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Effective Date: 8-8-94, 6-95

Product Name: Dithioerythritol (DTE)

CAS No.: 6892-68-8

Hazardous Ingredients:

RTECS No: KF2410000

Erythritol, 1, 4-Dithio-

Reviews, Standards, and Regulations:

NOES 1983: HZD X4164; NIS 2; TNF 315; NOS 4; TNE 8177; TFE 5997

EPA TSCA Chemical Inventory, JUNE1990

Target Organ Data: Behavioral (convulsions or effect on seizure threshold)

Only selected registry if toxic effects of chemical substances (RTECS)

Data is presented here, See Actual entry in RTECS for complete information

Toxicological effects associated with thiols: Accute exposure to thios may cause upper respiratory tract irritation. Exposure to C-8 thiols may produce analeptic and psychomimetic effect, other thiols may cause central nervous system depression. In addition to general symptoms from inhalation and ingestion, expsoure in excess of 50 ppm may result in cyanosis, rapid pulse, dyspnea, fever, irreversible depression of cerebral function, respiratory paralysis, delayed pulmonary edema, renal damage, with haematuria and albuminuria and hepatic damage

Physical Data:

Melting point (range) Approx.:

> 81°C

Boiling point:

N/A

Decomposition temperature:

N/A

pH (depends on quality):

5.3

Solubility in water:

5% W/V

Odor:

N/A

Physical form:

White Powder/crystals

Tap density:

N/A

Fire and Explosion Information:

Flash point:

N/A

(Auto) Ignition temperature:

not flammable

Extinguishing media to be recommended:
powder or appropriate foam,

Carbon Dioxide, dry chemical
water spray

to be avoided:

N/A

Special fire and explosions precautions:

Wear self-contained breathing
apparatus and protective clothing
to prevent contact with skin and
eyes. Use water spray to cool

fire-exposed containers.

Fire and explosions hazards:

Emits toxic fumes under fire
conditions (carbon monoxide,
hydrogen sulfide gas)

carbon dioxide, oxides of sulfur,

Reactivity Data:

Stable X

Unstable

Hazardous Polymerization:

Incompatibilities: Bases, Oxidizing Agents, Reducing Agents, Alkali Metals

Handling and Storage Information:

Store at 2-8° under nitrogen.

Label precautionary statements: Irritant. Avoid contact and inhalation. Stench.

Wear appropriate NIOSH/MSHA-Approved respirator, chemical-resistant gloves, safety goggles, other protective clothing. Use only in a chemical fume hood. Safety shower and eye bath. Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure. Wash thoroughly after handling. Keep tightly closed. Stench. Refrigerate.

Leak/Spill Information:

Evacuate area. Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves. Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Disposal Information:

The material should be ignited in the presence of sodium carbonate and slaked lime (calcium hydroxide). The substance should be mixed with vermiculite and then with dry caustics, wrapped in paper and burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local laws.

Health Hazard Information:

A. Exposure/Health Effects

May be harmful by inhalation, ingestion, or skin absorption. May cause irritation to skin, eyes, respiratory tract.

If inhaled, can cause nausea, headache, vomiting, blood in urine, difficulty breathing, irregular heartbeat, anemia, weakness, drunkenness, bluish skin color, lung congestion, kidney damage, paralysis, convulsions, unconsciousness, and coma.

If ingested, can cause nausea, vomiting, headache, diarrhea, weakness, drunkenness, restlessness, bluish skin color, paralysis and coma

Chronic Exposures: No data available.

Aggravation of pre-existing conditions: No data available.

B. First Aid:

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and obtain medical help.

Ingestion: If swallowed, wash out mouth with water and give plenty of fluids, provided person is conscious. Call a physician.

Skin Contact: In case of contact, immediately wash skin with soap and copious amounts of water. Discard contaminated clothing and shoes

Eye Contact: in case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

C. Toxicity Data

IMS-MUS LD50 : 309 mg/kg

Cytogenic analysis, human, lymphocyte 100 µmol/L

JPPMAB 1,576,49

RTEC reference #KF2410000

Occupational Control Measures:

Airborne Exposure Limits: No data available.

Ventilation Systems: local exhaust required.

Personal Respirators: Wear appropriate NIOSH/MSHA-approved respirator.

Skin Protection: Chemical resistant gloves, other protective clothing.

Eye Protection: Safety goggles.