Chemical Safety Data Sheet MSDS / SDS

# Dioxo[sulphato(2-)-O]uranium SDS

Revision Date:2024-04-25 Revision Number:1



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

### Product identifier

Product name: Dioxo[sulphato(2-)-O]uranium

CAS: 1314-64-3

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

Relevant identified uses: For R&D use only. Not for medicinal, household or other use.

Uses advised against: none

### Company Identification

Company: Chemicalbook.in

Address: 5 vasavi Layout Basaveswara Nilayam Pragathi Nagar Hyderabad, India -500090

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## SECTION 2: Hazards identification

### Classification of the substance or mixture

no data available

### GHS label elements, including precautionary statements

Signal word: no data available

### Hazard statement(s)

no data available

### Precautionary statement(s)

### Prevention

no data available

### Response

no data available

### Storage

no data available

### Disposal

no data available

### Other hazards which do not result in classification

no data available

## SECTION 3: Composition/information on ingredients

### Substance

| | |
|---|---|
| Chemical name: | Dioxo[sulphato(2-)-O]uranium |
| Common names and synonyms: | Dioxo[sulphato(2-)-O]uranium |
| CAS number: | 1314-64-3 |
| EC number: | 215-240-3 |
| Concentration: | 100% |

## SECTION 4: First aid measures

### Description of necessary first-aid measures

#### If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

#### Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

#### Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

#### Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

### Most important symptoms/effects, acute and delayed

Inhalation of dust may irritate nose and throat. Contact with eyes causes irritation. (USCG, 1999)

### Indication of immediate medical attention and special treatment needed, if necessary

Basic treatment: Establish a patent airway. Suction if necessary. Watch for signs of respiratory insufficiency and assist ventilations if necessary. Administer oxygen by nonrebreather mask at 10 to 15 L/min. Monitor for shock and treat if necessary ... Anticipate seizures and treat if necessary ... Perform routine emergency care for associated injuries. For eye contamination, flush eyes immediately with water. Irrigate each eye continuously during transport ... Do not use emetics. For ingestion, rinse mouth and administer 5 ml/kg up to 200 ml of water for dilution if the patient can swallow, has a good gag reflex, and does not drool ... Perform routine BLS care as necessary. Radioactives I, II, and III

## SECTION 5: Firefighting measures

### Suitable extinguishing media

Excerpt from ERG Guide 161 [Radioactive Materials (Low Level Radiation)]: Presence of radioactive material will not influence the fire control processes and should not influence selection of techniques. Move containers from fire area if you can do it without risk. Do not move damaged packages; move undamaged packages out of fire zone. SMALL FIRE: Dry chemical, CO2, water spray or

regular foam. LARGE FIRE: Water spray, fog (flooding amounts). (ERG, 2016)

### Specific hazards arising from the chemical

Excerpt from ERG Guide 161 [Radioactive Materials (Low Level Radiation)]: Some of these materials may burn, but most do not ignite readily. Many have cardboard outer packaging; content (physically large or small) can be of many different physical forms. Radioactivity does not change flammability or other properties of materials. (ERG, 2016)

### Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours.Avoid contacting with skin and eye. Use personal protective equipment.Wear chemical impermeable gloves. Ensure adequate ventilation.Remove all sources of ignition. Evacuate personnel to safe areas.Keep people away from and upwind of spill/leak.

### Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

### Methods and materials for containment and cleaning up

1. Ventilate area of spill. 2. Collect spilled material in the most convenient and safe manner and deposit in sealed containers for reclamation ... Liquid containing soluble uranium compound should be absorbed in vermiculite, dry sand, earth, or similar material. soluble and insoluble uranium compound, as uranium

## SECTION 7: Handling and storage

### Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

### Conditions for safe storage, including any incompatibilities

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

## SECTION 8: Exposure controls/personal protection

### Control parameters

### Occupational Exposure limit values

| | |
|---|---|
| **Component** | Dioxo[sulphato(2-)-O]uranium |
| **CAS No.** | 1314-64-3 |
| | NIOSH considers uranium (soluble compounds, as U) to be a potential occupational carcinogen. /Uranium (soluble compounds, as U)/ Recommended Exposure Limit: 10 Hr Time-Weighted Avg: 0.05 mg/cu m. /Uranium (soluble compounds, as U)/ |

### Biological limit values

no data available

### Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

### Individual protection measures, such as personal protective equipment (PPE)

### Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

### Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

### Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

### Thermal hazards

no data available

## SECTION 9: Physical and chemical properties and safety characteristics

| | |
|---|---|
| Physical state: | Uranyl sulfate is an odorless yellow-green solid. Sinks in and mixes with water. A hydrate of formula (H2SO4)2.7H2O is also known. |
| Colour: | Yellow crystals |
| Odour: | no data available |
| Melting point/freezing point: | no data available |
| Boiling point or initial boiling point and boiling range: | 330°C at 760mmHg |
| Flammability: | no data available |
| Lower and upper explosion limit/flammability limit: | no data available |
| Flash point: | no data available |
| Auto-ignition temperature: | no data available |
| Decomposition temperature: | no data available |
| pH: | no data available |
| Kinematic viscosity: | no data available |
| Solubility: | no data available |
| Partition coefficient n-octanol/water: | no data available |
| Vapour pressure: | no data available |
| Density and/or relative density: | 3.28 at 68° F (USCG, 1999) |

| | |
|---|---|
| Relative vapour density: | no data available |
| Particle characteristics: | no data available |

## SECTION 10: Stability and reactivity

### Reactivity

10 mg/cu m; NIOSH considers uranium (soluble compounds, as U) to be a potential occupational carcinogen. Uranium (soluble compounds, as U)

### Chemical stability

no data available

### Possibility of hazardous reactions

Finely divided U metal and some U compounds may ignite spontaneously in air or oxygen. /Uranium compounds/Inorganic oxidizing agents can react with reducing agents to generate heat and products that may be gaseous (causing pressurization of closed containers). The products may themselves be capable of further reactions (such as combustion in the air). The chemical reduction of materials in this group can be rapid or even explosive, but often requires initiation (heat, spark, catalyst, addition of a solvent). Inorganic oxidizing agents can react violently with active metals, cyanides, esters, and thiocyanates. Explosives often consist of an inorganic oxidizing agent mixed in intimate contact with a reducing agent. Gunpowder is such a mixture. Other examples are a mixture of sugar (an organic compound) plus sodium chlorate and magnesium (an inorganic reducing agent) plus barium peroxide. Compounds that inherently contain a group that is a reducing agent and an oxidizing agent are classed in both Group 44 (Inorganic Oxidizing Agents) and in Group 45 (Inorganic Reducing Agents; for example, ammonium nitrate). The strongly oxidizing elements oxygen and fluorine are classified here. Inorganic oxidizing agents that are also acids (such as nitric and perchloric acids) are not included in this group. They are in Group 2 (Acids, Inorganic Oxidizing).

### Conditions to avoid

no data available

### Incompatible materials

no data available

### Hazardous decomposition products

no data available

## SECTION 11: Toxicological information

**Acute toxicity**

Oral: no data available

Inhalation: no data available

Dermal: no data available

**Skin corrosion/irritation**

no data available

**Serious eye damage/irritation**

no data available

**Respiratory or skin sensitization**

no data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

A1; Confirmed human carcinogen. Uranium (natural), soluble & insoluble compounds, as U

**Reproductive toxicity**

no data available

**STOT-single exposure**

no data available

**STOT-repeated exposure**

no data available

**Aspiration hazard**

no data available

## SECTION 12: Ecological information

**Toxicity**

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

**Persistence and degradability**

no data available

**Bioaccumulative potential**

no data available

**Mobility in soil**

no data available

**Other adverse effects**

no data available

## SECTION 13: Disposal considerations

**Disposal methods**

**Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

## SECTION 14: Transport information

### UN Number

ADR/RID: no data available
IMDG: no data available
IATA: no data available

### UN Proper Shipping Name

ADR/RID: no data available
IMDG: no data available
IATA: no data available

### Transport hazard class(es)

ADR/RID: no data available
IMDG: no data available
IATA: no data available

### Packing group, if applicable

ADR/RID: no data available
IMDG: no data available
IATA: no data available

### Environmental hazards

ADR/RID: No
IMDG: No
IATA: No

**Special precautions for user**

no data available

**Transport in bulk according to IMO instruments**

no data available

## SECTION 15: Regulatory information

**Safety, health and environmental regulations specific for the product in question**

**European Inventory of Existing Commercial Chemical Substances (EINECS)**

Listed.

**EC Inventory**

Listed.

**United States Toxic Substances Control Act (TSCA) Inventory**

Listed.

**China Catalog of Hazardous chemicals 2015**

Not Listed.

**New Zealand Inventory of Chemicals (NZIoC)**

Not Listed.

**(PICCS)**

Not Listed.

**Vietnam National Chemical Inventory**

Not Listed.

**IECSC)**

Not Listed.

**Korea Existing Chemicals List (KECL)**

Not Listed.

## SECTION 16: Other information

**Abbreviations and acronyms**

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

**References**

IPCS - The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home

HSDB - Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm

IARC - International Agency for Research on Cancer, website: http://www.iarc.fr/

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en

CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple

ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg

Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp

ECHA - European Chemicals Agency, website: https://echa.europa.eu/

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