

Hexylene glycol SDS/MSDS (Safety Data Sheet)

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

- * Product Name: Hexylene glycol
- * Catalog Number: S3588
- * CAS Number: 107-41-5
- * IUPAC Name: 2,4-Pentanediol, 2-methyl-

Relevant identified uses and uses advised against

- * Identified uses: For research and development use only; laboratory chemicals; manufacture of substances.
- * Uses advised against: Not for pharmaceutical, household, or other unapproved uses.

Details of the supplier

- * Company: Selleck Chemicals
- * TollFree: +1 877 796-6397
- * Tel: +1 832 582-8158
- * Fax: +1 832 582-8590

Emergency telephone number

- * Emergency phone #: +1 832 582-8158

2. HAZARDS IDENTIFICATION

2.1 GHS classification in accordance with 29 CFR 1910 (OSHA HCS):

- Flammable liquids: Category 4. H227
- Skin irritation: Category 2. H315
- Serious eye irritation: Category 2. H319
- Specific target organ toxicity (single exposure): Category 3. H335
- Specific target organ toxicity (single exposure): Category 3. H336

2.2 GHS Label elements, including precautionary statements

Hazard Pictogram(s)



Signal Word

Warning

Hazard statement(s)

- H227: Combustible liquid
- H315: Causes skin irritation
- H319: Causes serious eye irritation
- H335: May cause respiratory irritation
- H336: May cause drowsiness or dizziness

Precautionary statement(s)

None.

Prevention	P210: Keep away from heat, hot surface, sparks, open flames and other ignition sources. No smoking. P261: Avoid breathing dust/fume/gas/mist/vapors/spray. P264: Wash hands thoroughly after handling. P264+P265: Wash hands thoroughly after handling. Do not touch eyes. P271: Use only outdoors or in a well-ventilated area. P280: Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
Response	P302+P352: IF ON SKIN: wash with plenty of water. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351: IF IN EYES: Rinse cautiously with water for several minutes. P319: Get medical help if you feel unwell. P321: Specific treatment (see information on this label and safety datasheet)). P332+P317: If skin irritation occurs: Get medical help. P337+P317: If eye irritation persists: Get medical help. P338: Remove contact lenses, if present and easy to do. Continue rinsing. P362+P364: Take off contaminated clothing and wash it before reuse. P370+P378: In case of fire: Use water spray, dry chemical, carbon dioxide, or appropriate foam to extinguish.
Storage	P403: Store in a well-ventilated place. P403+P233: Store in a well-ventilated place. Keep container tightly closed. P405: Store locked up.
Disposal	P501: P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards

None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Product name: Hexylene glycol
 CAS Number: 107-41-5
 PubChem CID: 7870
 Molecular formula: C₆H₁₄O₂
 Molecular weight: 118.17 g/mol
 IUPAC name: 2-methylpentane-2,4-diol

3.2 Mixtures

Not applicable (pure substance).

4. FIRST-AID MEASURES

4.1 Description of first aid measures

Inhalation: Fresh air, rest.
 Skin contact: Remove contaminated clothes. Rinse skin with plenty of water or shower.

Eye contact: First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

Ingestion: Rinse mouth. Give one or two glasses of water to drink. Refer for medical attention .

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 (Toxicological Information).

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Contact a poison control center or physician for severe exposure.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable: Water spray, dry chemical, carbon dioxide (CO₂), alcohol-resistant foam.

Unsuitable: None known.

5.2 Specific hazards arising from the substance or mixture

Fire Extinguishing Agents Not to Be Used: Water or foam may cause frothing.

Fire Extinguishing Agents: Alcohol foam, dry chemical, or carbon dioxide (USCG, 1999)

Use water spray, powder, alcohol-resistant foam, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

In case of fire: keep drums, etc., cool by spraying with water.

Use water spray, powder, alcohol-resistant foam, carbon dioxide.

Use water spray, alcohol - resistant foam, dry chemical or carbon dioxide.

5.3 Advice for firefighters

Wear self-contained breathing apparatus (SCBA) and full protective clothing.

Fight fire from upwind. Cool containers with water spray until fire is extinguished.

