UCLO, UCHI

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Date of issue: 2020-02-28 Revision date: 2020-02-28 Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Product form : Substance

Substance name : UCLO, UCHI

Product code : Not available

Substance name : Uranium oxide

Molecular formula : U_3O_8

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

Use of the substance/mixture : Uranium oxide CRM, for laboratory use only

1.3. Details of the supplier of the safety data sheet

National Research Council Canada
1200 Montreal Road
Ottawa, K1A 0R6 - Canada
T 613-993-2359

National Research Council Canada | Conseil national de recherches Canada

1.4. Emergency telephone number

Emergency number : CANUTEC 1-613-996-6666

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Radioactive nuclide: GHS classification and labelling not applicable. This product is exempt from classification and labelling as per the Hazardous Products Act, Paragraph 12(d) and C.F.R. 1910.1200(b)(6)(xi).

2.2. Label elements

GHS labelling

No labeling applicable

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : UCLO, UCHI

Name	Product identifier	% (by weight)
Uranium octaoxide	(CAS-No.) 1344-59-8	100

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact : If skin irritation occurs: Wash skin with plenty of water. Obtain medical attention if irritation persists.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : Harmful by inhalation. Triuranium octaoxide powders/dusts are respiratory irritants with coughing and shortness of breath as possible outcomes. Acute arterial lesions may also occur after acute exposure. Long-term pulmonary carcinogenic effects are suspected.

Symptoms/effects after skin contact : May cause skin irritation. Repeated exposure may cause skin dryness or cracking.

Symptoms/effects after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/effects after ingestion : Harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea. Triuranium octaoxide emits alpha particles (a form of radiation), which are of biological significance only if the U3O8 powder or dust is internalized by inhalation, by ingestion or by deposition into an open wound. Because of its slow absorption through the lungs, the primary damage from triuranium octaoxide is due to radiological damage to internal organs rather than chemical damage, which is mainly to the renal system. Triuranium octaoxide is soluble in hydrochloric acid and some ingested material could be absorbed from the stomach.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Small fires: CO2; Flood large fires with water as per US DOT P 5800.3 and ERG Guide 162.

Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon. The product may emit toxic and radioactive particulates if released due to rupture of a container in a fire.

5.3. Advice for firefighters

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.2. Methods and material for containment and cleaning up

For containment : Move containers from spill area. Avoid dust formation. Do not dry sweep spilled material.

Methods for cleaning up : Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Provide ventilation.

6.3. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Obtain special instructions before use. Provide adequate ventilation. Do not get in eyes, on skin, or on clothing. Do not breathe dusts or mists. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke.

Hygiene measures : Wash contaminated clothing before reuse. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep out of the reach of children. Keep container tightly closed. Store in a dry, cool and well-ventilated place. Do not store in unlabelled containers. Store in accordance with local regulations. Use appropriate containment to avoid environmental contamination. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Uranium octaoxide (1344-59-8)		
ACGIH	ACGIH TLV (TWA)	0.2 mg/m³, (as U) (8 hours)
ACGIH	ACGIH TLV (STEL)	0.6 mg/m³, (as U) (15 minutes.)
OSHA	OSHA PEL (TWA)	0.25 mg/m³, (as U) (8 hours.)
IDLH	Not applicable	Not applicable
NIOSH	NIOSH REL (TWA)	0.2 mg/m³, (as U) (10 hours.)
NIOSH	NIOSH REL (STEL)	0.6 mg/m³, (as U) (15 minutes.)

8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Hand protection : Wear suitable gloves resistant to chemical penetration

Eye protection : Wear eye protection.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Environmental exposure controls : Maintain levels below Community environmental protection thresholds.

Other information : Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Crystalline powder

Colour : Black

Odour : Odourless

Odour threshold : No data available

pH : No data available

Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C/ °F	: No data available
Relative density	: 8.3 g/L
Density	: No data available
Solubility	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: 1300 °C (2372 °F)
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat. Incompatible materials.

10.5. Incompatible materials

Strong acids.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous reactions will not occur.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not applicable
Acute toxicity (dermal)	: Not applicable
Acute toxicity (inhalation)	: Not applicable
Skin corrosion/irritation	: Not applicable
Serious eye damage/irritation	: Not applicable
Respiratory or skin sensitisation	: Not applicable

Germ cell mutagenicity	:	Not applicable
Carcinogenicity	:	Not applicable
Reproductive toxicity	:	Not applicable
STOT-single exposure	:	Not applicable
STOT-repeated exposure	:	Not applicable
Aspiration hazard	:	Not applicable
Symptoms/effects after inhalation	:	Harmful by inhalation. Triuranium octaoxide powders/dusts are respiratory irritants with coughing and shortness of breath as possible outcomes. Acute arterial lesions may also occur after acute exposure. Long-term pulmonary carcinogenic effects are suspected.
Symptoms/effects after skin contact	:	May cause skin irritation. Repeated exposure may cause skin dryness or cracking.
Symptoms/effects after eye contact	:	May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Symptoms/effects after ingestion	:	Harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea. Triuranium octaoxide emits alpha particles (a form of radiation), which are of biological significance only if the U3O8 powder or dust is internalized by inhalation, by ingestion or by deposition into an open wound. Because of its slow absorption through the lungs, the primary damage from triuranium octaoxide is due to radiological damage to internal organs rather than chemical damage, which is mainly to the renal system. Triuranium octaoxide is soluble in hydrochloric acid and some ingested material could be absorbed from the stomach.
Other information	:	Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

UCLO, UCHI	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

UCLO, UCHI	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available.

12.5. Other adverse effects

No additional information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

SECTION 14: Transport information

Department of Transportation (DOT) and Transportation of Dangerous Goods (TDG)

In accordance with DOT/TDG

UN-No.(DOT/TDG)	:	UN2912
Proper Shipping Name (DOT/TDG)	:	Radioactive material, low specific activity (LSA-I)
Class (DOT/TDG)	:	Class 7 - Radioactive material 49 CFR 173.403
Hazard labels (DOT/TDG)	:	

Additional information

Other information	:	No supplementary information available.
Special transport precautions	:	Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories.

15.2 US State regulations

No additional information available

SECTION 16: Other information

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Prepared by	:	Nexreg Compliance Inc.

DISCLAIMER:

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