Section 1

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Product Name: **FREEZER CLEANER # 9097E-B**

Section 2

Hazardous Ingredients:
The formula is proprietary. Exposure Limits: 200 mg/m3 ceiling. For Industrial Use Only.
NFPA ratings: Health = 1 Fire = 1 Reactivity = 0

Section 3. HEALTH

Hazards: HARMFUL OR FATAL IF SWALLOWED. May cause eye irritation. May cause respiratory tract irritation.

Effects of Single Acute Overexposure:
Inhalation: Exposure to vapor is minimal due to low volatility. With good ventilation, exposure is not expected to cause adverse effects. If material is heated or areas are poorly ventilated, vapor/mist may accumulate and cause respiratory irritation and symptoms such as headache and nausea.

Eye Contact: May cause slight eye irritation. Corneal injury is unlikely. Vapor or mist may cause eye irritation.

Skin Contact: Brief contact is essentially nonirritating to skin. Prolonged contact may cause slight skin irritation with local redness. Repeated contact may cause skin irritation with local redness.
Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts. Repeated skin exposure to large quantities may result in the absorption of harmful amounts. Massive contact with damaged skin or of material sufficiently hot to burn skin may result in absorption of potentially lethal amounts.

Swallowing: Oral toxicity is expected to be moderate in humans even though tests with animals show a lower degree of toxicity. The lethal dose in adult humans is approximately 6 ounces (200 ml) (2/3 cup). Swallowing may result in severe effects, even death. May cause nausea or vomiting. May cause abdominal discomfort or diarrhea. Excessive exposure may cause central nervous system effects, cardiopulmonary effects (metabolic acidosis), and kidney failure.

Chronic, Prolonged or Repeated Overexposure:
Effects of Repeated Overexposure: Repeated excessive exposure may cause irritation of the upper respiratory tract. In humans, effects have been reported on the following organs: Central nervous system. Observations in humans include: Nystagmus (involuntary eye movement). In animals, effects have been reported on the following organs: Kidney, liver. Based on animal studies, ingestion of very large amounts appears to be the major and possibly only route of exposure to produce birth defects.
Exposures by inhalation or skin contact, the primary routes of occupational exposure, had minimal effect on the fetus, in animal studies. Ingestion of large amounts has been shown to interfere with reproduction in animals.

Section 4. **FIRST AID PROCEDURES**

INHALATION: Move person to fresh air; if effects occur, consult a physician.
EYE CONTACT: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.
SKIN CONTACT: Immediately flush skin with water while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Discard contaminated articles including leather items such as shoes.
SWALLOWING: Do not induce vomiting. Seek medical attention immediately. If person is fully conscious give 1 cup or 8 ounces (240 ml) of water. If medical advice is delayed and if an adult has swallowed several ounces of chemical, then give 3-4 ounces (1/3-1/2 Cup) (90-120 ml) of hard liquor such as 80 proof whiskey. For children, give proportionally less liquor at a dose of 0.3 ounces (1 1/2 tsp) (8 ml) liquor for each 10 pounds of body weight, or 2 ml per kg body weight [e.g., 1.2 ounce (2 1/3 Tbsp) for a 40 pound child or 36 ml for an 18 kg child].

NOTES TO PHYSICIAN: If several ounces have been ingested, early administration of ethanol may counter the toxic effects of this product (metabolic acidosis, renal damage). Consider hemodialysis or peritoneal dialysis & thiamine 100 mg plus pyridoxine 50 mg for every 6 hr. If ethanol is used, a therapeutically effective blood concentration in the range of 100 - 150 mg/dl may be achieved by a rapid loading dose followed by a continuous intravenous infusion. Consult standard literature for details of treatment.
4-Methyl pyrazole (Antizol.) is an effective blocker of alcohol dehydrogenase and should be used in the treatment of such intoxication if available.
Fomepizole protocol: loading dose 15 mg/kg, follow by bolus dose of 10 mg/kg every 12 hours; after 48 hours, increase bolus dose to 15 mg/kg every 12 hours. Continue formepizole until serum Ethylene Glycol levels are undetectable. The signs and symptoms of poisoning include anion gap metabolic acidosis, CNS depression, renal tubular injury, and possible late stage cranial nerve involvement.
Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. In severe poisoning, respiratory support with mechanical ventilation and positive end expiratory pressure may be required. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach.

Section 5. FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES - refer to section 9, physical and chemical properties.

5.2 EXTINGUISHING MEDIA: water fog or fine spray, dry chemical fire extinguishers, carbon dioxide fire extinguishers, or foam. Do not use direct water stream; it may spread the fire. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

5.3 FIRE FIGHTING PROCEDURES: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of re-ignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.

5.4 SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

5.5 UNUSUAL FIRE AND EXPLOSION HAZARDS: Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

5.6 HAZARDOUS COMBUSTION PRODUCTS: During a fire, smoke may contain combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to carbon monoxide and carbon dioxide.

