# 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 2024) 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: RUST PREVENTER**

### 1.2 PRODUCT USE AND RESTRICTIONS

- **IDENTIFIED USE:** Various metal-working and finishing applications.
- **IDENTIFIED USERS:** For sale to, use and storage by personnel trained in handling product safely.

### 1.3 MANUFACTURER INFORMATION

- **MANUFACTURER/SUPPLIER: JAX CHEMICAL COMPANY**
- **ADDRESS:** 640 South Fulton Avenue, Mount Vernon, NY 10550
- **BUSINESS PHONE:** 914-668-1818 (Monday – Friday, 9:00 am – 5:00 pm)
- **EMERGENCY PHONE:** 1-800-535-5053 (INFOTRAC; U.S. & Canada; 24 hours)
  +1-352-323-3500 (INFOTRAC; International)

### 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

- Skin irritation (Category 2); Eye damage/irritation (Category 2A)

### 2.2 LABEL ELEMENTS

- **Hazard Pictograms:**
- **Signal Word:** WARNING
- **Hazard Statements:** Causes serious eye irritation. Causes skin irritation.
- **Precautionary Statements**
  - **Prevention:** Keep out of reach of children. Read label before use. Wash exposed skin thoroughly after handling. Wear eye protection/face protection and gloves.
  - **Response:** 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 ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminating clothing and wash it before reuse.
  - **Storage:** None specified. Refer to Section 7 for additional details.
  - **Disposal:** Dispose of contents/container in accordance with local, city, state, and national regulations.

## SECTION 2: HAZARDS IDENTIFICATION (Continued)

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

- **Product Aquatic Toxicity:** Aquatic Toxicity - Acute (Category 3). Harmful to aquatic life. Avoid release to the environment.

## SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1 INDENTIFICATION OF HAZARDOUS SUBSTANCES IN PRODUCT

| COMPONENT | CAS NUMBER | GHS HAZARD CLASSIFICATION | % (w/w) |
|---|---|---|---|
| Ammonia | 7664-41-7 | Skin irritation (Category 2); Eye irritation (Category 2A); Aquatic toxicity, chronic (Category 3) at this concentration. | 1.0-5.0% |
| Isopropyl Alcohol | 67-63-0 | Flammable liquids (Category 2), Eye irritation (Category 2A), Specific target organ toxicity - single exposure (Category 3, Central nervous system) | 0.1-5.0% |
| Aqueous solution, with components that do not present physical, health, or environmental effects at the concentrations present in this product. All ingredients are listed per the requirements of regulations pertinent to Safety Data Sheet requirements under various regulations. | | | Balance |

## SECTION 4: FIRST AID MEASURES

### 4.1 DESCRIPTION OF FIRST AID MEASURES

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

| AREA EXPOSED | TREATMENT |
|---|---|
| **Eye Contact:** | Flush with copious amounts of water for 15 minutes. "Roll" eyes during flush. Seek medical attention if irritation persists. |
| **Skin Contact:** | Flush area with warm, running water for several minutes. Seek medical attention if irritation persists or there is skin tissue damage. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Seek medical attention if irritation persists. |
| **Inhalation:** | Obtain fresh air. Seek medical attention if irritation persists or symptoms continue after exposure ends. |
| **Ingestion:** | 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:** | Wash clothing after reuse. |

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

- **ACUTE HEALTH EFFECTS:**

| AREA EXPOSED | EFFECTS |
|---|---|
| **Eye Contact:** | Causes serious irritation to the eyes. |
| **Skin Contact:** | Can cause mild to moderate irritation of the skin, depending on duration of exposure. |
| **Inhalation:** | May be mildly irritating to the respiratory system; inhalation of sprays, mists, and vapors can cause coughing and nasal congestion. |
| **Ingestion:** | May be mildly irritating to the digestive system; ingestion may cause nausea, vomiting, and diarrhea. |

- **CHRONIC HEALTH EFFECTS:** None reported.
- **TARGET ORGANS:** Skin and eyes.

### 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:** Water Spray, Water Jet, Dry Powder, Foam, Carbon Dioxide, Halon, or any other.
- **UNSUITABLE FIRE EXTINGUISHING MEDIA:** None known.

