

MATERIAL SAFETY DATA SHEET

RED TEK® 12a™ 30, 50 & 1000 LB Cylinders HYDROCARBON REFRIGERANT

SECTION 1 - IDENTIFICATION

MANUFACTURER: Thermofluid Technologies, Inc.
ADDRESS: 409 Home Avenue
Maryville, TN 37801
PHONE: (865) 983-1633
FAX: (865) 983-0068

PRODUCT NAME: RED TEK® 12a™
PROPER SHIPPING NAME: Petroleum Gases Liquefied
UN NUMBER: 1075
HAZARDOUS GOODS: 2.1
USES: Refrigeration Systems

TOLL FREE 24 HOUR EMERGENCY TELEPHONE NUMBER 1 – 800-262-8200.

WHMIS CLASSIFICATION: CLASS A; CLASS B; DIVISION 1

SECTION 2 – PHYSICAL PROPERTIES

APPEARANCE: Colourless gas; pine odour added
ODOUR THRESHOLD: N/A
COEFF.WATER/ OIL DIST: <1
FREEZING POINT: -286 °F
VAPOR DENSITY: (est.) 1.64
VAPOR PRESSURE: (PSIG) 85@ 70 °F .

PHYSICAL STATE: Gas
SPECIFIC GRAVITY: 0.530
EVAPORATION RATE: Rapid
BOILING POINT: -36.1° F
pH: N/A

SECTION 3 – FIRE OR EXPLOSION HAZARD

AUTO – IGNITION TEMPERATURE: 1585 F

FLASHPOINT: n/a **LOWER FLAMMABLE LIMIT (LEL):** 2.6% **UPPER FLAMMABLE LIMIT (UEL):** 9.0%

EXTINGUISH MEDIA: If possible, stop flow of gas. Use water to cool fire – exposed tanks, surroundings and to protect personnel working on shutoff. Water spray, dry powder, or carbon dioxide can be directed at flame area to reduce fire intensity. Do not extinguish flames unless leak can be stopped.

HAZARDOUS COMBUSTION PRODUCTS: Normal combustion forms oxides of carbon.

SENSITIVITY TO STATIC DISCHARGE: Vapor may ignite if exposed to static discharge.

EXPLOSION DATA: Sensitivity to impact. Mixture is not sensitivity.

FIRE AND EXPLOSION HAZARD: Flammable vapor may form if allowed to mix with air. Accumulation of gas is an ignition hazard. Vapors are heavier than air and may travel to an ignition source.

SECTION 4 – INGREDIENTS

| <u>HAZARDOUS INGREDIENTS</u> | <u>%</u> | <u>CAS NUMBER</u> | <u>LC50</u> | <u>P.E.L.</u> | <u>ACGIH TLV</u> |
|------------------------------|----------|-------------------|-------------|---------------|------------------|
| Alkanes (Hydrocarbons) | 100 | | | 800 ppm | 800 ppm |

SECTION 5 – REACTIVITY DATA

CHEMICAL STABILITY: This material is chemically stable.

CONDITIONS TO AVOID: Propellant is flammable, avoid ignition source.

INCOMPATIBLE MATERIALS: Strong oxidizers.

DECOMPOSITION PRODUCTS: Burning of this product can produce oxides of carbon.

HAZARDOUS POLYMERIZATION: Will not occur.

POLYMERIZATION TO AVOID: None known.

SECTION 6 – HEALTH HAZARD

AS WITH MOST FLAMMABLE PRODUCTS: Do not expose to flames , sparks, torches, welding area.

INHALED/ASPHYXIAANT: This product may cause irritation of the respiratory tract. May also cause headaches or dizziness at moderate exposures. Heavy exposure may cause anemia and irregular heart rhythm, respiratory arrest and death at elevated exposures.

EYE CONTACT: Irritating if the liquid gets into eyes, with a possible hazard from freezing due to rapid evaporation. Extremely high vapor concentration may also be irritating.

SKIN CONTACT: Exposure to rapidly expanding gas or vaporizing liquid may cause frost bite damage to tissue . Prolonged contact may irritate the skin and cause dermatitis.

CHRONIC: Prolonged exposure to this product may cause central nervous system disorder and/or damage.

SECTION 7 – FIRST AID

INHALED: In emergency situations, use proper respiratory protection and immediately remove the victim to fresh air. Administer artificial respiration if breathing has stopped. Seek medical attention promptly in serious cases of over exposure.

EYES: Flush eyes with tepid water for 15 minutes . Seek medical advice immediately.

SKIN: Avoid skin contact with the liquid . Remove contaminated clothing and wash the exposed area with soap and water.

FROSTBITE: Obtain medical assistance. If medical assistance is not available , place person in a warm area as soon as possible and allow the injured area to warm gradually. DO NOT WARM EXPOSED AREA TO EXCESS HEAT OR COLD.

INGESTION: Unlikely to be a problem , this should not occur.

SECTION 8 – SAFE HANDLING

SPILLS: Shut off ignition source and source of leak. Evacuate all non essential personnel from the area. If possible , ventilate the area. If mechanical ventilation is used, equipment must be explosion proof. Use water spray to disperse vapors. Isolate and ventilate area until gas has dispersed . If the incident is significant seek assistance from local fire, police, and other relevant authorities.

WASTE DISPOSAL METHOD: Dispose of product in accordance with local, county, provincial/state, and federal regulations.

STORAGE AND SHIPPING: Store in a cool , well ventilated area. Store away from strong oxidizing agents, chlorine dioxide, excessive heat and /or static discharge.

OTHER PRECAUTIONS: Empty containers may contain flammable or combustible vapors. Do not use without adequate precautions.

SECTION 9 – PERSONAL PROTECTION

ENGINEERING CONTROLS: Use only in a well ventilated area! Ensure there is good ventilation. If additional ventilation is needed use auxiliary ventilation equipment ensuring that all systems are well grounded and spark proof.

EYES: Wear chemical safety glasses with side shields and/or goggles.

GLOVES: Use thermal, chemical resistant gloves when handling this product.

OTHER PROTECTIVE CLOTHING: Long sleeves, pants and closed toe shoes.

RESPIRATORY PROTECTION: If ventilation of the area is not adequate use a jointly approved NIOSH/MESA respirator for organic vapours, to prevent overexposure by inhalation.

SECTION 10- PREPARATION

Thermofluid Technologies, Inc. : 409 Home Avenue , Maryville, TN 37801 865-983-1633 Prepared by Missy Simpson January 21, 2011 REV.

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