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), the American National Standards Institute (Z400.1, 1998), and equivalent state Standards. It has also been developed in accordance with the Canadian Workplace Hazardous Materials Standard and the United Nations Globally Harmonized System of Classification of Chemicals, as well as European Union requirements under REACH (Registration, Evaluation, Authorization and Restriction of Chemical substances, per EC 1907/2006) and Directive 91/155/EC. 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: **ELECTROKING**
- SYNONYMS: Not applicable
- CHEMICAL NAME/CLASS: Salt Mixture
- PRODUCT CODE(s): 45.202; 45.203

1.2 RELEVANT IDENTIFIED USES OF THE MIXTURE OR USES ADVISED AGAINST

- IDENTIFIED USE: Metal Plating**.**
- USES ADVISED AGAINST: None Specified

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

- DISTRIBUTED BY: **GROBET FILE CO. OF AMERICA, INC.**
- ADDRESS 750 Washington Ave.; Carlstadt, NJ 07072
- BUSINESS PHONE: 201-939-6700; Toll Free – 800-847-4188 (USA only)
- EMERGENCY PHONE: 1-800-255-3924 (9 am – 5 pm EST)

1.4 OTHER PERTINENT INFORMATION

- This product is sold in relatively small quantities. 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
OSHA HAZARD COMMUNICATION (GHS)	Skin Corrosion/Irritation - Category 2, Serious Eye Damage, Eye Irritation - Category 2A, Acute Toxicity - Category 4

SECTION 2: HAZARDS IDENTIFICATION (Continued)

3.1 LABEL ELEMENTS:

- OSHA/CLP – BASED ON GLOBALLY HARMONIZED SYSTEM

Symbol: To the right.

Signal Word: Warning.

Hazard statement(s)

- Harmful if swallowed. Causes skin irritation. Causes serious eye irritation.

Precautionary statement(s)

- Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.
- IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. If eye irritation persists: Get medical advice or attention. Call a POISON CENTER if you feel unwell.
- Store locked up.
- Dispose of contents/ container to an approved waste disposal plant.

3.2 OTHER PERTINENT DATA ON CHEMICAL AND PHYSICAL HAZARDS:

- **HAZARDOUS MATERIALS IDENTIFICATION SYSTEM**

Health	**2**
Flammability	**0**
Physical Hazard	**0**
Protective Equipment	**B/C**

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.

- **CANADIAN REGULATORY STATUS**
  - This product is classified as hazardous under Canadian Controlled Products regulations (SOR-88-66). **WHMIS 2015:** See previous section**. Pre-2015 WHMIS:** D2-B: Materials Causing Other Toxic Effects/Toxic Material

  - This SDS contains all the information required by the CPR.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1/3.2 SUBSTANCES/MIXTURES

COMPONENT	CAS NUMBER	EINECS #	GHS HAZARD CLASSIFICATION	% (w/w)
Soluble Silicate	Proprietary[1]	Proprietary	Corrosive to metals (Category 1), Skin corrosion (Category 1B), Serious eye damage (Category 1), Specific target organ toxicity - single exposure (Category 3, Respiratory system)	25-35%
Chelating Agent			Not Established	1-10%
Surfactant			Not Established	< 1%
Sodium Phosphate Derivative			Not Established	Balance

[1]The exact identity of the compounds and the percentage of composition have been withheld as a trade secret. All relevant physical and health hazards have been declared, in accordance with regulatory requirements.

SECTION 4: FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

Eyes: Flush with copious amounts of water for 15 minutes. "Roll" eyes during flush. Seek medical attention immediately. **Skin:** Flush area with warm, running water for 15 minutes. **Inhalation**: If dusts of this product are inhaled, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. I**ngestion:** Contact a Poison Control Center or physician for instructions. If professional advice is not available, do not induce vomiting. Victim should drink milk, egg whites, or large quantities of water. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow.

4.2 MOST IMPORTANT ACUTE AND CHRONIC EXPOSURE SYMPTOMS

- **ACUTE:** Contact can cause mild to severe eye or skin irritation, depending on point of contact and duration of exposure. Eye contact can cause redness, pain, and tearing. Skin contact can result in redness and irritation. Prolonged or repeated skin contact can result in dermatitis. If the product is swallowed, irritation of the mouth, throat, and other tissues of the gastro-intestinal system will occur. Ingestion of large amounts can cause severe irritation, pain, vomiting, and diarrhea and may damage tissues of the digestive system. Phosphates (e.g., Sodium Phosphate Derivative, the main component of this product) are slowly and incompletely absorbed when ingested, and seldom result in systemic effects. If ingested in very large volume, phosphates can sequester calcium, which may result in blood chemistry changes, heart disturbances, and central nervous system effects. Overexposure to dusts of this product causes irritation to the respiratory tract. Symptoms of such exposure can cause coughing, wheezing, and inflammation of the tissues of the nose, throat, and other respiratory system organs. Prolonged/repeated overexposures to dusts can lead to severe irritation and damage to the tissues of the respiratory system.
- **CHRONIC:** Prolonged or repeated skin contact may result in dermatitis. Long-term ingestion or inhalation of significant amounts of this product may result in systemic phosphorus poisoning. Liver damage, kidney problems, jaw/tooth abnormalities, blood disorders and cardiovascular effects may result.
- **TARGET ORGANS:** Acute - eyes, skin, respiratory system. Chronic – skin, respiratory system.

