

Mallinckrodt

Material Safety Data

Emergency Phone Number: 314-982-5000

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ETHYL ALCOHOL ABSOLUTE DENATURED

PRODUCT IDENTIFICATION:

Synonyms: Denatured ethyl alcohol; alcohol; potato alcohol

Formula CAS No.: 64-17-5

Molecular Weight: 46.07

Chemical Formula: C_2H_6O (major component)

Hazardous Ingredients: CAS # 67-56-1 Methyl Alcohol

PRECAUTIONARY MEASURES

DANGER! MAY BE FATAL IF SWALLOWED.

HAZARDOUS IF INHALED. FLAMMABLE!

AFFECTS CENTRAL NERVOUS SYSTEM. MAY CAUSE BLINDNESS.

CAUSES IRRITATION.

Keep away from heat, sparks and flame.

Keep container closed.

Use with adequate ventilation.

Wash thoroughly after handling.

Avoid contact with eyes, skin and clothing.

Avoid breathing vapor.

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.

SEE SECTION 5.

DOT Hazard Class: Flammable Liquid

SECTION 1 Physical Data

Appearance: Clear, colorless liquid.

Odor: Mild odor.

Solubility: Infinite in water.

Boiling Point: 78°C (172.4°F)

Melting Point: -114°C (-173°F)

Specific Gravity (water = 1): 0.80

Vapor Density (Air = 1): 1.6

Vapor Pressure (mm Hg): 47 @ 25°C (77°F)

Evaporation Rate: (BuAc = 1): ca. 3.3

SECTION 2 Fire and Explosion Information

Fire:

Flammable. Fire data is for ethyl alcohol:

Flash point: 13°C (55°F) (closed cup).

Auto ignition temperature: 422°C (793°F)

Flammable limits in air, % by volume:

lcl = 3.3, ucl = 19.0.

Dangerous fire hazard when exposed to heat or flame.

Explosion:

Above flash point, vapor-air mixtures are explosive within flammable limits noted above.

Fire Extinguishing Media:

Dry chemical, foam or carbon dioxide. Water spray may be used to keep fire exposed containers cool. Water may be used to flush spills away from exposures and to dilute spills to non-flammable mixtures.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Vapors can flow along surfaces to distant ignition source and flash back.

SECTION 3 Reactivity Data

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

May produce carbon monoxide and carbon dioxide when heated to decomposition.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Strong oxidizers, heat and sources of ignition.

SECTION 4 Leak/Spill Disposal Information

Ventilate area of leak or spill. Remove all sources of ignition. Clean-up personnel require protective clothing and respiratory protection from vapors. Contain and recover liquid when possible. Collect as hazardous waste and atomize in a suitable RCRA approved combustion chamber, or absorb with vermiculite, dry sand, earth or similar material for disposal as hazardous waste in a RCRA approved facility. Do not flush to sewer!

Ensure compliance with local, state and federal regulations.

Effective Date: 07-13-87 Supersedes 12-18-85

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SECTION 5 Health Hazard Information

A. EXPOSURE / HEALTH EFFECTS

Inhalation:

Inhalation may cause irritation to the upper respiratory tract. Prolonged exposures to high concentration may cause drowsiness, loss of appetite, and inability to concentrate. Methyl alcohol component affects vision by acting upon the optic nerve. Exposure may result in vision impairment or blindness.

Ingestion:

Can cause gastritis, vomiting, central nervous system depression, headache, and dizziness. Other symptoms may parallel those from inhalation exposure.

Skin Contact:

May cause irritation. Prolonged contact may produce discoloration. Skin absorption of methyl alcohol component may occur with symptoms paralleling those of inhalation exposure.

Eye Contact:

May cause severe irritation. Splashes may cause pain, blurred vision, and eye damage.

Chronic Exposure:

Prolonged skin exposure may cause drying and cracking of skin. May affect the nervous system. May cause vision impairment, liver injury and pancreatitis.

Aggravation of Pre-existing Conditions:

Persons with pre-existing skin disorders or eye problems, or impaired 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, or milk if available and sticking finger down throat. Call a physician immediately. Never give anything by mouth to an unconscious person.

Skin Exposure:

Remove any contaminated clothing. Wash skin with soap or mild detergent and water for at least 15 minutes. Get medical attention if irritation develops or persists.

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)

Ethyl alcohol: Oral rat LD50: 7060 mg/kg Inhalation rat LC50: 20,000 ppm/10H Mutation references cited. Reproductive effects cited. Irritation skin rabbit: 400mg open mild eye rabbit 100mg/24H severe Methyl alcohol: Oral rat LD50: 5628 mg/kg Skin rabbit LD50: 20 gm/kg. Mutation references cited. Reproductive effects cited.

SECTION 6 Occupational Control Measures

Airborne Exposure Limits:

-OSHA Permissible Exposure Limit (PEL):
1,000 ppm (TWA) for Ethyl Alcohol
200 ppm (TWA) for Methyl Alcohol
-ACGIH Threshold Limit Value (TLV):
1,000 ppm (TWA) For Ethyl Alcohol
200 ppm (TWA) 250 ppm (STEL) skin for Methyl Alcohol

Ventilation System:

A system of local and/or general 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 contaminant 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 up to the maximum use concentration specified by the respirator supplier. Alternatively, a supplied air full facepiece respirator or airlined hood may be worn.

Skin Protection:

Gloves and lab coat, apron or coveralls.

Eye Protection:

Use chemical safety goggles. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work area.

SECTION 7 Storage and Special Information

Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from oxidizing materials. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment.

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