

## Toluene-d<sub>8</sub>

### Section 1. Chemical product and company identifications

**Product code:** D-0040

**Chemical formula:** C<sub>7</sub>D<sub>8</sub>

**CAS:** 2037-26-5

**CAS (unlabelled):** 108-88-3

**Synonyms:** Methylbenzene, Toluol

**Supplier / Manufacturer:**

**C/D/N Isotopes Inc.**

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**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 2)
- Acute toxicity, Oral (Category 4)
- Skin irritation (Category 2)
- Eye irritation (Category 2A)
- Reproductive toxicity (Category 2)
- Specific target organ toxicity - single exposure (Category 3), Central nervous system
- Specific target organ toxicity - repeated exposure (Category 2)
- Aspiration hazard (Category 1)

**GHS Label elements:**

- Pictograms:   
- Signal word: Danger

**Hazards statement:**

- H225 Highly flammable liquid and vapour.
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.
- H361 Suspected of damaging fertility or the unborn child.
- H373 May cause damage to organs through prolonged or repeated exposure.

**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.
- 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 discharges.
- P260 Do not breathe the mist or vapours.
- 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.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
- P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
- 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.
- P331 Do NOT induce vomiting.
- 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.
- 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>
Toluene-d <sub>8</sub>	2037-26-5	99-100%

### **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:** Because of the danger of aspiration, emesis or gastric lavage should not be used unless the risk is justified by the presence of additional toxic substance.

**Most important symptoms and effects, both acute and delayed:** Difficulty in breathing. Coughing and/ or wheezing. Dizziness. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

### **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. 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 at room temperature. 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:** 92.14 g/mol  
**Physical status:** Liquid  
**Color:** Clear  
**Odour:** Aromatic  
**Density:** 0.865 g/ml  
**Melting point:** -95 °C (-139 °F)  
**Boiling point:** 110 - 111 °C (230 - 232 °F)  
**Vapour pressure:** 29 hPa (22 mmHg) at 20 °C (68 °F)  
**Vapour density:** 3.1 (Air = 1)  
**Partition coefficient (octanol/water):** log Pow: 2.73  
**Water solubility:** 0.53 g/L  
**Lower explosion limit:** 1.1 Vol%  
**Upper explosion limit:** 7.1 Vol%  
**Auto-ignition temperature:** 535 °C (995 °F)  
**Flash point:** 4 °C (39 °F)

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

**Stability and reactivity:** Stable under recommended storage conditions.  
**Incompatibility:** Strong oxidizing 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:** Toluene

### **Information on ingredients:**

<b><u>Name</u></b>	<b><u>CAS</u></b>	<b><u>LD<sub>50</sub></u></b>	<b><u>LC<sub>50</sub></u></b>
Toluene	108-88-3	Oral - Rat - 636 mg/kg	Inhalation - Rat - 4 h - 49,000 mg/m <sup>3</sup>

### **Potential acute effects**

- **Eyes:** Causes serious eye irritation.
- **Skin:** Causes skin irritation.
- **Inhalation:** Vapours may cause drowsiness and dizziness.
- **Ingestion:** Harmful if swallowed. Aspiration hazard if swallowed - can enter lungs and cause damage.

### **Potential chronic effects**

- **Carcinogenic effects:** This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification. IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Toluene). ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- **Mutagenic effects:** No data available.
- **Teratogenic effects:** Suspected of damaging the unborn child. Suspected human reproductive toxicant.
- **Medical conditions aggravated by overexposure:** May cause damage to organs through prolonged or repeated exposure.

## **Section 12. Ecological information**

### **Ecological data:**

<b><u>Name</u></b>	<b><u>Results</u></b>	<b><u>Species</u></b>	<b><u>Period</u></b>
Toluene	25 mg/l LC50	Oryzias latipes	96 h
	4.1 mg/l EC50	Daphnia magna	48 h
	29 mg/l EC50	Selenastrum capricornutum	72 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:** Aerobic. Result: 86 % - Readily biodegradable.

**Bioaccumulative potential:** Leuciscus idus - 3 d - 0.05 mg/l. Bioconcentration factor (BCF): 90.

## **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:** Toluene

**UN number:** UN1294

**Class:** 3

**Packaging group:** II

**Additional information:** None

## **Section 15. Regulatory information**

### **UNITED STATES:**

#### **NFPA classification**



Health: 2  
Flammable: 3  
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 :** Listed

**SARA section 313 (specific toxic chemical listings) :** Listed

**CERCLA reportable quantity :** Listed

**Sections 302-304 reportable quantity :** Listed

**Community Right-to-Know (Sections 311 and 312) :** Listed

## **Section 16. Additional information**

**Date of issue:** September 25<sup>th</sup>, 2025

**Version:** 4

**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.*