

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.10.2023

Version number 3

Revision: 06.10.2023

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: Uranyl acetate-2H₂O



Article number: 77870

CAS Number:

6159-44-0

Index number:

092-002-00-3

1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

Application of the substance / the mixture:

Laboratory chemicals

Reagent for volumetric determination of phosphoric acid

Reagent for the quantitative determination of sodium

Contrast agent for electron microscopy

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

SERVA Electrophoresis GmbH

Carl-Benz-Str. 7

D-69115 Heidelberg

Tel.: +49 6221 13840-0

FAX: +49 6221 13840-10

msds.info@serva.de

Information department: Product Safety Department Tel.: +49 6221 13840-35

1.4 Emergency telephone number:

Emergency medical information in case of poisoning

Poison Information Centre Mainz-Tel: +49 (0) 6131 19240

(Counselling in German and English)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008:



GHS06

Acute Tox. 2 H300 Fatal if swallowed.

Acute Tox. 2 H330 Fatal if inhaled.



GHS08

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS09

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008:

The substance is classified and labelled according to the GB CLP regulation.

Hazard pictograms: GHS06, GHS08, GHS09

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- **Signal word:** Danger
- **Hazard statements:**
 - H300+H330 Fatal if swallowed or if inhaled.
 - H373 May cause damage to organs through prolonged or repeated exposure.
 - H411 Toxic to aquatic life with long lasting effects.
- **Precautionary statements**
 - P260 Do not breathe dust.
 - P273 Avoid release to the environment.
 - P284 Wear respiratory protection.
 - P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
 - P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 - P314 Get medical advice/attention if you feel unwell.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment:**
 - **PBT:** PBT - Assessment not available.
 - **vPvB:** vPvB - Assessment not available.
 - **Determination of endocrine-disrupting properties** No further relevant information available.

SECTION 3: Composition/information on ingredients

- **3.1 Substances**
- **CAS No. Description:**
 - 6159-44-0 Bis(acetato-O)dioxouranium
- **Identification number(s):**
- **Index number:** 092-002-00-3
- **Additional information:** The product is made exclusively from depleted uranium U-238.
- **Description:**
- **Empirical formula:** (C₂H₃COO)₂UO₂ · 2 H₂O
- **MW:** 424.20

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:**
 - Remove contaminated clothing.
 - Remove breathing apparatus only after contaminated clothing have been completely removed.
- **After inhalation:** Supply fresh air or oxygen; call for doctor.
- **After skin contact:**
 - Immediate wash with copious amounts of water and soap; rinse thoroughly; seek medical advice.
- **After eye contact:**
 - Rinse opened eye for several minutes with running water. Remove contact lenses if possible and continue rinsing. Consult an ophthalmologist immediately.
- **After swallowing:**
 - Rinse out mouth. Call a doctor immediately.
 - Do not induce vomiting!
- **4.2 Most important symptoms and effects, both acute and delayed**
 - No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
 - No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
 - CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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- **5.2 Special hazards arising from the substance or mixture:**
In case of fire formation of toxic vapours and gases is possible.
In case of fire, the following can be formed, but not limited to:
 Carbon monoxide and carbon dioxide
 uranium oxides
- **5.3 Advice for firefighters**
- **Protective equipment:** *Wear self-contained breathing apparatus.*

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Ensure adequate ventilation
Avoid formation of dust.
- **6.2 Environmental precautions:** *Do not allow to enter sewers/ surface or ground water.*
- **6.3 Methods and material for containment and cleaning up**
Dispose contaminated material as waste according to section 13.
Pick up mechanically.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling:**
Carry out filling operations only at sites with extractors available.
Restrict the quantity stored at the work place.
Avoid contact with eyes and skin.
Thorough dedusting.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
- **Information about protection against explosions and fires:** *No special measures required.*
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** *Store only in unopened original receptacles.*
- **Information about storage in one common storage facility:** *Separate storage is required.*
- **Further information about storage conditions:**
Store under lock and key and with access restricted to technical experts or their assistants only.
Store containers tightly closed and dry.
- **7.3 Specific end use(s):** *No further relevant information available.*

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:** *Not required.*
- **Additional information:** *The lists that were valid during the creation were used as basis.*
- **8.2 Exposure controls**
- **Appropriate engineering controls:** *No further data; see section 7.*
- **Individual protection measures, such as personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Store protective clothing separately.
Use skin protection cream for skin protection.

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*Avoid contact with the eyes and skin.**Immediately remove all soiled and contaminated clothing**Clean skin thoroughly immediately after handling the product.**Wash hands before breaks and at the end of work.***· Breathing equipment:***Short term filter device:**Filter P3.***· Hand protection:***The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.**Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.**Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation***· Material of gloves:***Neoprene gloves**Nitrile rubber, NBR**Butyl rubber, BR**Fluorocarbon rubber (Viton)**The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.***· Penetration time of glove material:***The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.***· Eye/face protection:** *Safety glasses***· Body protection:** *Protective work clothing.*

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties**· General Information:****· Physical state:***Solid.***· Colour:***Yellow***· Odour:***uncharacteristic***· Odour threshold:***Not determined.***· Melting point/freezing point:***not applicable (decomposition)***· Boiling point or initial boiling point and boiling range:***not applicable (decomposition)***· Flammability:***No information available***· Lower and upper explosion limit:****· Lower:***No information available***· Upper:***No information available***· Flash point:***No information available***· Decomposition temperature:***275 °C***· Viscosity:****· Kinematic viscosity:***No information available***· Dynamic viscosity:***No information available***· Solubility:****· Water:***Soluble***· Partition coefficient n-octanol/water (log value):***No information available***· Vapour pressure:***No information available***· Density and/or relative density:****· Density at 20 °C:***2.89 g/cm³***· Relative density:***No information available***· Particle characteristics***No information available***· 9.2 Other information***Further physico-chemical data are not available.*

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- **Appearance:**
- **Form:** Powder
- **Important information on protection of health and environment, and on safety:**
- **Explosive properties:** Product does not present an explosion hazard.
- **Molecular weight:** 424.2 g/mol

SECTION 10: Stability and reactivity

- **10.1 Reactivity:** No further relevant information available.
- **10.2 Chemical stability:**
- **Thermal decomposition / conditions to be avoided:** Loss of constitutional water on heating
- **10.3 Possibility of hazardous reactions:** No further relevant information available.
- **10.4 Conditions to avoid:** Humidity
- **10.5 Incompatible materials:** Avoid contact with strong oxidising agents and reducing agents.
- **10.6 Hazardous decomposition products:** In case of fire: see section 5

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:**
- **Acute toxicity:** Fatal if swallowed or if inhaled.

· LD/LC50 values that are relevant for classification:

Oral	LD50	204 mg/kg (rat)
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- **Skin corrosion/irritation:** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation:** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:** May cause damage to organs through prolonged or repeated exposure.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards:**
- **Endocrine disrupting properties:** No relevant information available

SECTION 12: Ecological information

- **12.1 Toxicity:**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability:** No further relevant information available.
- **Other information:** specific radioactivity: 0,384 µCi/g
- **12.3 Bioaccumulative potential:** No further relevant information available.
- **12.4 Mobility in soil:** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment:**
- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.
- **12.6 Endocrine disrupting properties:** For information on endocrine disrupting properties see section 11.
- **12.7 Other adverse effects:**
- **Remark:** Toxic to aquatic life with long lasting effects.
- **Additional ecological information:**
- **General notes:**
Do not allow product to reach ground water, water course or sewage system.

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Water danger class 3 (German Regulation) (Assessment by list): extremely hazardous for water.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Must be specially treated adhering to official regulations.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· Uncleaned packagings:

· Recommendation:

Uncleaned packaging must be disposed of in the same way as the product in accordance with official regulations.

· Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION 14: Transport information

· 14.1 UN number or ID number

· ADR, IMDG, IATA

UN2910

· 14.2 UN proper shipping name

· ADR

2910 RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - LIMITED QUANTITY OF MATERIAL, ENVIRONMENTALLY HAZARDOUS

· IMDG, IATA

RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - LIMITED QUANTITY OF MATERIAL

· 14.3 Transport hazard class(es)

· ADR



· Class:

7 Radioactive material.

· Label:

7

· IMDG, IATA



· Class

7 Radioactive material.

· Label

7

· 14.4 Packing group

· ADR, IMDG, IATA

Void

· 14.5 Environmental hazards

· Special marking (ADR):

Environmentally hazardous substance, solid

Symbol (fish and tree)

· 14.6 Special precautions for user

· Hazard identification number (Kemler code):

-

· EMS Number:

F-I,S-S

· Stowage Category

A

· 14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

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· Transport/Additional information:**· ADR****· Limited quantities (LQ)**

0

· Excepted quantities (EQ)

Code: E0

Not permitted as Excepted Quantity

· Transport category

4

· Tunnel restriction code

E

· IMDG**· Limited quantities (LQ)**

0

· Excepted quantities (EQ)

Code: E0

Not permitted as Excepted Quantity

· UN "Model Regulation":UN 2910 RADIOACTIVE MATERIAL, EXCEPTED
PACKAGE - LIMITED QUANTITY OF MATERIAL, 7,
ENVIRONMENTALLY HAZARDOUS**SECTION 15: Regulatory information****· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****· Directive 2012/18/EU****· Named dangerous substances - ANNEX I** Substance is not listed.**· Seveso category**

H2 ACUTE TOXIC

E2 Hazardous to the Aquatic Environment

· Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t**· Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t**· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

Substance is not listed.

· REGULATION (EU) 2019/1148**· Annex I - RESTRICTED EXPLOSIVES PRECURSORS** (Upper limit value for the purpose of licensing under Article 5(3))

Substance is not listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS Substance is not listed.**· Regulation (EC) No 273/2004 on drug precursors** Substance is not listed.**· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

Substance is not listed.

· National regulations:**· Information about limitation of use:** Employment restrictions concerning young persons must be observed.**· Technical instructions (air):**

Class	Share in %
I	80-100

· Water hazard class: Water danger class 3 (Assessment by list): extremely hazardous for water.**· 15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: Product Safety Department

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· **Contact:** +49 6221 13840-35

· **Date of previous version:** 26.01.2018

· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

PBT: persistent, bioaccumulative, toxic substance (UK REACH)

vPvB: very persistent, very bioaccumulative substance (UK REACH)

UK REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

GB CLP: Regulation on classification, labelling and packaging of substances and mixtures

bw: body weight

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 2: Acute toxicity – Category 2

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

GB