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SAFETY OFFICER
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TRICHLOROETHYLENE

Material Safety Data Sheet

Mallinckrodt Inc.
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Emergency Telephone Number
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Effective Date: 09-12-85

PRODUCT IDENTIFICATION:

Synonyms: Trichloroethene; TCE; acetylene trichloride

Formula CAS No.: 79-01-6 Molecular Weight: 131.39

Hazardous Ingredients: Chemical Formula: C₂HCl₃
Not applicable.

PRECAUTIONARY MEASURES

WARNING! HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION.
POSSIBLE CANCER HAZARD BASED ON TESTS WITH LABORATORY ANIMALS. EXPOSURE MAY CREATE
A CANCER RISK.

Do not get in eyes, on skin, or on clothing.
Do not breathe vapor.
Keep container closed.
Use with adequate ventilation.
Wash thoroughly after handling.

EMERGENCY/FIRST AID

If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes. In all cases call a physician.
Note to physician: Do not administer adrenaline or epinephrine to a victim of chlorinated solvent poisoning.
SEE SECTION 5.

DOT Hazard Class: ORM-A

Physical Data SECTION 1

Appearance: Clear, colorless liquid.

Odor: Chloroform-like.

Solubility: Practically insoluble in water. Readily miscible in organic solvents.

Boiling Point: 87°C (188.6°F). Vapor Density (Air=1):4.5

Melting Point: -73°C (-99.4°F). Vapor Pressure (mm Hg):57.8 @ 20°C
(68°F).

Specific Gravity: 1.45 Evaporation Rate:No information found.

Fire and Explosion Information

SECTION 2

Fire: Flashpoint: None by standard methods.
Flammable limits in air, % by volume at 57°C (135°F): lcl: 12.5, ucl: 90.
Autoignition temperature: 410°C (770°F).

Explosion: A strong ignition source, e.g., a welding torch, can produce ignition.

Fire Extinguishing Media: Use water spray to keep fire exposed containers cool. If substance does ignite, use CO₂, dry chemical or foam.

Special Information: Dry chemical, foam or carbon dioxide. Water spray may be used to keep fire exposed containers cool.

Reactivity Data

SECTION 3

Stability: Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Decomposed by heat or flame and in the presence of oxygen and light, especially UV radiation. Can form carbon monoxide, phosgene, and emit corrosive fumes of hydrochloric acid.

Hazardous Polymerization: This substance does not polymerize.

Incompatibilities: Alkali hydroxides, powdered metals, liquid oxygen.

Leak/Spill Disposal Information SECTION 4

Ventilate area of leak or spill. Clean-up personnel require protective clothing. Contain and recover liquid when possible.

Larger Spills: absorb with vermiculite, dry sand, earth, or similar material for disposal as hazardous waste in a RCRA approved facility.

Do Not Flush To Sewer.

Reportable Quantity (RQ)(CWA/CERCLA) : 1000 lbs.

Ensure compliance with local, state and federal regulations.

Health Hazard Information

SECTION 5

A. Exposure/Health Effects

Inhalation: Acute exposure causes depression of the central nervous system that may include symptoms of visual disturbances and mental confusion, incoordination, headache, nausea, euphoria, and dizziness. Inhalation of high concentrations could cause unconsciousness and death.

Ingestion: Low to moderately toxic. May cause effects similar to inhalation. May cause coughing, abdominal pain, diarrhea, dizziness, unconsciousness. Kidney failure can result in severe cases. Estimated fatal dose is 3-5 mls/kg.

Skin Contact: May cause irritation. Continued skin contact has a defatting action and can produce rough, dry, red skin resulting in secondary infection.

Eye Contact: Vapors may cause severe irritation with redness and pain. Splashes may cause eye damage.

Chronic Exposure: Chronic exposures may cause liver and kidney damage and nervous system effects. Workers chronically exposed may exhibit central nervous system depression, intolerance to alcohol, and increased cardiac output.

Aggravation of Pre-existing Conditions: Persons with pre-existing skin disorders or eye problems, or impaired liver, kidney or respiratory function may be more susceptible to the effects of the substance.

B. FIRST AID

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion: If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person. Call physician immediately.

Skin Exposure: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Call a physician immediately.

Eye Exposure: Wash eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

C. TOXICITY DATA (RTECS, 1982)

Oral rat LD50: 4920 mg/kg.
 Mutation references cited.
 Reproductive effects cited.
 Tumorigenic effects cited.
 Carcinogenic determination: limited evidence in experimental animals (IARC Supplement 4, 1982)
 Aquatic Toxicity Rating: TL 96: 1000-100 ppm.

Occupational Control Measures

SECTION 6

Airborne Exposure Limits: -OSHA Permissible Exposure Limit (PEL):
 100 ppm (TWA); 200 ppm (Ceiling);
 300 ppm/5M/2H (Peak).
 -ACGIH Threshold Limit Value (TLV):
 50 ppm (TWA) 200 ppm (STEL).

Ventilation System: A system of local exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the dust or vapor at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

Personal Respirators: (NIOSH Approved) If the TLV is exceeded a full facepiece chemical cartridge respirator may be worn, in general, up to 100 times the TLV or the maximum use concentration specified by the respirator supplier, whichever is less. Alternatively, a supplied air full facepiece respirator or airlined hood may be worn.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls to prevent skin contact.

Eye Protection: Use chemical safety goggles and/or a full face shield where splashing is possible. Contact lenses should not be worn when working with this material.

Maintain eye wash fountain and quick-drench facilities in work area.

Storage and Special Information SECTION 7

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage.

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