

SAFETY DATA SHEET

Version Number: 6

Revision Date: 11 Feb 2013

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product Name: Osmium
Product Code: CMG – 14000
CAS No. 7440-04-2
REACH Registration No: Not applicable, substance is exempt from registration.

1.2 Relevant identified use for the substance or mixture and uses advised against

Laboratory Chemical, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

MANUFACTURER: Ceimig Limited
ADDRESS: Units 1 – 3 Smeaton Road
Wester Gourdie Industrial Estate
DUNDEE
DD2 4UT
Telephone: + 44 (0) 1382 624127
Fax: + 44 (0) 1382 611777
E-mail address: info@ceimig.com

1.4 Emergency Telephone Number

Telephone: + 44 (0) 1382 624127
The above telephone number is only available during office hours of 9am to 5pm (UK Time)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (EU-GHS/CLP)

Flammable solids (Category 2)
Skin irritation (Category 2)
Serious eye damage (category 1)
Specific target organ toxicity – single exposure (Category 3)

Classification according to EU Directives 67/548/EEC or 1999/45/EC

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

2.2 Label Elements

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

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

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P280 Wear protective gloves/ protective clothing/ 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.

Supplemental Hazard none
 Statement(s)

According to EU Directive 67/548/EEC as amended

Hazard Symbol(s)



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

2.3 Other Hazards
 none

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula Os
 Molecular Weight 190.23 g/mol

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

For full text of H-Statements and R-phrases mentioned in this sections, see section 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General Advice

Consult a physician. Show this SDS to the doctor in attendance.

If inhaled

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

In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. 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.

4.2 Most important symptoms and effects, both acute and delayed



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To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

4.3 Indication of any immediate medical attention and special treatment needed

no data available

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media

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

5.2 Special Hazards arising from the substance or mixture

no data available

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary. Use water spray to cool unopened containers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

6.2 Environmental precautions

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

6.3 Methods and materials for containment and cleaning up

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

6.4 Reference to other sections

For exposure control see section 8. For disposal see section 13

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Keep away from sources of ignition – No smoking. Take measures to prevent the build up of electrostatic charge. Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities

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

7.3 Specific end use(s)

no data available

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure Controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Respiratory Protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) 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).

Eye Protection

Face Shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such

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as NIOSH (US) or EN166(EU).

Skin and body protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. 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. Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures:

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

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance	Form: solid, Colour: blue
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	3,045 °C - lit
f) Initial boiling point and boiling range	5,027 °C - lit
g) Flash point	no data available
h) Evaporation rate	no data available
i) Flammability (solid, gas)	The substance or mixture is a flammable solid with the subcategory 2
j) Upper/Lower flammability or explosive limits	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	22.61 g/cm ³
n) Solubility	no data available
o) Partition coefficient: n-octanol/water	no data available
p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties	no data available
t) Oxidising properties	no data available

9.2 Other information

no data available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

no data available

10.2 Chemical stability

no data available

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

Oxygen, Halogens, Phosphorus

10.6 Hazardous decomposition products

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

SECTION 11: TOXICOLOGICAL INFORMATION

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11.1 Information on toxicological effects

Acute toxicity

no data available

Skin corrosion/Irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin Sensitisation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed Human carcinogen by IARC

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

Inhalation

May be harmful if inhaled. Causes respiratory tract irritation

Ingestion

May be harmful if swallowed.

Skin

May be harmful if absorbed through skin, Causes skin irritation.

Eyes

Causes serious eye irritation.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional Information

RTECS#: RN1100000

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

no data available

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

no data available

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SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. The product should be disposed of as hazardous waste due to its classification.

Contaminated packaging

Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number

ADR/RID

UN3089

IMDG

UN3089

IATA

UN3089

14.2 UN proper shipping name

ADR/RID

METAL POWDER, FLAMMABLE, N.O.S (Osmium)

IMDG

METAL POWDER, FLAMMABLE, N.O.S (Osmium)

IATA

Metal powder, flammable, n.o.s (Osmium)

14.3 Transport hazard class(es)

ADR/RID

Class 4.1

IMDG

Class 4.1

IATA

Class 4.1

14.4 Packing Group

ADR/RID

Packing Group II

IMDG

Packing Group II

IATA

Packing Group II

14.5 Environmental Hazards

ADR/RID

No

IMDG

Marine Pollutant: No

IATA

No

14.6 Special Precautions for user

no data available

SECTION 15: REGULATORY INFORMATION

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

no data available

15.2 Chemical Safety Assessment

no data available

SECTION 16: OTHER INFORMATION

Text of H-code(s) and R-phrase(s) mentioned in Section 3.

Eye Dam	Serious eye damage
Flam Sol	Flammable solids
H228	Flammable solid
H315	Causes skin irritation



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H318	Causes serious eye damage
H335	May cause respiratory irritation
Skin Irrit	Skin irritation
STOT SE	Specific target organ toxicity – single exposure
F	Highly flammable
Xi	Irritant
R11	Highly flammable
R37/38	Irritating to respiratory system and skin
R41	Risk of serious damage to eyes

Further Information:

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.