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

- **NFPA FLAMMABILITY CLASSIFICATION:**

**NFPA Rating:**


**NFPA Hazard Classification:** Not flammable.

- **UNUSUAL HAZARDS IN FIRE SITUATIONS:**

| POTENTIAL HAZARD | DESCRIPTION FOR PRODUCT |
|---|---|
| **Decomposition:** | Generates extremely irritating vapors, ammonia, carbon oxides, and nitrogen compounds. |
| **Incompatibilities:** | See Section 10 (Reactivity and Stability). |
| **Explosion Sensitivity to Mechanical Impact:** | Not applicable. |
| **Explosion Sensitivity to Static Discharge:** | Not applicable. |

### 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-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.
- **RESPONSE PROCEDURES FOR ANY RELEASE:** Absorb spilled liquid with polypads or other suitable absorbent materials. 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:** Follow good chemical hygiene practices. Do not smoke, drink, eat, or apply cosmetics in the chemical use area. Avoid inhalation of vapors, mists, and sprays. Use in well-ventilated area. Avoid contact with skin or eyes. Remove contaminated clothing promptly. Clean up spilled product immediately.

## SECTION 7: HANDLING AND STORAGE

- **HANDLING PRACTICES:** Employees must be appropriately trained to use this product safely as needed. Keep containers closed when not in use.

### 7.2 CONDITIONS FOR SAFE STORAGE

- **STORAGE PRACTICES:** 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. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. Empty containers may contain residual liquid; therefore, empty containers should be handled with care.
- **INCOMPATIBILITIES:** See Section 10 (Stability and Reactivity).

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 CONTROL PARAMETERS

- **AIRBORNE EXPOSURE LIMITS:**
- **U.S. NATIONAL EXPOSURE LIMITS:**

| COMPONENT | ACGIH TLV | OSHA PEL | NIOSH REL | OTHER |
|---|---|---|---|---|
| Ammonia | TWA= 25 ppm; STEL = 35 ppm | TWA= 50 ppm | TWA= 25 ppm; STEL = 35 ppm | NE |
| Isopropyl Alcohol | TWA= 200 ppm; STEL = 400 ppm | 400 ppm | TWA= 400 ppm; STEL = 500 ppm | NE |

- **BIOLOGICAL OCCUPATIONAL EXPOSURE LIMITS:** The following Biological Exposure Indices are available for components of this product:
  - **Isopropyl Alcohol:** Acetone in urine: End of shift and end of workweek: 40 mg/L.

### 8.2 EXPOSURE CONTROLS

- **ENGINEERING CONTROLS:** Ensure area has adequate ventilation.
- **RESPIRATORY PROTECTION:** None normally required during use with 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).
- **BODY PROTECTION:** Body protection appropriate to task; use a rubber apron if splashes or sprays can be generated.

### 8.3 PERSONAL PROTECTIVE EQUIPMENT SYMBOLS

**Hand Protection** 

**Eye/Face Protection** 

**Body Protection.** 

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

- **APPEARANCE AND DISTINGUISHING CHARACTERISTICS:**

| PROPERTY | DATA |
|---|---|
| **State:** | Liquid. |
| **Color:** | Light amber. |
| **Odor:** | Slight ammonia. |
| **Odor Threshold:** | Not applicable. |
| **pH:** | 10.7 |

- **PHYSICAL DATA:**

| PROPERTY | DATA |
|---|---|
| **Melting Point/Freezing Point:** | Approximately 0°C (32 °F). |
| **Initial Boiling Point/Boiling Range:** | Approximately 100°C (212 °F). |
| **Flash Point:** | Not applicable. |
| **Evaporation Rate (Water = 1):** | Approximately 1.0. |
| **Flammability:** | Not applicable. |

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| **Upper/Lower Explosive Limits** | Not applicable. |
| **Vapor Pressure:** | Not determined. |
| **Vapor Density** | Not determined. |
| **Relative Density (Density):** | Approximately 1.0 |
| **Solubility:** | Soluble in water. |
| **Partition Coefficient/n-octanol/water:** | Not determined. |
| **Autoignition Temperature:** | Not applicable. |
| **Decomposition Temperature:** | Not determined. |
| **Kinematic Viscosity:** | Not determined. |
| **Particle Characteristics:** | Not applicable. |

**9.2 OTHER USEFUL INFORMATION ON PROPERTIES**

- **VOC (less water & exempt):** < 60.0 g/L **VOC % By WEIGHT:** < **6**.0%.