Section 6. ACCIDENTAL RELEASE MEASURES

Steps To Be Taken If Material Is Released Or Spilled: Small spills: Absorb with materials such as cat litter, sand, sawdust, vermiculite, Zorb-all or Hazorb. Large spills: Dike area to contain spill. Pump into suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

Personal Precautions: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Refer to Section 7, Handling for additional precautionary measures.

Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/ or groundwater. See Section 12, Ecological Information.

Section 7. HANDLING AND STORAGE

7.1 HANDLING: Do not swallow. Avoid contact with eyes. Wash thoroughly after handling. Avoid breathing vapors or mist. Use with adequate ventilation. Keep container closed.

Ventilation: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

Other Precautions: Spills of these organic materials on hot fibrous insulation may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

7.2 STORAGE: Do not store near food, foodstuffs, drugs or potable water supplies.

Section 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 EXPOSURE LIMITS
Exposure Limits: 200 mg/m3 ceiling IHG (Industrial Hygiene Guideline) for vapor
The listed limit includes all airborne forms of the substance that can be inhaled.

8.2 PERSONAL PROTECTION
Respiratory Protection: Atmospheric levels should be maintained below the exposure guideline. For most conditions, no respiratory protection should be needed; however, if material is heated or sprayed, use an approved air-purifying respirator.

Ventilation: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

Eye Protection: Use safety glasses. If exposure causes eye discomfort, use a full-face respirator.

Other Protective Equipment: When prolonged or frequently repeated contact could occur, use chemically protective clothing resistant to this material. Selection of specific items such as face shield, gloves, boots, apron, or full-body suit will depend on operation. If hands are cut or scratched, use impermeable gloves even for brief exposures. When handling hot material, protect skin from thermal burns as well as from skin absorption.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colorless Liquid
Odor: Sweet
Flash Point: Not Flammable (> 250^{o}F)
Autoignition Temperature: > 800^{o}F
Vapor Pressure: < 0.06 mmHg (at 20^{o}C)
Boiling Point: > 390^{o}F (at 760 mmHg)
Specific Gravity (H20 = 1): 1
Freezing Point: -35^{o}F
Solubility in Water (by weight): 100%
pH: 9
Evaporation Rate (Butyl Acetate = 1): 0.01

Section 10. STABILITY AND REACTIVITY

Stability/Instability: Thermally stable at recommended temperatures and pressures.

Conditions to Avoid: Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible Materials: avoid contact with strong acids, strong bases and strong oxidizers.

Thermal Decomposition: Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to aldehydes, alcohols and ethers.

Hazardous polymerization will not occur.

Section 11. TOXICOLOGICAL INFORMATION

Acute Toxicity: Oral: Human; Lethal Dose; approximately 6 ounces (200 ml) (2/3 cup)
Rat: LD50 (12000 - 26000) mg/kg
Percutaneous: Rabbit; LD50 = > 44000 mg/kg
Inhalation: Rat; LC50 = > 8 mg/L; Aerosol, 7 hours

Developmental Toxicity: Based on animal studies, ingestion of very large amounts appears to be the major and possibly only route of exposure to produce birth defects. Exposures by inhalation or skin contact, the primary routes of occupational exposure, had minimal effect on the fetus, in animal studies.

Reproductive Toxicity: Ingestion of large amounts has been shown to interfere with reproduction in animals.

Chronic Toxicity And Carcinogenicity: did not cause cancer in long-term animal studies.

Genetic Toxicology: In vitro mutagenicity studies were negative.
In vivo, animal mutagenicity studies were negative.

Significant Data With Possible Relevance To Humans: Repeated excessive exposure may cause irritation of the upper respiratory tract. In humans, effects have been reported on the following organs: central nervous system. Observations in humans include: Nystagmus (involuntary eye movement). In animals, effects have been reported on the following organs: kidney, liver.

Section 12. ECOLOGICAL INFORMATION

12.1 ENVIRONMENTAL FATE
Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
Biodegradation reached in Modified OECD Screening Test (OECD Test No. 301 E) after 28 days: >90%.
Biodegradation reached in Manometric Respirometry Test (OECD Test No. 301 F) after 28 days: >94%.

BOD (% Oxygen consumption): Day 5: 60.5% Day 10: 82% Day 20: 89.1%

12.2 ECOTOXICITY: Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in the most sensitive species tested).

12.3 FURTHER INFORMATION
Bioconcentration potential is low. Potential for mobility in soil is very high.

Section 13. DISPOSAL CONSIDERATIONS

13.1 DISPOSAL
Do Not Dump Into Any Sewers, On The Ground, Or Into Any Body Of Water. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Vendor has no control over the management practices of parties handling or using this material. The information presented here pertains only to the product as shipped in its intended condition. For unused and uncontaminated product, the preferred options include sending to a licensed, permitted recycler, reclaimer, incinerator or other thermal destruction device.

Section 14. TRANSPORT INFORMATION

14.1 U.S. D.O.T.: NOT REGULATED when packaged in 55Gallon drums or smaller containers.
(Regulated by DOT when transported in bulk quantity.)
Reportable Quantity: 5,051 Lb.

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