Flash point: 200 °F (USCG, 1999)

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear appropriate personal protective equipment (see Section 8).

Avoid breathing dust/vapor. Ensure adequate ventilation.

Evacuate personnel to safe areas. Keep people away from and upwind of spill.

6.2 Environmental precautions

Prevent product from entering drains, waterways, or soil.

Contain spill with inert absorbent material.

6.3 Methods and materials for containment and cleaning up

Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Ventilation. Collect leaking liquid in covered containers. Wash away remainder with plenty of water.

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Do not let product enter drains.

SRP: The most favorable course of action is to use an alternative chemical product with less inherent propensity for occupational harm/injury/toxicity or environmental contamination. Recycle any unused portion of the material for its approved use or return it to the manufacturer or supplier. Ultimate disposal of the chemical must consider: the material's impact on air quality; potential migration in soil or water; effects on animal and plant life; and conformance with environmental and public health regulations.

SRP: Wastewater from contaminant suppression, cleaning of protective clothing/equipment, or contaminated sites should be contained and evaluated for subject chemical or decomposition product concentrations. Concentrations shall be lower than applicable environmental discharge or disposal criteria. Alternatively, pretreatment and/or discharge to a permitted wastewater treatment facility is acceptable only after review by the governing authority and assurance that "pass through" violations will not occur. Due consideration shall be given to remediation worker exposure (inhalation, dermal and ingestion) as well as fate during treatment, transfer and disposal. If it is not practicable to manage the chemical in this fashion, it must be evaluated in accordance with EPA 40 CFR Part 261, specifically Subpart B, in order to determine the appropriate local, state and federal requirements for disposal.

DISPOSAL : Recover or recycle if possible. Otherwise : incineration

Personal protection: filter respirator for organic gases and vapors adapted to the airborne concentration of the substance. Ventilation. Collect leaking liquid in covered containers. Wash away remainder with plenty of water.

For more Disposal Methods (Complete) data for 2-METHYL-2,4-PENTANEDIOL (6 total), please visit the HSDB record page.

SRP: The scientific literature for the use of contact lenses by industrial workers is inconsistent. The benefits or detrimental effects of wearing contact lenses depend not only upon the substance, but also on factors including the form of the substance, characteristics and duration of the exposure, the uses of other eye protection equipment, and the hygiene of the lenses. However, there may be individual substances whose irritating or corrosive properties are such that the wearing of contact lenses would be harmful to the eye. In those specific cases, contact lenses should not be worn. In any event, the usual eye protection equipment should be worn even when contact lenses are in place.

SRP: Contaminated protective clothing should be segregated in a manner such that there is no direct personal contact by personnel who handle, dispose, or clean the clothing. The completeness of the cleaning procedures should be considered before the decontaminated protective clothing is returned for reuse by the workers.

Contaminated clothing should not be taken home at the end of shift, but should remain at employee's place of work for cleaning.

SRP: Local exhaust ventilation should be applied wherever there is an incidence of point source emissions or dispersion of regulated contaminants in the work area. Ventilation control of the contaminant as close to its point of generation is both the most economical and safest method to minimize personnel exposure to airborne contaminants. Ensure that the local ventilation moves the contaminant away from the worker.

The worker should immediately wash the skin when it becomes contaminated.

For more Preventive Measures (Complete) data for 2-METHYL-2,4-PENTANEDIOL (11 total), please visit the HSDB record page.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Separated from strong oxidants and strong acids.

Keep container tightly closed in a dry and well-ventilated place. Store under inert gas. hygroscopic

Separated from strong oxidants and strong acids.

7.2 Conditions for safe storage, including any incompatibilities

Separated from strong oxidants and strong acids.

Keep container tightly closed in a dry and well-ventilated place. Store under inert gas. hygroscopic

Separated from strong oxidants and strong acids.

Store away from incompatible materials (see Section 10).

[Note: Specific storage temperature not available in public databases. Refer to supplier Certificate of Analysis (COA) for exact storage conditions.]