## 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 (INCLUDING THOSE ASSOCIATED WITH FORSEEABLE EMERGENCY)**

- 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.

**10.4 INCOMPATIVLE MATERIALS**

- Strong oxidizing agents, strong acids, strong bases, water reactive materials.

**10.5 HAZARDOUS DECOMPOSITION PRODUCTS**

- Thermal decomposition of this product generates ammonia, nitrogen oxides, and carbon oxides.

## 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) > 2000 mg/kg
  - Acute Toxicity Estimate (Dermal) > 2000 mg/kg
  - Acute Toxicity Estimate (Inhalation) > 10 mg/L
- **SUBSTANCE TOXICOLOGY DATA:** The following data are available for the hazardous components in this product listed in Section 3 (Composition/Information on Ingredients).

**AMMONIA**
LD50 (Oral, Rat) = 350 mg/kg
TC Lo (Inhalation, Human) = 43 mg/kg
Acute Inhalation, TC Lo (Man) = 408ppm

**ISOPROPYL ALCOHOL**
LD50 (Oral, Rat) = 5045 mg/kg
LD50 (Skin, Rabbit) = 12870 mg/kg
LC50 (Inhalation, Rat) = 73 mg/L/hour

- **DEGREE OF IRRITATION:** The product can cause serious eye irritation and mild skin irritation.
- **SENSITIZATION:** No component is reported to be a skin or respiratory 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:** Can cause serious eye irritation. Symptoms can include redness and pain.
  - **Skin:** Can cause mild to moderate skin irritation, especially upon prolonged contact. Symptoms can include pain, redness, and itching.
  - **Inhalation:** May be mildly irritating to the respiratory system; inhalation of sprays, mists, and vapors can cause coughing and nasal congestion.
  - **Ingestion:** May be mildly irritating to the digestive system; ingestion may cause nausea, vomiting, and diarrhea.

## SECTION 11: TOXICOLOGICAL INFORMATION (Continued)

**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.

| CHEMICAL | IARC | NTP | NIOSH | OSHA | OTHER |
|---|---|---|---|---|---|
| Ammonia | NO | NO | NO | NO | NO |
| Isopropyl Alcohol | IARC-3: Not Classifiable | NO | NO | NO | TLV-A4: Not Classifiable as to Human Carcinogenicity |

- **REPRODUCTIVE TOXICITY INFORMATION: This** product is not reported to cause adverse reproductive effects upon normal circumstances of use and handling.
- **MUTAGENIC EFFECTS:** This product is not reported to cause adverse mutagenic effects upon normal circumstances of use and handling.
- **SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE:** Not applicable.
- **SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE:** Not applicable.
- **ASPIRATION HAZARD:** Not applicable.

**11.3 OTHER USEFUL TOXICOLOGY INFORMATION**

- **TOXICOLOGICALLY SYNERGISTIC PRODUCTS:** None known.
- **ADDITIONAL TOXICOLOGY:** None known.

## SECTION 12: ECOLOGICAL INFORMATION

**12.1 ENVIRONMENTAL TOXICITY**

- Based on available data, this product is harmful or fatal to contaminated terrestrial plants or animals.
- Based on the components and their concentrations, this product is rated as Acute Aquatic Toxicity (Category 1) and Chronic Aquatic Toxicity (Category 2).
- The following aquatic toxicity data are available for components of this product:

**AMMONIA**

LC50 (Crustacea, Daphnia magna) = 0.66mg/L/48 hours

**ISOPROPYL ALCOHOL**

LC50 (Rasbora heteromorpha) =4200 mg/L (96 hours; Flow-through system)
EC50 (Daphnia magna) = > 10000 mg/L (48 hous)
LC50 (Pimephales promela) = 640 mg/L (96 hours, Lethal)
Threshold Limit > 1000 mg/l (72 hours; Scenedesmus subspicatus; Growth rate)

Threshold Limit = 1800 mg/l (72 hours; Algae; Cell numbers

**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:
    - **Isopropyl Alcohol:** Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. No (test)data on mobility of the substance available. Biological Oxygen Demand = 1.19 g $O^2$/g substance. Chemical Oxygen Demand: 2.23 g $O^2$/g substance.

**12.3 BIOACCUMULATIVE POTENTIAL**

- No data available.

**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 TREAMENT 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:** Not 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 TRANSPORATION 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 |
|---|---|---|---|---|---|---|
| NOT APPLICABLE | | | | | | |

- **LIMITED QUANTITY EXCEPTIONS [49 CFR 173.154(b)]**: Not applicable.
- **CANADIAN TRANSPORTATION INFORMATION**: This product is not regulated by Transport Canada as dangerous goods under Canadian transportation standards. Refer to above information.
- **IATA DESIGNATION**: This product is not regulated as dangerous goods by the International Air Transport Association.
- **IMO DESIGNATION**: This product is not regulated as dangerous goods by the International Maritime Organization.

### 14.2 ENVIRONMENTAL HAZARDS

- Not applicable, based on the product composition and volume of packaging.

### 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**: Ammonia (500 lb.).
- **U.S. SARA HAZARD CATEGORIES (SECTION 311/312, 40 CFR 370-21):** ACUTE: Skin Corrosion/Irritation; Eye Damage/Irritation.
- **U.S. CERCLA REPORTABLE QUANTITY (RQ):** Ammonia (100 lb.).
- **U.S. SARA 313:** The following components of this product are subject to Title III Section 313 reporting: Ammonia.
- **U.S. TSCA INVENTORY STATUS:** All components of this product are listed on the TSCA Inventory.
- **US CLEAN AIR ACT (SECTION 112r):** Not applicable.

## SECTION 15: REGULATORY INFORMATION (Continued)

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

- **CALIFORNIA SAFE DRINKING WATER ACT (PROPOSITION 65) STATUS:** Not applicable.
- **STATE HAZARDOUS SUBSTANCES LIST:**

| COMPONENT | NJ Right to Know | PA Right to Know | MA Right to Know | OTHER |
|---|---|---|---|---|
| Ammonia | LISTED | LISTED | LISTED | LISTED: RI |
| Isopropyl Alcohol | LISTED | LISTED | LISTED | LISTED: RI |

### 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.
  - **WHIMS 2015:** See Section 2.
  - This SDS contains all the information required by the HPR.
- **CANADIAN DSL/NDSL INVENTORY STATUS:** 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 in the form specified. (Ammonia in the aquatic environment is listed on Priority Substances List 2).

## SECTION 16: OTHER INFORMATION

### 16.1 INDICATION OF CHANGE

- **DATE OF REVISION:** October 4, 2024
- **SUPERCEDES**: April 5, 2019
- **CHANGE INDICATED:** Update of document for compliance with 2024 US OSHA Hazard Communication standard. Review and update of data, based on currently available information.

### 16.2 HAZARDOUS MATERIALS SYSTEM RATING

| | |
|---|---|
| **Health** | **1** |
| **Flammability** | **0** |
| **Physical Hazard** | **0** |
| **Protective Equipment** | **B/C** |

(Personal Protective Equipment Rating: Occupational Use situations: B: Gloves/safety goggles-safety glasses with side shields; C: Add body protection if splashes/sprays can be generated.

### 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 (Fl.P.) and boiling point (BP) to classify flammable or combustible liquids. Class IA: Fl.P. below 73°F and BP below 100°F. Class IB: Fl.P. below 73°F and BP at or above 100°F. Class IC: Fl.P. at or above 73°F and BP at or above 100°F. Class II: Fl.P. at or above 100°F and below 140°F. Class IIIA: Fl.P. at or above 140°F and below 200°F. Class IIIB: Fl.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. $mg/m^3$: 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: 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 access 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.

**12** EC50: Effect Concentration (on 50% of study group); BOD: Biological Oxygen Demand. TLM: Threshold Limit, Median.

**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

JAX CHEMICAL COMPANY

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