

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. 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: **TIX SOLDER**
- SYNONYMS: Tin Mixture
- CHEMICAL NAME/CLASS: Metallic Solid
- PRODUCT CODE: 54.808 (3" sticks)

1.2 RELEVANT IDENTIFIED USES OF THE MIXTURE OR USES ADVISED AGAINST

- IDENTIFIED USE: Soldering operations.
- 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)	Carcinogenicity (Category 2); Reproductive toxicity (Category 2)

2.2 LABEL ELEMENTS:

- OSHA/CLP – BASED ON GLOBALLY HARMONIZED SYSTEM

Symbol: To the right.

Signal Word: Warning.

Hazard statement(s)

Suspected of causing cancer. Suspected of damaging fertility or the unborn child.



SECTION 2: HAZARDS IDENTIFICATION (Continued)

Precautionary statement(s)

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. If exposed or concerned: Get medical advice/ attention.

STORAGE: Store locked up.

DISPOSAL: 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. *Reproductive Toxicity/Carcinogenicity
Flammability	0	
Physical Hazard	0	
Protective Equipment	B/C	

CANADIAN REGULATORY STATUS

- This product is classified as hazardous under Canadian Controlled Products regulations (SOR-88-66). It is classified D2-A: Materials Causing Other Toxic Effects/Very Toxic.
 - This SDS contains all the information required by the CPR.



SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 SUBSTANCES/MIXTURES

COMPONENT	CAS NUMBER	GHS HAZARD CLASSIFICATION FOR COMPONENT	% (w/w)
Tin	7440-31-5	Not classified as hazardous (In form provided).	> 99
Lead	7439-92-1	Acute toxicity, Oral (Category 4); Carcinogenicity (Category 2); Reproductive toxicity (Category 2); Specific target organ toxicity - repeated exposure (Category 2); Acute aquatic toxicity (Category 1); Chronic aquatic toxicity (Category 1).	< 1
Indium	7440-74-6	Not classified as hazardous (In form provided).	< 1
The remaining components of this product are not classified as hazardous in their existing concentrations.			Balance

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 if symptoms continue. **Skin:** Flush area with warm, running water for 15 minutes. Seek medical attention if symptoms develop and/or continue. **Inhalation:** If dusts or fumes of this product are inhaled, remove victim to fresh air. Seek medical attention if symptoms continue. **Ingestion:** 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:** May cause mild to serious irritation of the eye if exposed to dusts or fumes. May cause tearing, or burning of the eyes, but only due to mechanical irritation.
- CHRONIC:** Lead, a component of this metal solder product, is a suspected human carcinogen and reproductive toxin.
- TARGET ORGANS:** Acute - eyes. Chronic – Reproductive system.

SECTION 4: FIRST AID MEASURES (Continued)

4.3 INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

- **RECOMMENDATIONS TO PHYSICIANS:** Treat symptoms and eliminate exposure.
- **MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:** Disorders associated with the target organs may be aggravated after either acute or chronic exposures.

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. It will not 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. Wear gloves, safety glasses when cleaning-up spills.
- **RESPONSE TO NON-INCIDENTAL RELEASES:** In the event of a non-incident release (more than 10 lb in which particulates may be generated), minimum personal protective equipment should be **Level C: triple-gloves, chemical resistant apron, boots, and splash goggles and an Air-Purifying respirator with high efficiency particulate filter**. Sweep-up spilled solid carefully, or mop-up with damp sponge or pad. If necessary, triple-rinse contaminated area or items with water.
- **RESPONSE PROCEDURES FOR ANY RELEASE:** Sweep-up spilled material.

6.2 ENVIRONMENTAL PRECAUTIONS

- Avoid response actions that can cause a release of a significant amount of the substance (10 lb or more) into the environment.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

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

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

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

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

COMPONENT	ACGIH TLV	OSHA PEL	NIOSH REL	OTHER
Tin, metal	2mg/m ³ TWA	2mg/m ³ TWA	2mg/m ³ TWA.	NE.
Lead	0.05 mg/m ³ TWA	0.05 mg/m ³ TWA	0.05 mg/m ³ TWA	NE
Indium	0.1mg/m ³ TWA	NE	0.1 mg/m ³ TWA	NE

- **BIOLOGICAL OCCUPATIONAL EXPOSURE LIMITS:** The following Biological Exposure Indices (BEIs) are applicable for components of this product.

