

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name : Osmium

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

According to Regulation (EC) No 1272/2008

Flammable solids (Category 2)

Skin irritation (Category 2)

Serious eye damage (Category 1)

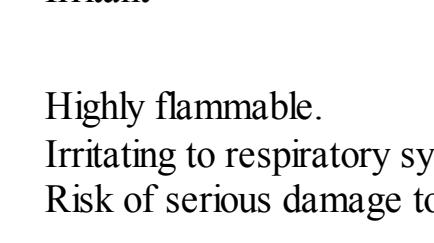
Specific target organ toxicity - single exposure (Category 3)

According to European Directive 67/548/EEC as amended.

Highly flammable. Irritating to respiratory system and skin. Risk of serious damage to eyes.

Label elements

Pictogram



Signal word Danger

Hazard statement(s)

H228 Flammable solid.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/eye protection/face protection.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Hazard symbol(s)

F Highly flammable

Xi Irritant

R-phrase(s)

R11 Highly flammable.

R37/38 Irritating to respiratory system and skin.

R41 Risk of serious damage to eyes.

S-phrase(s)

S16 Keep away from sources of ignition - No smoking.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : Os
Molecular Weight : 190,23 g/mol

CAS-No.	EC-No.	Classification	Concentration
Osmium 7440-04-2	231-114-0	Flam. Sol. 2; Skin Irrit. 2; Eye Dam. 1; STOT SE 3; H228, H315, H318, H335 F, Xi, R11 - R37/38 - R41	-

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water.

Consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Handle with gloves.

Eye protection

Safety glasses with side-shields conforming to EN166

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form powder

Safety data

pH no data available

Melting point 3.045 °C - lit.

Boiling point 5.027 °C - lit.

Flash point no data available

Flammability (solid, gas) The substance or mixture is a flammable solid with the subcategory 2.

Ignition temperature no data available

Lower explosion limit no data available

Upper explosion limit no data available

Density 22,61 g/cm³

Water solubility no data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

Heat, flames and sparks.

Materials to avoid

Oxygen, Halogens, Phosphorus

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Nature of decomposition products not known.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

no data available

Inhalation: no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

GERM CELL MUTAGENICITY

no data available

Carcinogenicity

no data available

IARC: No probable, possible or confirmed human carcinogen by IARC.

IARC: No probable, possible or confirmed human carcinogen by IARC. equal to 0.1% is identified as

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Potential health effects

no data available

Inhalation

May be harmful if inhaled. Causes respiratory tract irritation.

Skin

May be harmful if swallowed. Causes skin irritation.

Eyes

Causes serious eye irritation.

Additional information

RTECS: RN1100000

RTECS: RN1100000

12. ECOLOGICAL INFORMATION

Toxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

UN/ID

UN-Number: 3089 Class: 4.1

Packing group:

II EMS-No: F-G, S-G

Proper shipping name: