

Uranyl Acetate Di-Hydrate SDS

1. IDENTIFICATION

Product identifier: Uranyl Acetate Dihydrate

Synonyms: Uranyl acetate

CAS No.: 6159-44-0

EC No.: 208-767-5

Index No.: 092-002-00-3

Molecular formula: $\text{UO}_2(\text{CH}_3\text{COO})_2 \cdot 2\text{H}_2\text{O}$

Molecular weight: 424.15 g/mol

Recommended use: Laboratory chemical; manufacture of substances

Restrictions on use: Radioactive material. For trained and authorized personnel only.

Supplier:

International Bio-Analytical Industries, Inc.

3495 N. Dixie Hwy., Unit #8

Boca Raton, FL 33431

Tel: 561-826-0061

Fax: 561-892-8450

Emergency telephone numbers:

INFOTRAC (USA & Canada): 1-800-535-5053

INFOTRAC (International): 1-352-323-3500

2. HAZARD(S) IDENTIFICATION

- Classification (OSHA Hazard Communication Standard, GHS)
- Acute toxicity (oral), Category 2
- Acute toxicity (inhalation), Category 2
- Specific target organ toxicity – repeated exposure, Category 2
- Aquatic acute toxicity, Category 2
- Aquatic chronic toxicity, Category 2

GHS Label Elements

Pictograms:



Signal word: Danger

Hazard statements:

H300 + H330: Fatal if swallowed or if inhaled.

H373: May cause damage to organs (kidneys) through prolonged or repeated exposure.

H401: Toxic to aquatic life.

H411: Toxic to aquatic life with long-lasting effects.

Precautionary statements:

P260: Do not breathe dust or mist.

P264: Wash 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.

P284: Wear respiratory protection.

P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or physician.

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P330: Rinse mouth.

P391: Collect spillage.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.

P501: Dispose of contents/container in accordance with local, regional, national, and international regulations.

Hazards not otherwise classified (HNOC):

Contains radioactive uranium isotopes. External and internal radiation hazard. Radiation hazard symbols are regulated separately from GHS.

3. COMPOSITION/INFORMATION ON INGREDIENTS

- Component: Bis(acetato-O)dioxouranium dihydrate
- CAS No.: 6159-44-0
- Concentration: ≥99%
- Classification: Acute Tox. 2 (H300, H330); STOT RE 2 (H373); Aquatic Acute 2 (H401); Aquatic Chronic 2 (H411)

4. FIRST-AID MEASURES

- **General advice:** Seek immediate medical attention. Show this SDS to medical personnel.
- **Inhalation:** Move to fresh air immediately. If breathing has stopped, give artificial respiration. Obtain medical attention immediately.
- **Skin contact:** Wash immediately with soap and plenty of water. Remove contaminated clothing. Seek medical attention.
- **Eye contact:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses if present and easy to do. Seek medical attention.
- **Ingestion:** Rinse mouth. Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Most important symptoms/effects: Severe chemical toxicity affecting kidneys and other organs. Delayed effects possible due to radiological exposure.

5. FIRE-FIGHTING MEASURES

- **Suitable extinguishing media:** Use extinguishing media appropriate for surrounding fire.
- **Specific hazards:** Thermal decomposition may produce uranium oxides and carbon oxides.
- **Protective equipment:** Firefighters must wear self-contained breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

- **Personal precautions:** Evacuate area. Wear appropriate PPE including respiratory protection. Avoid dust generation.
- **Environmental precautions:** Prevent entry into drains, soil, and waterways.
- **Methods for cleanup:** Collect material carefully without generating dust. Place in sealed containers for disposal as radioactive hazardous waste.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin and eyes. Avoid dust formation. Use local exhaust ventilation. Follow radiation safety procedures.

Storage: Store securely in a dry, well-ventilated area. Store locked up. Segregate from incompatible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limits:

OSHA PEL (uranium, soluble compounds): 0.05 mg/m³ (TWA)

ACGIH TLV (uranium, soluble compounds): 0.2 mg/m³ (TWA)

Engineering controls: Local exhaust ventilation. Radiation shielding and monitoring as required.

Personal protective equipment:

Eye/face: Safety glasses and a face shield

Skin: Nitrile gloves; chemical-resistant protective clothing

Respiratory: NIOSH-approved N100 or supplied-air respirator if limits exceeded

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Yellow crystalline solid

Odor: Slight acetic acid odor

Density: 2.89 g/cm³

Melting point: Decomposes

Decomposition temperature: ~275 °C

Solubility: Soluble in water

10. STABILITY AND REACTIVITY

Reactivity: Weakly acidic

Chemical stability: Stable under recommended storage conditions

Incompatible materials: Strong oxidizing agents

Hazardous decomposition products: Uranium oxides, carbon oxides

11. TOXICOLOGICAL INFORMATION

LD₅₀ (oral, rat): ~204 mg/kg

LD₅₀ (subcutaneous, rat): ~8.3 mg/kg

STOT – repeated exposure: Kidney damage

Carcinogenicity: Cancer risk associated with internal radioactive exposure

Delayed effects possible.

12. ECOLOGICAL INFORMATION

Toxic to aquatic life with long-lasting effects.

13. DISPOSAL CONSIDERATIONS

Dispose of contents and containers as radioactive hazardous waste in accordance with federal, state, and local regulations.

14. TRANSPORT INFORMATION

Transport as **Radioactive Material, Class 7**, subject to DOT, IATA, and IMDG regulations.

UN number, proper shipping name, and packing requirements **depend on radioactive activity, physical form, and license conditions** and must be determined for each shipment.

Proper Shipping Name:

Hazard Class:

UN/ID Number: To be determined on a case-by-case basis.

Special Information:

Packing Group:

15. REGULATORY INFORMATION

OSHA HazCom: Hazardous

SARA 311/312: Acute Health Hazard, Chronic Health Hazard

SARA 313: Uranium compounds are subject to reporting requirements

State Right-to-Know: Listed (MA, PA, NJ)

California Prop 65: Contains uranium, a chemical known to the State of California to cause cancer

16. OTHER INFORMATION

Full text of H-statements available upon request.

HMIS: Health 3*, Flammability 0, Physical Hazard 0

NFPA: Health 4, Fire 0, Reactivity 0

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Revision Date: 02/10/2026