- **Lead:** Lead in blood/30 µg/100 mL

8.2 EXPOSURE CONTROLS

- **ENGINEERING CONTROLS:** Use this product in well-ventilated environment. When soldering, ensure that the operation is being conducted under appropriate ventilation. 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 dusts.
- **HAND PROTECTION:** Nitrile or neoprene gloves should be used. If necessary, refer to U.S. OSHA 29 CFR 1910.138, or appropriate state or national standards.
- **EYE PROTECTION:** Splash goggles or safety glasses. If necessary, refer to U.S. OSHA 29 CFR 1910.133, or appropriate state 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:

- (a) **APPEARANCE:** Thin, silver, metallic rods.
- (b) **ODOR:** Odorless.
- (c) **ODOR THRESHOLD:** Not determined.
- (d) **pH:** Not applicable.
- (e) **MELTING POINT/FREEZING POINT:** 135 °C (275 °F)
- (f) **INITIAL BOILING POINT AND BOILING RANGE:** Not applicable.
- (g) **FLASH POINT:** Not applicable.
- (h) **EVAPORATION RATE (water=1):** Not applicable.
- (i) **FLAMMABILITY:** Not applicable.
- (j) **UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:** Not applicable.
- (k) **VAPOR PRESSURE (mmHg @ 20°C):** Not applicable.
- VAPOR DENSITY:** Not applicable.
- (m) **DENSITY:** 8.6 g/cm³ at 25 °C (77 °F)
- (n) **SOLUBILITY:** Insoluble.
- (o) **PARTITION COEFFICIENT: N-OCTANOL/WATER:** Not applicable.
- (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 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.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

- Thermal decomposition of this product generates fumes containing tin, lead, and indium.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

- **DEGREE OF IRRITATION:** Eye irritant.
- **SENSITIZATION:** Not reported to be a skin or respiratory sensitizer.

SECTION 11: TOXICOLOGICAL INFORMATION (Continued)

• ACUTE TOXICITY:

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

LEAD:

TDLo (Inhalation, human): 01mg/m³

TDLo (Woman, Oral): 450mg/kg/6 years (muscle weakness, hallucinations, peripheral nerve effects)

- **REVIEW OF ACUTE SYMPTOMS AND EFFECTS:** See Section 2 (Hazards Information) and Section 4 (First-Aid Measures) for further details.
 - **EYES:** Can cause mechanical eye irritation.
 - **SKIN:** May cause mild skin irritation upon prolonged exposure.
 - **INHALATION:** Dusts of this product may cause mild nasal irritation, due to mechanical irritation.
 - **INGESTION:** Although not anticipated to be a significant route of occupational over-exposures, ingestion of this product may cause gastrointestinal problems.

• 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	OSHA	OTHER
Tin	NO	NO	NO	NO
Lead	2A – Probably Carcinogenic to Humans	R – Reasonably Anticipated to be a Carcinogen	1910.1025 (Lead); OSHA specifically regulated carcinogen (Lead)	EPA – B2: Sufficient evidence from animal studies; TLV – A3: Confirmed Animal Carcinogen
Indium	NO	NO	NO	NO

- **REPRODUCTIVE TOXICITY INFORMATION:** The components of this product are not reported to cause reproductive effects under typical circumstances of exposure associated with use of the product as directed. The following data are available, in terms of reproductive toxicity effects for specific components of this product:
 - **LEAD:** Suspected human reproductive toxicant: Reproductive toxicity - Rat – Inhalation Effects on Newborn: Biochemical and metabolic. Reproductive toxicity - Rat – Oral Effects on Newborn: Behavioral. Reproductive toxicity - Mouse – Oral Effects on Fertility: Female fertility index (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated). Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea). Developmental Toxicity - Rat – Inhalation Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Blood and lymphatic system (including spleen and marrow). Developmental Toxicity - Rat – Oral Specific Developmental Abnormalities: Blood and lymphatic system (including spleen and marrow). Effects on Newborn: Growth statistics (e.g., reduced weight gain). Developmental Toxicity - Rat – Oral Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Effects on Embryo or Fetus: Fetal death. Developmental Toxicity - Mouse – Oral Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Effects on Embryo or Fetus: Fetal death.
 - **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 to this product, in the form as provided.
 - **SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE:** Not applicable to this product, in the form as provided.
- ### • 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 to contaminated terrestrial plants or animals.
- Based on available data, this product can be harmful 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: Yes; FIRE: No; REACTIVE: No; SUDDEN RELEASE: No
- **U.S. CERCLA REPORTABLE QUANTITY (RQ):** Lead = 10 lb.
- **US SARA TITLE 313:** Lead is subject to the reporting requirements.
- **U.S. TSCA INVENTORY STATUS:** All components are listed on the TSCA Inventory.
- **CALIFORNIA SAFE DRINKING WATER ACT (PROPOSITION 65) STATUS:** This product contains lead. WARNING: This product contains a chemical known to the state of California to cause cancer, birth defects, and other reproductive harm.

SECTION 15: REGULATORY INFORMATION (Continued)

• **INTERNATIONAL REGULATIONS**

- **CANADIAN DSL/NDL INVENTORY STATUS:** The listed components of this product are on the DSL/NDL 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:** Prepared per OSHA Hazard Communication Standard (29 CFR 1910.1200).
- **DATES OF PUBLICATION:** November 30, 2015 (New)
- **SUPERCEDES:** Not applicable.

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

- 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 (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. 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: LD₅₀ or LC₅₀: 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. TD₅₀ or TC₅₀: 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_m – 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/NDL: Canadian Domestic Substances and Non-Domestic Substances Lists.