

According to the UN GHS revision 8

Creation Date: December 23, 2024

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1. IDENTIFICATION

1.1 GHS Product identifier

Product name: D-Menthol
Catalog Number: TN1544
CAS Number: 15356-60-2

1.2 Other means of identification

Other names: -

1.3 Recommended use of the chemical and restrictions on use

Identified uses: no data available

1.4 Supplier's details

Company: Targetmol Chemicals Inc.
Uses advised against: 36 Washington Street, Wellesley Hills, Massachusetts 02481 USA
Tel/Fax: (781) 999-4286

1.5 Emergency phone number

Emergency phone number: 781-999-4286
Service hours: Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT -5 hours).

2. HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Skin irritation, Category 2

2.2 GHS label elements, including precautionary statements

Pictogram(s):
Signal word: Warning
Hazard statement(s): H315 Causes skin irritation
Precautionary statement(s):
Prevention: P264 Wash ... thoroughly after handling. P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...
Response: P302+P352 IF ON SKIN: Wash with plenty of water/... P321 Specific treatment (see ... on this label). P332+P317 If skin irritation occurs: Get medical help. P362+P364 Take off contaminated clothing and wash it before reuse.
Storage: none
Disposal: none

2.3 Other hazards which do not result in classification

no data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number
D-Menthol	-	15356-60-2	239-387-8

4. FIRST-AID MEASURES

4.1 Description of necessary first-aid measures

General advice

Whitish to white.

If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a d°Ctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a d°Ctor.

Following eye contact

Rinse with pure water for at least 15 minutes. Consult a d°Ctor.

Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a d°Ctor or Poison Control Center immediately.

4.2 Most important symptoms/effects, acute and delayed

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand-valve resuscitator, bag-valve-mask device, or p°Cket mask, as trained. Perform CPR as necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting °Ccurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. Aromatic hydr°Carbons and related compounds

4.3 Indication of immediate medical attention and special treatment needed, if necessary

SYMPTOMS: Symptoms of exposure to this compound may include irritation of the skin, eyes, mucous membranes and upper respiratory tract. Exposure may also cause hypersensitivity reactions including contact dermatitis, spasms of the glottis and collapse in young children, urticaria, flushing, headache, insomnia, unsteady gait, thick speech, tremor of the hands, mental confusion, depression, vomiting, cramp in the legs and bradycardia. Exposure to compounds of this class may cause painless blanching or erythema, possible corrosion, profuse sweating, intense thirst, nausea, diarrhea, cyanosis from methemoglobinemia, hyperactivity, stupor, blood pressure fall, hyperpnea, abdominal pain, hemolysis, convulsions, coma and pulmonary edema followed by pneumonia. If death from respiratory failure is not immediate, jaundice and oliguria or anuria may °Ccur. These compounds °Ccasionally cause skin sensitization.

ACUTE/CHRONIC HAZARDS: This compound may be harmful by inhalation, ingestion or skin absorption. It is an irritant of the skin and eyes. It is also irritating to the mucous membranes and upper respiratory tract. When heated to decomposition it emits acrid smoke and toxic fumes of carbon monoxide and carbon dioxide. (NTP, 1992)

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Wear self-contained breathing apparatus for firefighting if necessary.

5.2 Specific hazards arising from the chemical

This chemical is combustible. (NTP, 1992)

5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

ACCIDENTAL RELEASE MEASURES Personal precautions, protective equipment and emergency procedures Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section Environmental precautions Do not let product enter drains. Methods and materials for containment and cleaning up Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

Thermal hazards

no data available

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid. Crystalline.
Color	no data available
Odour	Peppermint odor /dl-Menthol/
Melting point/ freezing point	36 - 40.7 °C. Atm. press.:1 013 hPa.
Boilingpoint or initial boiling point and boiling range	218.94 °C. Atm. press.:1 013 hPa.
Flammability	no data available
Lower and upper explosion limit/flammability limit	no data available

Flash point	94 °C. Atm. press.:102 kPa.
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	DMSO: 55 mg/mL (351.95 mM)
N-octanol-water partition coefficient	log Pow = 3.15. Temperature:25 °C.
Vapour pressure	19 Pa. Temperature:25 °C.
Density and/ or relative density	0.49 g/cm ³ . Temperature:20 °C.
Relative vapour density	5.4 (NTP, 1992) (Relative to Air)
Particle characteristics	no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

no data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Combustible liquid.D,L-MENTHOL is incompatible with butyl chloral hydrate, camphor, phenol, chloral hydrate, Exalgine, betanaphthol, resorcinol or thymol in triturations; potassium permanganate, chromium trioxide and pyrogallol. It is also incompatible with strong oxidizers. (NTP, 1992)

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

When heated to decomposition it emits acrid smoke and irritating fumes.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral: LD50 - mouse - 3.4 g/kg bw.Inhalation: no data availableDermal: LD50 - rabbit - > 5 000 mg/kg bw.

Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

STOT-single exposure

no data available

STOT-repeated exposure

no data available

Aspiration hazard

no data available

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish: LC0 - Danio rerio (previous name: Brachydanio rerio) - 13.2 mg/L - 96 h. Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna - 26.6 mg/L - 48 h. Toxicity to algae: EC50 - Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) - 20 mg/L - 72 h. Toxicity to microorganisms: EC50 - activated sludge - 237 mg/L.

12.2 Persistence and degradability

AEROBIC: Menthol, present at 100 mg/L, reached 0% of its theoretical BOD in 4 weeks using an activated sludge in a Culum at 30 mg/L in the Japanese MITI test(1). However, other reports indicate that DL-menthol is readily biodegradable(2).

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

Using a structure estimation method based on molecular connectivity indices(1), the K_{OC} of menthol can be estimated to be 88(SRC). According to a classification scheme(2), this estimated K_{OC} value suggests that menthol is expected to have high mobility in soil.

12.5 Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

13.1 Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

14. TRANSPORT INFORMATION

14.1 UN Number

no data available

14.2 UN Proper Shipping Name

no data available

14.3 Transport hazard class(es)

no data available

14.4 Packing group, if applicable

no data available

14.5 Environmental hazards

no data available

14.6 Special precautions for user

no data available

14.7 Transport in bulk according to IMO instruments

no data available

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question

European Inventory of Existing Commercial Chemical Substances (EINECS)	Listed.
EC Inventory	Listed.
United States Toxic Substances Control Act (TSCA) Inventory	Listed.
China Catalog of Hazardous chemicals 2015	Not Listed.
New Zealand Inventory of Chemicals (NZI ^o C)	Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Listed.
Vietnam National Chemical Inventory	Not Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)	Listed.
Korea Existing Chemicals List (KECL)	Not Listed.

16. OTHER INFORMATION

Information on revision

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Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home> HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.html> IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/eChemPortal> - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageSize=0&request_l_Cale=enCAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simpleChemIDplus>, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp> ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg> Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp> ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

Other Information

no data available

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. We as supplier shall not be held liable for any damage resulting from handling or from contact with the above product.

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