



# Safety Data Sheet

## 2-Pyrrolidinone-3,3,4,4,5,5-d<sub>6</sub>

### **Section 1. Chemical product and company identifications**

**Product code:** D-2200

**Chemical formula:** C<sub>4</sub>HD<sub>6</sub>NO

**CAS:** 70607-84-0

**CAs (unlabelled):** 616-45-5

**Synonyms:** 2-Pyrrolidone, Butyrolactam

**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:**

- Acute toxicity, Oral (Category 4)
- Skin irritation (Category 2)
- Eye irritation (Category 2A)

**GHS Label elements:**

- Pictograms: 
- Signal word: Warning

**Hazards statement:**

- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.

**Precautionary statement:**

- P264 Wash skin thoroughly after handling.
- P265 Do not touch eyes.
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P301 + P312 + P330 IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell. Rinse mouth.
- P302 + P352 IF ON SKIN: Wash with plenty of soap and 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.
- 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.
- 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>
2-Pyrrolidinone-3,3,4,4,5,5-d <sub>6</sub>	70607-84-0	> 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:** 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.

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

**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.

**Storage:** Store at room temperature. Adequate ventilation. Protect from 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.

**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:** 85.10 g/mol

**Physical status:** Liquid or low melting solid

**Color:** Colorless to light yellow

**Odour:** No data available

**Density:** 1.12 g/mL

**Melting point:** 23 - 25 °C (73 - 77 °F)

**Boiling point:** 245 °C (473 °F)

**Vapour pressure:** No data available

**Vapour density:** No data available

**Partition coefficient (octanol/water):** log Pow: -0.85

**Water solubility:** Very soluble

**Lower explosion limit:** 1.8 Vol%

**Upper explosion limit:** 16.6 Vol%

**Auto-ignition temperature:** 390 °C (734 °F)

**Flash point:** 138 °C (280 °F)

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

**Stability and reactivity:** Stable under recommended storage conditions.

**Incompatibility:** Strong oxidizing agents, strong acids, strong bases, strong reducing agents.

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

**Reactivity conditions:** No data available.

## **Section 11. Toxicological information (unlabelled)**

**Toxicological data:** 2-Pyrrolidinone

### **Information on ingredients:**

<u>Name</u>	<u>CAS</u>	<u>LD<sub>50</sub></u>	<u>LC<sub>50</sub></u>
2-Pyrrolidinone	616-45-5	Oral - Rat - 328 mg/kg	No data available

### **Potential acute effects**

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

### **Potential chronic effects**

- **Carcinogenic effects:** IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. 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:** No data available.
- **Medical conditions aggravated by overexposure:** No data available.

## **Section 12. Ecological information**

### **Ecological data:**

<u>Name</u>	<u>Results</u>	<u>Species</u>	<u>Period</u>
2-Pyrrolidinone	4,600 - 10,000 mg/l LC50	Danio rerio	96 h
	> 500 mg/l EC50	Daphnia magna	48 h
	> 500 mg/l	Desmodesmus subspicatus	48 h

**Effects on environment:** No data available.

**Mobility:** No data available.

**Environmental precautions:** No data available.

**Persistence and degradability:** Aerobic. Result: ca. 98 % - Readily biodegradable. Method: OECD Test guideline 301B.

**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:** Not dangerous goods

**UN number:** None

**Class:** None

**Packaging group:** None

**Additional information:** None

## **Section 15. Regulatory information**

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



Health: 2  
Flammable: 1  
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**

**Date of issue:** May 30<sup>th</sup>, 2024

**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.*