ETHYL BENZENE (Continued)

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

XYLENES

LC50: = 15700 µg/L, 96 hours (Lepomis macrochirus)
LC50: = 19000 µg/L, 96 hours (Lepomis macrochirus) LC50: = LC%): = 13400 µg/L, 96 hours (Pimephales promelas)
LC50: = 16940 µg/L, 48 hours (Carassius auratus)
EC50: = 90 mg/L, 96 hours (Cypris subglobosa)
LC50: = 8.5 ppm/L, 46 hours (Palamonetes pugio)

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. The following data are available for components of this product:
 - **METHYL CELLOSOLVE:** Aerobic - Exposure time 20 days. Result: 88 % - Readily biodegradable

12.3 BIOACCUMULATIVE POTENTIAL

- The components of this product are not anticipated to bioaccumulate in any significant quantities. The following data are available for components of this product:
 - **METHYL CELLOSOLVE:** No bioaccumulation is to be expected (log Pow <= 4).

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.

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, or the applicable Canadian standards.


13.2 DISPOSAL CONSIDERATIONS

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

SECTION 14: TRANSPORT INFORMATION

14.1 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
UN1993	Flammable liquids, n.o.s. (Methyl Cellosolve, Xylenes)	III	3		128	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 PRODUCT

- **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; Acute Toxicity; Skin Corrosion/Irritation; Eye Damage/ Irritation; Carcinogenicity. Reproductive toxicity; Specific target organ toxicity – single and repeated exposure
- **U.S. CERCLA REPORTABLE QUANTITY (RQ):** Xylenes = 100 lb.; Ethyl Benzene = 1000 lb.
- **U.S. SARA 313:** Xylenes, Methyl Cellosolve; Ethyl Benzene
- **U.S. TSCA INVENTORY STATUS:** All components of this product are listed on the TSCA Inventory.
- **CALIFORNIA SAFE DRINKING WATER ACT (PROPOSITION 65) STATUS:**



WARNING: This product can expose you to Ethyl Benzene, a chemical known to the state of California to cause cancer. For more information, go to www.p65Warnings.ca.gov

- **INTERNATIONAL REGULATIONS**

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

15.2 CHEMICAL SAFETY ASSESSMENT.

- No information available.

SECTION 16: OTHER INFORMATION

16.1 INDICATION OF CHANGE.

- **ORIGINAL DATE OF ISSUE:** May 6, 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
- SAX – Dangerous Properties of Industrial Materials
- RTECS – Registry of Effects of Toxic Chemicals

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.
- **COPYRIGHT** - © 2019 by Krohn Industries

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.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. 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/m³: Milligrams per cubic meter. mppcf: Millions of Particles per Cubic Foot. BEI: Biological Exposure Limit. CA: California Permissible Exposure Limits for Chemical Contaminants.

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_{xx} or LC_{xx}: 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_{xx} or TC_{xx}: 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: T_{lm} – 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.