Store in original container. Keep upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure controls

8.1.1 Occupational exposure limits (OEL)

49 mg/m

8.1.2 Appropriate engineering controls

Use only in a chemical fume hood or with local exhaust ventilation.

Ensure adequate ventilation to keep airborne concentrations below exposure limits.

8.2 Individual protection measures

8.2.1 Eye/face protection

Wear chemical safety goggles.

8.2.2 Skin protection

Wear protective gloves. Recommended material: Nitrile rubber.

Wear suitable protective clothing (lab coat).

8.2.3 Respiratory protection

Use NIOSH-approved dust/mist respirator (N95 or higher) if ventilation is inadequate.

8.2.4 Thermal hazards

Not applicable.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance: Hexylene glycol is an oily colorless liquid with a mild sweet odor. Floats and mixes slowly with water. (USCG, 1999)

b) Odor: Mild sweetish

c) Odor threshold: No data available

d) pH: No data available

e) Melting point/freezing point: -58 °F (USCG, 1999)

f) Initial boiling point and boiling range: 387 °F at 760 mmHg (USCG, 1999)

g) Flash point: 200 °F (USCG, 1999)

h) Evaporation rate: No data available

i) Flammability (solid, gas): No data available

j) Upper/lower flammability or explosive limits: No data available

k) Vapor pressure: 0.05 mmHg (NIOSH, 2024)

l) Vapor density: No data available

m) Relative density: 0.923 at 68 °F (USCG, 1999) - Less dense than water; will float

n) Water solubility: Miscible (NIOSH, 2024)

- o) Partition coefficient: n-octanol/water: Log P (n-octanol/water): 0.3
- p) Auto-ignition temperature: 583 °F (USCG, 1999)
- q) Decomposition temperature: No data available
- r) Viscosity: 34 cP at 20 °C
- s) Explosive properties: No data available
- t) Oxidizing properties: No data available

9.2 Other information

Topological Polar Surface Area (TPSA): 40.5 Å²
Complexity: 68

10. STABILITY AND REACTIVITY

10.1 Reactivity

No specific reactivity hazards identified under normal handling conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions under normal conditions.

10.4 Conditions to avoid

Avoid heat, sparks, open flames, direct sunlight, and moisture.

10.5 Incompatible materials

Can react with oxidizing materials.

Strong oxidizers, strong acids [Note: Hygroscopic (i.e., absorbs moisture from the air)].

Incompatible materials: Strong acids, Strong oxidizing agents, Strong reducing agents.

Strong oxidizers, strong acids [Note: Hygroscopic (i.e., absorbs moisture from the air).]

10.6 Hazardous decomposition products

Thermal decomposition may produce: Carbon monoxide (CO), Carbon dioxide (CO₂).

See also Section 5 (Fire-fighting measures) for combustion products.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:

No acute toxicity data available.

Skin corrosion/irritation:

Causes skin irritation (H315).

Serious eye damage/eye irritation:

Causes serious eye irritation (H319).

Respiratory or skin sensitization:

No data available.

Germ cell mutagenicity:

No data available.

Carcinogenicity:

No data available.

Reproductive toxicity:

No data available.

Specific target organ toxicity (single exposure):

No data available.

Specific target organ toxicity (repeated exposure):

No data available.

Aspiration hazard:

No data available.

11.2 Additional information

Exposure routes:

The substance can be absorbed into the body by inhalation of its aerosol.

inhalation, ingestion, skin and/or eye contact

Signs and symptoms of exposure:

Sore throat. Cough.

Dry skin. Redness.

Redness. Pain.

irritation eyes, skin, respiratory system; headache, dizziness, nausea, incoordination, central nervous system depression; dermatitis, skin sensitization

Data source: Hazardous Substances Data Bank (HSDB) via PubChem.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

LC50; Species: Alburnus alburnus (bleak); Conditions: /saltwater, static, 10 °C, pH 7.8/; Concentration: 8000 mg/L for 96 hr

LC50; Species: /Oncorhynchus mykiss/ (Rainbow trout); Conditions: flow through, 11.4 °C, pH 7.99, dissolved oxygen 8.76 mg/L; Concentration: 9450 mg/L for 96 hr (95% confidence limit: 8820-10100 mg/L)

LC50; Species: Pimephales promelas (fathead minnow) weight 0.22 g; Conditions: flow through, 18.7 °C, pH mean 7.95, dissolved oxygen 6.27 mg/L; Concentration: 8690 mg/L for 96 hr

LC50; Species: Lepomis macrochirus (bluegill sunfish) mean weight 0.53 g; Conditions: flow through, 17.4 °C, pH 8.02, dissolved oxygen 6.47 mg/L; Concentration: 12,800 mg/L for 96 hr (95% confidence limits: 11,200-14,600 mg/L)

For more Ecotoxicity Values (Complete) data for 2-METHYL-2,4-PENTANEDIOL (21 total), please visit the HSDB record page.

/AQUATIC SPECIES/ In the mitotic sea urchin egg, the spindle microtubules were composed of different tubulin isotypes from those of astral microtubules using monoclonal antibodies. Three of the antibodies, D2D6, DM1B, and YL1/2, were specific for spindle microtubules, astral microtubules and reactive with both microtubules, respectively. The mitotic sea urchin egg was treated with microtubule depolymerizing (colcemid and nocodazole) and stabilizing (hexylene glycol) drugs and change in the heterogeneous distribution of the tubulin isotypes was investigated by the immunofluorescence procedure using these three monoclonal anti-tubulin antibo

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

Log P (n-octanol/water): 0.3

Low potential for bioaccumulation (Log P < 3).

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available.

12.6 Other adverse effects

No other adverse ecological effects identified.

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods**

Waste Treatment Methods: Waste material must be disposed of in accordance with national and local regulations. Leave chemicals in original containers and do not mix with other waste. Handle uncleaned containers in the same manner as the product itself.

14. TRANSPORT INFORMATION**14.1 UN number**

Not regulated as dangerous goods (research quantities typically exempt).

14.2 UN proper shipping name

Not subject to transport regulations (small quantities for research use).

14.3 Transport hazard class(es)

Not classified as dangerous goods for transport (research quantities).

14.4 Packing group

Not applicable (not regulated as dangerous goods in typical research quantities).

14.5 Environmental hazards

Marine pollutant: No (not classified as environmentally hazardous per GHS).

14.6 Special precautions for user

Transport in original packaging. Ensure containers are tightly sealed.

For bulk or commercial quantities, consult applicable transport regulations (DOT, IATA, IMDG).

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

US EPA / TSCA: Subject to EPA TSCA regulations

EU ECHA / REACH: Registered (REACH Active)

SARA 302 Components:

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components:

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards:

Acute (short-term) health hazard

Fire hazard

Massachusetts Right To Know Components:

This material contains components subject to the Massachusetts Right to Know Act. See Section 2 for hazard classification.

Pennsylvania Right To Know Components:

This material contains components subject to the Pennsylvania Right to Know Act. See Section 2 for hazard classification.

New Jersey Right To Know Components:

This material contains components subject to the New Jersey Right to Know Act. See Section 2 for hazard classification.

California Prop. 65 Components:

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Other regulatory listings:

- The Australian Inventory of Industrial Chemicals: Chemical: 2,4-Pentanediol, 2-methyl-
- The Australian Inventory of Industrial Chemicals: Chemical: C.I. Acid Red 299
- New Jersey Worker and Community Right to Know Act: The New Jersey Worker and Community Right to Know Act requires public and private employers to provide information about hazardous substances at their workplaces. (N.J.S.A. 34:5A-1 et. seq.)
- FIFRA Requirements: Residues of 2-methyl-2,4-pentanediol are exempted from the requirement of a tolerance when used in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to growing crops or to raw agricultural commodities after harvest. Use: Growin

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out for this substance.

For research-use-only compounds, no CSA is required under REACH Annex I.

16. OTHER INFORMATION

Revision Date: 2026/09/09

Further Information: The information provided is believed to be correct but is not exhaustive and should be used only as a guideline based on current knowledge. It does not represent a guarantee of the properties of the product.

Selleck Chemicals Corporation and its Affiliates shall not be held liable for any damage resulting from handling or

contact with the product.