

(±)-Glycidol-1,1,2,3,3-d₅

Section 1. Chemical product and company identifications

Product code: D-7483

Chemical formula: C₃HD₅O₂

CAS: 1246819-20-4

CAS (unlabelled): 556-52-5

Synonyms: (±)-2,3-Epoxy-1-propanol; 3-Hydroxypropylene Oxide

Supplier / Manufacturer:

C/D/N Isotopes Inc.

88 Leacock Street

Pointe-Claire (Québec) H9R 1H1

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Website: www.cdnisotopes.com

In case of emergency:

TOXYSKAN HOTLINE: 1-855-780-0599

Section 2. Hazards identifications

GHS (Globally Harmonized System of Classification and Labelling of Chemicals):

GHS Classification:

- Flammable liquids (Category 4)
- Acute toxicity, Oral (Category 4)
- Acute toxicity, Dermal (Category 4)
- Acute toxicity, Inhalation (Category 2)
- Skin irritation (Category 2)
- Serious eye damage (Category 1)
- Germ cell mutagenicity (Category 2)
- Carcinogenicity (Category 1B)
- Reproductive toxicity (Category 1B)
- Specific target organ toxicity - single exposure (Category 3), Respiratory system

GHS Label elements:

- Pictograms: 
- Signal word: Danger

Hazards statement:

- H227 Combustible liquid.
- H302 + H312 Harmful if swallowed or in contact with skin.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H330 Fatal if inhaled.
- H335 May cause respiratory irritation.
- H341 Suspected of causing genetic defects.
- H350 May cause cancer.
- H360 May damage fertility or the unborn child.

Precautionary statement:

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
- P264 Wash skin thoroughly after handling
- P270 Do not eat, drink or smoke when using this product
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P284 Wear respiratory protection
- P301 + P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.
- P302 + P350 IF ON SKIN: Wash with plenty of soap and water.
- P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308 + P313 IF exposed or concerned: Get medical advice/ attention.
- P330 Rinse mouth.
- P332 + P313 If skin irritation occurs: Get medical advice/ attention.
- P337 + P313 If eye irritation persists: Get medical advice/ attention.
- P362 + P364 Take off contaminated clothing and wash it before reuse.
- P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up
- P501 Dispose of contents/ container to an approved waste disposal plant.

Section 3. Composition and information on ingredients

<u>Name</u>	<u>CAS</u>	<u>Concentration %</u>
(±)-Glycidol-1,1,2,3,3-ds	1246819-20-4	> 98

Section 4. First aid measures

Eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin contact: Wash off with soap and plenty of water. Consult a physician.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Indication of immediate medical attention and special treatment needed, if necessary: No data available

Most important symptoms and effects, both acute and delayed: Coughing and/ or wheezing. Difficulty in breathing. May cause redness and tearing of the eyes. Burning sensation.

Section 5. Firefighting measures

Flammability of the product: Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.

Products of combustion: Hazardous decomposition products formed under fire conditions: Carbon oxides.

Firefighting media and instructions: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Section 6. Accidental release measures

Personal precautions: Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition.

Environmental precautions: Do not let product enter drains.

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

Section 7. Handling and storage

Handling: Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Provide appropriate exhaust ventilation. Keep away from sources of ignition - No smoking.

Storage: STORE FROZEN. Adequate ventilation. Protect from heat and ignition sources.

Section 8. Exposure Controls, Personal Protections

Engineering controls: Use mechanical exhaust or laboratory fumehood to avoid exposure.

Eyes: Safety glasses with side-shields conforming to NIOSH (US) or EN 166 (EU).

Respiratory: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US).

Hands: Handle with gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Skin/body: Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Section 9. Physical and chemical properties (unlabelled)

Molecular weight: 74.08 g/mol

Physical status: Liquid

Color: Colorless

Odour: No data available

Density: 1.117 g/mL

Melting point: - 54 °C (-65 °F)

Boiling point: 61 - 62 °C (142 - 144 °F) at 20 hPa (15 mmHg)

Vapour pressure: 1.2 hPa (0.9 mmHg) at 25 °C (77 °F)

Vapour density: 2.97 (Air = 1)

Partition coefficient (octanol/water): log Pow: -0.95

Water solubility: Soluble

Lower explosion limit: No data available.

