

## SAFETY DATA SHEET

Creation Date 15-Dec-2011

Revision Date 25-Dec-2021

Revision Number 4

### 1. Identification

**Product Name** Osmium(III) chloride hydrate

**Cat No. :** AC318700000; AC318700025; AC318705000

**Synonyms** No information available

**Recommended Use** Laboratory chemicals.

**Uses advised against** Food, drug, pesticide or biocidal product use.

#### Details of the supplier of the safety data sheet

##### Company

Fisher Scientific Company  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

**Emergency Telephone Number** For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

### 2. Hazard(s) identification

#### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|   |              |
|---|--------------|
| Acute oral toxicity                         | Category 3   |
| Acute dermal toxicity                       | Category 3   |
| Acute Inhalation Toxicity - Dusts and Mists | Category 3   |
| Skin Corrosion/Irritation                   | Category 1 C |
| Serious Eye Damage/Eye Irritation           | Category 1   |

#### Label Elements

**Signal Word**  
Danger

**Hazard Statements**  
Causes severe skin burns and eye damage  
Toxic if swallowed, in contact with skin or if inhaled

**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Wear protective gloves/protective clothing/eye protection/face protection  
Use only outdoors or in a well-ventilated area  
Do not breathe dust/fume/gas/mist/vapors/spray

**Response**

Immediately call a POISON CENTER or doctor/physician

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

**Skin**

Wash contaminated clothing before reuse  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

**Ingestion**

Rinse mouth  
Do NOT induce vomiting

**Storage**

Store locked up  
Store in a well-ventilated place. Keep container tightly closed

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

### 3. Composition/Information on Ingredients

| Component                            | CAS No     | Weight % |
|--------------------------------------|------------|----------|
| Osmium(III) chloride hydrate         | 14996-60-2 | >95      |
| Osmium chloride (OsCl <sub>3</sub> ) | 13444-93-4 | -        |

### 4. First-aid measures

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

**Skin Contact**

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention.

**Inhalation**

Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Get medical attention.

**Ingestion**

Clean mouth with water. Get medical attention.

**Most important symptoms and effects**

Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue

**Notes to Physician** and danger of perforation  
Treat symptomatically

## 5. Fire-fighting measures

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** No information available

**Flash Point** No information available  
**Method -** No information available

**Autoignition Temperature** No information available

**Explosion Limits**

**Upper** No data available

**Lower** No data available

**Sensitivity to Mechanical Impact** No information available

**Sensitivity to Static Discharge** No information available

**Specific Hazards Arising from the Chemical**

Non-combustible.

**Hazardous Combustion Products**

Hydrogen chloride gas.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**

**Health**  
3

**Flammability**  
0

**Instability**  
0

**Physical hazards**  
N/A

## 6. Accidental release measures

**Personal Precautions** Ensure adequate ventilation. Use personal protective equipment as required.

**Environmental Precautions** See Section 12 for additional Ecological Information.

**Methods for Containment and Clean Up** Sweep up and shovel into suitable containers for disposal.

## 7. Handling and storage

**Handling** Avoid contact with skin and eyes. Do not breathe dust.

**Storage.** Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area. Incompatible Materials. Finely powdered metals.

## 8. Exposure controls / personal protection

**Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Engineering Measures** Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal Protective Equipment**

|                                 |   |
|---------------------------------|---|
| <b>Eye/face Protection</b>      | Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.   |
| <b>Skin and body protection</b> | Wear appropriate protective gloves and clothing to prevent skin exposure.   |
| <b>Respiratory Protection</b>   | Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. |
| <b>Hygiene Measures</b>         | Handle in accordance with good industrial hygiene and safety practice.  |

## 9. Physical and chemical properties

|   |                          |
|---|--------------------------|
| <b>Physical State</b>                         | Solid                    |
| <b>Appearance</b>                             | Dark red                 |
| <b>Odor</b>                                   | No information available |
| <b>Odor Threshold</b>                         | No information available |
| <b>pH</b>                                     | No information available |
| <b>Melting Point/Range</b>                    | > 500 °C / 932 °F        |
| <b>Boiling Point/Range</b>                    | No information available |
| <b>Flash Point</b>                            | No information available |
| <b>Evaporation Rate</b>                       | Not applicable           |
| <b>Flammability (solid,gas)</b>               | No information available |
| <b>Flammability or explosive limits</b>       |                          |
| Upper   | No data available        |
| Lower   | No data available        |
| <b>Vapor Pressure</b>                         | No information available |
| <b>Vapor Density</b>                          | Not applicable           |
| <b>Specific Gravity</b>                       | No information available |
| <b>Solubility</b>                             | No information available |
| <b>Partition coefficient; n-octanol/water</b> | No data available        |
| <b>Autoignition Temperature</b>               | No information available |
| <b>Decomposition Temperature</b>              | No information available |
| <b>Viscosity</b>                              | Not applicable           |
| <b>Molecular Formula</b>                      | Cl3 Os . x H2 O          |
| <b>Molecular Weight</b>                       | 296.56                   |

