

## Acetaldehyde-2,2,2-d<sub>3</sub>

### Section 1. Chemical product and company identifications

**Product code:** D-0682  
**Chemical formula:** C<sub>2</sub>HD<sub>3</sub>O  
**CAS:** 19901-15-6  
**CAS (unlabelled):** 75-07-0  
**Synonyms:** Ethanal

**Supplier / Manufacturer:**

**C/D/N Isotopes Inc.**  
88 Leacock Street  
Pointe-Claire (Québec) H9R 1H1  
Phone: 514-697-6254  
Toll-Free (Canada & USA): 1-800-565-4696  
Fax: 514-697-6148  
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 1)
- Acute toxicity, Oral (Category 4)
- Eye irritation (Category 2A)
- Germ Cell Mutagenicity (Category 2)
- Carcinogenicity (Category 2)
- Specific target organ toxicity - single exposure (Category 3), Respiratory system

**GHS Label elements:**

- Pictograms:   
- Signal word: Danger

**Hazards statement:**

- H224 Extremely flammable liquid and vapour.
- H302 Harmful if swallowed.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H341 Suspected of causing genetic defects.
- H351 Suspected of causing cancer.

**Precautionary statement:**

- P201 Obtain special instruction before use
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat/ hot surfaces/ spark/ open flames/ ignition sources. No smoking.
- P233 keep container tightly closed
- P240 Ground and bond container and receiving equipment
- P241 Use explosion – proof electrical / ventilating/ lighting/ equipment
- P242 Use non-sparking tools
- P243 Take action to prevent static discharge
- P264 Wash skin thoroughly after handling
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P301 + P312 IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell.
- P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+ P361+P353 IF SKIN: Take off immediately all contaminated clothing. Rinse skin with water.
- 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.
- P337 + P313 IF eye irritation persists: Get medical advice/attention.
- P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
- P403 + P235 Store in a well-ventilated place. Keep cool.

- 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>
Acetaldehyde-2,2,2-d <sub>3</sub>	19901-15-6	> 96

### **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:** No data available.

### **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. Dry powder

**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. Discharge into the environment must be avoided.

**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 REFRIGERATED. Adequate ventilation. Protect from heat and ignition sources. Protect from air and moisture.

### **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. (Recommended gloves material: butyl-rubber)

**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:** 44.05 g/mol

**Physical status:** Liquid

**Color:** Colorless

**Odour:** Pungent

**Density:** 0.785 g/cm<sup>3</sup>

**Melting point:** -125 °C (-193 °F)

**Boiling point:** 21 °C (70 °F)

**Vapour pressure:** 986 hPa (740 mmHg) at 20 °C (68 °F)

**Vapour density:** 1.52 (Air = 1)

**Partition coefficient (octanol/water):** log Pow: -0.34

**Water solubility:** Completely miscible

**Lower explosion limit:** 4 Vol%  
**Upper explosion limit:** 60 Vol%  
**Auto-ignition temperature:** 140 °C (284 °F)  
**Flash point:** -39 °C (-38 °F)

## **Section 10. Stability and reactivity**

**Stability and reactivity:** Stable under recommended storage conditions. Vapors may form explosive with air

**Incompatibility:** Strong oxidizing/reducing agents.

**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:** Acetaldehyde

**Information on ingredients:**

<b>Name</b>	<b>CAS</b>	<b>LD<sub>50</sub></b>	<b>LC<sub>50</sub></b>
Acetaldehyde	75-07-0	Oral - Rat - 661 mg/kg Oral - Mouse - 900 mg/kg Dermal - Rabbit - 3,540 mg/kg	Inhalation - Rat - 4 h - 13,300 ppm

### **Potential acute effects**

- **Eyes:** Causes serious irritation.
- **Skin:** No data available.
- **Inhalation:** No data available.
- **Ingestion:** Harmful if swallowed.

### **Potential chronic effects**

- **Carcinogenic effects:** This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification. Limited evidence of carcinogenicity in animal studies. IARC: 2B - Group 2B: Possibly carcinogenic to humans (Acetaldehyde).
- **Mutagenic effects:** Laboratory experiments have shown mutagenic effects.
- **Teratogenic effects:** No data available.
- **Medical conditions aggravated by overexposure:** No data available.

## **Section 12. Ecological information**

**Ecological data:**

<b>Name</b>	<b>Results</b>	<b>Species</b>	<b>Period</b>
Acetaldehyde	31 mg/l LC50	Pimephales promelas	96 h
	57.4 mg/l EC50	Daphnia magna	48 h
	>100 mg/l EC50	Pseudokirchneriella subcapitata	24 h

**Effects on environment:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

**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:** Acetaldehyde

**UN number:** UN1089

**Class:** 3

**Packaging group:** I

**Additional information:** None

## **Section 15. Regulatory information**

### **UNITED STATES: NFPA classification**



Health: 2  
Flammable: 4  
Reactivity: 2  
Special conditions: None

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

### **U.S. Federal regulations:**

**California proposition 65 requirements** : Listed  
**SARA section 313 (specific toxic chemical listings)** : 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**

**Date of issue:** April 7<sup>th</sup>, 2025

**Version:** 5

**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.