

MSDS# 09450

Section 1 - Chemical Product and Company Identification

MSDS Name: Ethylene glycol dimethyl ether

Catalog Numbers: AC118450000, AC118450010, AC118450025, AC118450050, AC118455000, 61035-1000,
BP2613-100, O2430-1, O2430-4

Synonyms: 1,2-Dimethoxyethane; Monoglyme.

Company Identification: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 201-796-7100

Emergency Number US: 201-796-7100

CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

Risk Phrases:

CAS#: 110-71-4
Chemical Name: Ethylene glycol dimethyl ether
%: 99+
EINECS#: 203-794-9
Hazard Symbols:

Risk Phrases:

CAS#: 128-37-0
Chemical Name: 2,6-Di-tert-butyl-p-cresol
%: 0.01
EINECS#: 204-881-4
Hazard Symbols:

Text for R-phrases: see Section 16

Hazard Symbols:



Risk Phrases:

T F



60 61 11 19 20

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! Harmful if inhaled. May form explosive peroxides. Flammable liquid and vapor. May cause harm to the unborn child. May impair fertility. Target Organs: Blood, kidneys, central nervous system, cardiovascular system, reproductive system.

Potential Health Effects

Eye: May cause eye irritation.

Skin: May cause skin irritation. May be harmful if absorbed through the skin.

Ingestion: May cause irritation of the digestive tract. May be harmful if swallowed. May cause central nervous system depression.

Inhalation: Harmful if inhaled. May cause respiratory tract irritation. May cause narcotic effects in high concentration.

Chronic: May cause liver and kidney damage. Possible risk of harm to the unborn child. May impair fertility.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation develops, get medical aid.

Skin: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

Ingestion: Do not induce vomiting. Get medical aid if irritation or symptoms occur.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Containers may explode in the heat of a fire. Flammable liquid and vapor. May form explosive peroxides.

Extinguishing Media: Use water spray to cool fire-exposed containers. Use water spray, dry chemical, carbon dioxide, or chemical foam.

Autoignition Temperature: 200 deg C (392.00 deg F)

Flash Point: 6 deg C (42.80 deg F)

Explosion Limits: Lower: 1.60 vol %

Explosion Limits: Upper: 10.40 vol %

NFPA Rating: health: 2; flammability: 3; instability: 2;

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Remove all sources of ignition. Use a spark-proof tool. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling: Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Take precautionary measures against static discharges. Keep away from heat, sparks and flame. Do not ingest or inhale. Use only in a chemical fume hood. If peroxide formation is suspected, do not open or move container. Do not distill to dryness. Test for peroxide formation before distillation.

Storage: Keep away from sources of ignition. Store in a cool, dry place. Do not store in direct sunlight. Store in a tightly closed container. Flammables-area. Do not expose to air. Containers should be dated when opened and tested periodically for the presence of peroxides.

Section 8 - Exposure Controls, Personal Protection

| Chemical Name | ACGIH | NIOSH | OSHA - Final PELs |
|--------------------------------|--|--------------|-------------------|
| Ethylene glycol dimethyl ether | none listed | none listed | none listed |
| 2,6-Di-tert-butyl-p-cresol | 2 mg/m3 (inhalable fraction and vapor) | 10 mg/m3 TWA | none listed |

OSHA Vacated PELs: Ethylene glycol dimethyl ether: None listed 2,6-Di-tert-butyl-p-cresol: 10 mg/m³ TWA

Engineering Controls:

Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Clear liquid

Color: APHA: 15 max

Odor: ethereal odor - sharp odor

pH: Not available

Vapor Pressure: 64 hPa @ 20 deg C

Vapor Density: 3.1 (air=1)

Evaporation Rate: 5.0 (butyl acetate=1)

Viscosity: 1.1 mPas 20 deg C

Boiling Point: 84 - 86 deg C @ 760 mmHg

Freezing/Melting Point: -69 deg C (-92.20°F)

Decomposition Temperature: Not available

Solubility in water: Miscible

Specific Gravity/Density: 0.867

Molecular Formula: C₄H₁₀O₂

Molecular Weight: 90.12

Section 10 - Stability and Reactivity

Chemical Stability: Prolonged exposure to air and sunlight may form unstable peroxides.

Conditions to Avoid: Incompatible materials, light, ignition sources, excess heat, prolonged exposure to air.

Incompatibilities with Other Materials: Strong acids, may form peroxides in air.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 110-71-4: KI1451000
CAS# 128-37-0: GO7875000

RTECS:

CAS# 110-71-4: Oral, mouse: LD50 = 3200 mg/kg;
Oral, rabbit: LD50 = 320 mg/kg;
Oral, rat: LD50 = 775 mg/kg;

RTECS:

LD50/LC50: **CAS# 128-37-0:** Draize test, rabbit, eye: 100 mg/24H Moderate;
Draize test, rabbit, skin: 500 mg/48H Moderate;
Oral, mouse: LD50 = 650 mg/kg;
Oral, mouse: LD50 = 1040 mg/kg;
Oral, rabbit: LD50 = 2100 mg/kg;
Oral, rat: LD50 = 890 mg/kg;

Carcinogenicity: Ethylene glycol dimethyl ether - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
2,6-Di-tert-butyl-p-cresol - IARC: Group 3 (not classifiable)

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Other: Do not empty into drains.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: 1,2-DIMETHOXYETHANE

Hazard Class: 3

UN Number: UN2252

Packing Group: II

Canada TDG

Shipping Name: 1,2-DIMETHOXYETHANE

Hazard Class: 3

UN Number: UN2252

Packing Group: II

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: T F

Risk Phrases:

R 61 May cause harm to the unborn child.

R 11 Highly flammable.

R 19 May form explosive peroxides.

R 20 Harmful by inhalation.

R 60 May impair fertility.

Safety Phrases:

S 53 Avoid exposure - obtain special instructions before use.

S 16 Keep away from sources of ignition - No smoking.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 110-71-4: 1

CAS# 128-37-0: 1

Canada

CAS# 110-71-4 is listed on Canada's DSL List

CAS# 128-37-0 is listed on Canada's DSL List

Canadian WHMIS Classifications: B2, D1B, D2A, F

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 110-71-4 is not listed on Canada's Ingredient Disclosure List.

CAS# 128-37-0 is listed on Canada's Ingredient Disclosure List

US Federal

TSCA

CAS# 110-71-4 is listed on the TSCA

Inventory.

CAS# 128-37-0 is listed on the TSCA

Inventory.

Section 16 - Other Information

MSDS Creation Date: 12/12/1997

Revision #12 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.