Upper explosion limit: No data available.

Auto-ignition temperature: 415 °C (779 °F)

Flash point: 72 °C (162 °F)

Section 10. Stability and reactivity

Stability and reactivity: Stable under recommended storage conditions.

Incompatibility: Strong oxidizing agent, strong acids, strong bases.

Products of combustion: Hazardous decomposition products formed under fire conditions: Carbon oxides.

Reactivity conditions: Heat, flames and sparks.

Section 11. Toxicological information (unlabelled)

Toxicological data: Glycidol

Information on ingredients:

Name	CAS	LD₅₀	LC₅₀
Glycidol	556-52-5	Oral - Rat - 420 mg/kg Dermal - Rabbit - 1,980 mg/kg	Inhalation - Rat - 8 h - 580 ppm

Potential acute effects

- **Eyes:** Causes serious eye damage.
- **Skin:** Harmful in contact with skin. Causes skin irritation.
- **Inhalation:** Fatal if inhaled. May cause respiratory tract irritation.
- **Ingestion:** Harmful if swallowed.

Potential chronic effects

- **Carcinogenic effects:** Carcinogenicity - Mouse - Oral. Tumorigenic: Carcinogenic by RTECS criteria. Gastrointestinal: Tumors. Skin and Appendages: Other: Tumors. Carcinogenicity - Rat - Oral. Tumorigenic: Carcinogenic by RTECS criteria. Gastrointestinal: Tumors. Skin and Appendages: Other: Tumors. Possible human carcinogen. IARC: 2A - Group 2A: Probably carcinogenic to humans (Glycidol). ACGIH: A3 - Animal carcinogen.
- **Mutagenic effects:** In vitro tests showed mutagenic effects. Genotoxicity in vitro - Mouse - lymphocyte. Mutation in mammalian somatic cells. Genotoxicity in vitro - Hamster - ovary. Cytogenetic analysis. Genotoxicity in vitro - Hamster - Lungs. Mutation in mammalian somatic cells. Genotoxicity in vitro - Hamster - Embryo. Morphological transformation. Genotoxicity in vitro - Hamster - Lungs. Sister chromatid exchange. Genotoxicity in vitro - Hamster - ovary. Sister chromatid exchange. Genotoxicity in vitro - Human - lymphocyte. Sister chromatid exchange. Genotoxicity in vitro - Human - lymphocyte. Cytogenetic analysis. Genotoxicity in vivo - Rat - Intraperitoneal. Cytogenetic analysis. Genotoxicity in vivo - Rat - Oral. Cytogenetic analysis.
- **Teratogenic effects:** Developmental Toxicity - Mouse - Oral. Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Presumed human reproductive toxicant.
- **Medical conditions aggravated by overexposure:** Central nervous system depression.

Section 12. Ecological information

Ecological data:

Name	Results	Species	Period
Glycidol	No data available		

Effects on environment: No data available.

Mobility: No data available.

Environmental precautions: No data available.

Persistence and degradability: No data available.

Bioaccumulative potential: No data available.

Section 13. Disposal considerations

Waste disposal: Contact a licensed professional waste disposal service to dispose of this material.

Section 14. Transportation information

Classification DOT/IMDG/IATA label:

Shipping name: Toxic liquid, organic, n.o.s. (Glycidol)

UN number: UN2810

Class: 6.1

Packaging group: III

Additional information: None

Section 15. Regulatory information

UNITED STATES:

NFPA classification



Health: 3
Flammable: 2
Reactivity: 0
Special conditions: None

Legend: 4: Severe, 3: High, 2: Moderate, 1: Slightly, 0: Not hazardous

U.S. Federal regulations:

California proposition 65 requirements : Not Listed

SARA section 313 (specific toxic chemical listings) : Not listed

CERCLA reportable quantity : Not listed

Sections 302-304 reportable quantity : Not listed

Community Right-to-Know (Sections 311 and 312) : Not Listed

Section 16. Additional information

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Elaborated by: Toxyscan Inc., 1-866-780-0599

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This safety data sheet has been prepared in accordance with the OSHA (USA), WHMIS (Canada) / GHS classification rules in effect at the time of writing.