4.3 INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

- **RECOMMENDATIONS TO PHYSICIANS**: Treat symptoms and eliminate exposure.
- **MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:** Eye, skin disorders, respiratory disorders.

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: Not flammable.

UNUSUAL HAZARDS IN FIRE SITUATIONS: This product is non-combustible. This product does not significantly contribute to the intensity of a fire. Use extinguishing material suitable to the surrounding fire.

Sensitivity to Mechanical Impact: Not sensitive. Explosion Sensitivity to Static Discharge: Not sensitive.

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 kg). 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 solid or clean-up procedures that generate substantial amounts of dust.
- **RESPONSE TO NON-INCIDENTAL RELEASES:** For large-scale 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 a HEPA filter. Level B protection should be used when oxygen levels are below 19.5% or are unknown.
- **RESPONSE PROCEDURES FOR ANY RELEASE**: Wipe up solid residue with damp polypads or sponge. Rinse area with soap/water solution followed by a water rinse. Alternatively a broom/dustpan can be used for removing spilled solid; these items should be discarded or rinsed thoroughly with water before returning to service.

6.2 ENVIRONMENTAL PRECAUTIONS

- Avoid response actions that can cause a release of a significant amount of the substance (1 kg or more) 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 dusts. 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. When mixing this product with water, slowly add the product to the water, to prevent splattering. Keep containers closed when not in use.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

- **STORAGE RECOMMENDATIONS:** 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.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

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

COMPONENT	ACGIH TLV	OSHA PEL (ppm)	NIOSH REL (ppm)	OTHER
Sodium Phosphate Derivative (as particulates, not otherwise classified)	10 mg/m^3 TWA (inhalable particles, recommended); 3 mg/m^3 TWA (respirable particles, recommended)	15 mg/m^3 TWA (total dust); 5 mg/m^3 TWA (respirable fraction)	5 mg/m^3	NE

- **BIOLOGICAL OCCUPATIONAL EXPOSURE LIMITS:** There are no Biological Exposure Indices (BEIs) for components of this product.

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 dusts. For situations in which significant amounts of dusts could be generated, wear an air-purifying respirator with a high-efficiency particulate filter.
- **HAND PROTECTION:** Neoprene gloves should be used. Use triple gloves for spill response, as stated in Section 6 (Accidental Release Measures) of this SDS.
- **EYE PROTECTION:** Splash goggles or safety glasses
- **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

(a) APPEARANCE: White solid.
(b) ODOR: Odorless.
(c) ODOR THRESHOLD: Not determined.
(d) pH: 11.3 (6% w/w solution in water).
(e) MELTING POINT/FREEZING POINT: Not determined.
(f) INITIAL BOILING POINT AND BOILING RANGE: Not applicable.
(g) FLASH POINT: Not applicable.
(h) EVAPORATION RATE (water=1): Not applicable.
(i) FLAMMABILITY: Not flammable.
(j) UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS: Not applicable.
(k) VAPOR PRESSURE (mmHg @ 20˚C): Not applicable.
(l) VAPOR DENSITY: Not applicable.
(m) RELATIVE DENSITY (water=1): Not determined
(n) SOLUBILITY: Soluble.
(o) PARTITION COEFFICIENT: N-OCTANOL/WATER: Not determined.
(p) AUTO-IGNITION TEMPERATURE: Not applicable.
(q) DECOMPOSITION TEMPERATURE: Not determined.
(r) VISCOSITY: Not applicable.
(s) EXPLOSIVE PROPERTIES: Not applicable.
(t) OXIDIZING PROPERTIES: Not an oxidizer.

9.2 OTHER INFORMATION

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

SECTION 10: STABILITY AND REACTIVITY

10.1 REACTIVITY

- Not reactive under typical conditions of use or handling; contact with water can generate some amount of heat.