## 10. Stability and reactivity

|   |  |
|---|--|
| <b>Reactive Hazard</b>                  | None known, based on information available |
| <b>Stability</b>                        | Stable under normal conditions.            |
| <b>Conditions to Avoid</b>              | Excess heat. Incompatible products.        |
| <b>Incompatible Materials</b>           | Finely powdered metals                     |
| <b>Hazardous Decomposition Products</b> | Hydrogen chloride gas                      |
| <b>Hazardous Polymerization</b>         | Hazardous polymerization does not occur.   |
| <b>Hazardous Reactions</b>              | None under normal processing.              |

## 11. Toxicological information

### Acute Toxicity

**Product Information**  
**Component Information**

**Toxicologically Synergistic Products** No information available

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Irritation** No information available

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component                            | CAS No     | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|--------------------------------------|------------|------------|------------|------------|------------|------------|
| Osmium(III) chloride hydrate         | 14996-60-2 | Not listed | Not listed | Not listed | Not listed | Not listed |
| Osmium chloride (OsCl <sub>3</sub> ) | 13444-93-4 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** None known

**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

### Ecotoxicity

Do not empty into drains.

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

**DOT** Not regulated  
**Technical Name** Osmium(III) chloride hydrate  
**TDG** Not regulated  
**IATA**  
**UN-No** UN2923  
**Proper Shipping Name** Corrosive solid, toxic, n.o.s.  
**Hazard Class** 8

|                         |                                |
|-------------------------|--------------------------------|
| Subsidiary Hazard Class | 6.1                            |
| Packing Group           | III                            |
| <b>IMDG/IMO</b>         |                                |
| UN-No                   | UN2923                         |
| Proper Shipping Name    | Corrosive solid, toxic, n.o.s. |
| Hazard Class            | 8                              |
| Subsidiary Hazard Class | 6.1                            |
| Packing Group           | III                            |

## 15. Regulatory information

### United States of America Inventory

| Component                            | CAS No     | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|--------------------------------------|------------|------|---|-----------------------------|
| Osmium(III) chloride hydrate         | 14996-60-2 | -    | -   | -                           |
| Osmium chloride (OsCl <sub>3</sub> ) | 13444-93-4 | X    | ACTIVE  | -                           |

#### Legend:

**TSCA** US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

**TSCA 12(b)** - Notices of Export Not applicable

### International Inventories

Canada (DSL/NDL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

| Component                            | CAS No     | DSL | NDL | EINECS    | PICCS | ENCS | ISHL | AICS | IECSC | KECL     |
|--------------------------------------|------------|-----|-----|-----------|-------|------|------|------|-------|----------|
| Osmium(III) chloride hydrate         | 14996-60-2 | -   | -   | -         | -     | -    | -    | -    | -     | -        |
| Osmium chloride (OsCl <sub>3</sub> ) | 13444-93-4 | X   | -   | 236-587-7 | -     | -    | -    | X    | -     | KE-27436 |

**KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

### U.S. Federal Regulations

**SARA 313** Not applicable

**SARA 311/312 Hazard Categories** See section 2 for more information

**CWA (Clean Water Act)** Not applicable

**Clean Air Act** Not applicable

**OSHA** - Occupational Safety and Health Administration Not applicable

**CERCLA** Not applicable

**California Proposition 65** This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations** Not applicable

### U.S. Department of Transportation

Reportable Quantity (RQ): N  
 DOT Marine Pollutant N  
 DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

**Other International Regulations****Mexico - Grade**

No information available

**Authorisation/Restrictions according to EU REACH****Safety, health and environmental regulations/legislation specific for the substance or mixture**

| Component                            | CAS No     | OECD HPV       | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|--------------------------------------|------------|----------------|------------------------------|---------------------------|--|
| Osmium(III) chloride hydrate         | 14996-60-2 | Not applicable | Not applicable               | Not applicable            | Not applicable                             |
| Osmium chloride (OsCl <sub>3</sub> ) | 13444-93-4 | Not applicable | Not applicable               | Not applicable            | Not applicable                             |

| Component                            | CAS No     | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|--------------------------------------|------------|---|--|----------------------------|------------------------------------|
| Osmium(III) chloride hydrate         | 14996-60-2 | Not applicable  | Not applicable   | Not applicable             | Not applicable                     |
| Osmium chloride (OsCl <sub>3</sub> ) | 13444-93-4 | Not applicable  | Not applicable   | Not applicable             | Not applicable                     |

**16. Other information****Prepared By**

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25-Dec-2021

**Revision Summary**

This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**