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 can release heat upon contact with water.
- This product 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 oxidizers, strong acids and water-reactive substances.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

- Products of thermal decomposition of this product can include carbon monoxide, carbon dioxide and compounds of sodium and phosphorous.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

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

SODIUM PHOSPHATE DERIVATIVE:
Oral-Rat LD50: 4000 mg/kg
Intraperitoneal-Rat LD50: 59 mg/kg
Intravenous-Rat LD50: 100 mg/kg
Oral-Mouse LDLo: 40 mg/kg
Intraperitoneal-Mouse LD50: 380 mg/kg
Subcutaneous-Mouse LD50:400 mg/kg
Intravenous-Mouse LD50: 69 mg/kg
Intravenous-Rabbit, adult LDLo:50 mg/kg

CHELATING AGENT
Oral - Rat – LD50 > 2,000 mg/kg

SOLUBLE SILICATE
Skin-Human 250 mg/24H: Severe irritation effects
Skin-Rabbit, adult 250 mg/24H: Severe irritation effects

SOLUBLE SILICATE (Continued)
Skin-Guinea Pig, adult 250 mg/24H:
Skin-Human 250 mg/24H: Severe irritation effects
Skin-Rabbit, adult 250 mg/24H: Severe irritation effects
Skin-Guinea Pig, adult 250 mg/24H: Moderate irritation effects
Oral-Rat LD50: 1153 mg/kg
Oral-Mouse LD50: 770 mg/kg
Oral-Dog, adult LDLo: 250 mg/kg
Oral-Pig LDLo: 250 mg/kg
Intraperitoneal-Guinea Pig, adult LDLo: 200 mg/kg
Oral-Dog, adult LDLo: 250 mg/kg
Oral-Pig LDLo: 250 mg/kg
Intraperitoneal-Guinea Pig, adult LDLo: 200 mg/kg
S

  - **DEGREE OF IRRITATION:** Mild to severe, 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 severe irritation.
    - **SKIN**: Can cause mild to severe irritation.
    - **INHALATION:** Dusts of this product can cause mild to severe nasal irritation.
    - **INGESTION:** Although not anticipated to be a significant route of occupational over-exposures, ingestion of this product may irritate the mouth, throat, and other contaminated tissue and cause other adverse health effects.

SECTION 11: TOXICOLOGICAL INFORMATION (Continued)

- **CHRONIC TOXICITY:**
  - **CARCINOGENICITY STATUS:** Not established.
  - **REPRODUCTIVE TOXICITY INFORMATION:** The components of this product are not reported to cause reproductive effects under typical circumstances of exposure at the concentrations present in this product. The following components have been reported to have reproductive effects in test animals.
    - **SOLUBLE SILICATE.** Oral-Rat TDLo:15 g/kg (14W male/14W pre-3W post): Reproductive effects; Oral-Rat TDLo:15 g/kg (14W male/14W pre-3W post):Reproductive effects
  - **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:** Not applicable.
  - **SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE:** Not applicable.
- **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.
- Based on available data, this product can be harmful or fatal to contaminated aquatic plants or animals.

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.

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 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.

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

14.1 DANGEROUS GOODS BASIC DESCRIPTION AND OTHER TRANSPORT INFORMATION

- This material is not hazardous for shipment, per the Hazardous Materials Regulations or Dangerous Goods Codes. Please contact the manufacturer if there are questions pertinent to the shipment of this product.

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 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):** ACUTE: Yes; CHRONIC: No; FIRE: No; REACTIVE: No; SUDDEN RELEASE: No
  - **U.S. CERCLA REPORTABLE QUANTITY (RQ):** Not applicable.
  - **U.S. TSCA INVENTORY STATUS:** All components of this product are listed on the TSCA Inventory.
  - **US SARA 313:** Not applicable.
  - **CALIFORNIA SAFE DRINKING WATER ACT (PROPOSITION 65) STATUS:** Not applicable.
- **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.

SECTION 16: OTHER INFORMATION

16.1 INDICATION OF CHANGE.

- **CHANGE INDICATED:** Update per OSHA Hazard Communication Standard (29 CFR 1910.1200).
- **DATE OF PUBLICATION:** August 24, 2015
- **SUPERCEDES:** Not applicable.

16.2 KEY LITERATURE REFERENCES AND SOURCES FOR DATA

- SAFETY DATA SHEETS FOR COMPONENT PRODUCTS.
- SAX – Dangerous Properties of Industrial Materials
- RTECS – Registry of Effects of Toxic Chemicals
- ECHA: European Chemical Hazards Agency http://echa.europa.eu/en/information-on-chemicals/
- TOXNET: http://toxnet.nlm.nih.gov/

16.3 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. REACH: European Union regulation, Registration, Evaluation, Authorization and Restriction of Chemical substances.

SECTION 2: CAS Number: Chemical Abstract Service Number, which is used by the American chemical Society to uniquely identify a chemical. EINECS: European Inventory of Existing Commercial Substances.

SECTION 3: 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 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. 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^3: Milligrams per cubic meter. mppcf: Millions of Particles per Cubic Foot. BEI: Biological Exposure Limit. EL: Exposure Limit (United Kingdom). Federal Republic of Germany (DFG) Maximum Concentration Values in the Workplace (MAKs)

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 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.

SECTION 12: TLm – Median Tolerance Limit

SECTION 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.

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.