

MATERIAL SAFETY DATA SHEET

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product Details

Product Name	Molybdenum tungsten diselenide powder
Chemical Name	Molybdenum tungsten diselenide
Chemical Formula	MoWSe ₂
Product Code	M2142C
CAS No.	126414-37-7
EC No.	n/a
REACH No.	A registration number is not available for this substance as the substance or its uses are exempted from registration or the annual tonnage does not require a registration.

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

Identified uses	Laboratory chemicals
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1.3. Supplier details

Company Identification	Ossila Limited
Address of Supplier	Solpro Business Park Windsor Street, Sheffield
Postal Code	S4 7WB, UK
Telephone	0114 2999 180
Email address	info@ossila.com

2. Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) 1272/2008 (CLP)

Acute Tox. 3 - Ingestion
Acute Tox. 3 - Inhalation
STOT RE 2
Aquatic Chronic 1

2.2. Label elements

Regulation (EC) 1272/2008 (CLP)



Hazard Pictogram(s)

Signal Word(s) Danger

Hazard Statements

H301 Toxic if swallowed
H331 Toxic if inhaled.
H373 May cause damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P405 Store locked up.
 P501 Dispose of contents in accordance with local, state or national legislation.

2.3. Other hazards

None.

3. Composition/Information on ingredients

3.1. Substances

Hazardous ingredient(s)	CAS No.	EC No.	%W/W	Hazard Statement(s)
Molybdenum tungsten diselenide	126414-37-7		≤ 100	Acute Tox. 3: H301+H331 STOT RE 2: H373 Aquatic Chronic 1: H410

4. First aid measures

4.1. Description of first aid measures

Inhalation Call a poison centre/doctor

Skin contact Wash with soap and water. Get medical attention if you feel unwell.

Eye contact Flush with copious amounts of water as a precaution. Get medical attention if you feel unwell.

Ingestion Rinse out mouth with water. Immediately call a poison centre/doctor.

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

The most important known symptoms and effects are described in section 11.

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

Get medical attention if you feel unwell. Treat symptomatically.

5. Fire fighting

5.1. Extinguishing media

Suitable extinguishing media: As appropriate for surrounding fire.

5.2. Special hazards arising from the substance or mixture

May decompose in a fire, giving off toxic and irritant vapours.

5.3. Advice for firefighters

Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protective equipment (section 8). Avoid dust formation. Ensure room is well ventilated.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Containment and cleaning

Contain and clean up spill if safe to do so using an electrically protected vacuum cleaner or by wet-brushing. Dispose of dry waste in closed container for proper disposal according to local regulations.

7. Handling and storage

7.1. Precautions for safe handling

Avoid formation of dust and aerosols. Provide exhaust ventilation in places where dust is formed.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, dry and well-ventilated place inside of a tightly sealed container. Reseal containers that have been opened and keep upright to prevent leakage. Store locked up.

Storage temperature Ambient
Storage life Stable under normal conditions.

7.3. Specific end uses

Use in laboratories.

8. Exposure controls / Personal protection

8.1. Control parameters

8.1.1 Occupational Exposure Limits

Contains no substances with occupational exposure limit values.

8.2. Exposure controls

8.2.1 Engineering measures

Handle in accordance with good industrial engineering/laboratory practices for hygiene and safety. Ensure eyewash stations and safety showers are close to the laboratory workstation. Ensure good general ventilation is present when handling the product.

8.2.2 Personal protective equipment

Eye Protection Wear safety glasses with side-shields conforming to appropriate government standards such as NOISH (US) or EN166 (EU).
Skin Protection Wear protective clothing and gloves. Use gloves that satisfy the specifications of your national standards (e.g. EN 374). Wash hands after handling. Wash contaminated clothing after use.
Respirators: Use multi-purpose combination particle respirator N99 (US) or type ABEK P2 (EN 14387) respirator cartridges as a backup to engineering controls. Respirators should be approved under appropriate government standards such as NIOSH (US) or CEN (EU).

8.2.3 Environmental Exposure Controls

Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance Solid black powder
Odour No data available
Odour threshold No data available

pH	No data available
Melting/freezing point	No data available
Boiling point/range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability	No data available
Explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Solubility(ies)	No data available
Partition coefficient: <i>n</i> -octanol/water	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidising properties	No data available

9.2. Other safety information

No data available.

10. Stability and reactivity

10.1 Reactivity

No data available.

10.2. Chemical stability

Stable under normal temperatures and pressures under recommended storage conditions.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

Strong oxidising agents.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Toxic if swallowed or if inhaled.

Skin corrosion/irritation

No data available.

Serious eye damage/irritation

No data available.

Respiratory sensitisation

No data available.

Skin sensitisation

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

Reproductive toxicity

No data available.

STOT - single exposure

No data available.

STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

No data available.

Routes of exposure

Eye contact, ingestion, inhalation, skin contact.

Signs and Symptoms of Exposure

No data available.

11.2 Other information

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

12. Ecological information

12.1. Toxicity

Very toxic to aquatic life with long lasting effects.

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

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6. Other adverse effects

No data available.

13. Disposal

13.1. Waste treatment methods

Product

Observe all federal, state and local environmental regulations and directives on waste and hazardous waste. Offer surplus material to a licensed professional waste disposal professional.

Contaminated packaging

Dispose of as unused product.

14. Transport

14.1 UN number

3283

14.2 UN proper shipping name

Selenium Compound, Solid, N.O.S.

14.3 Transport hazard class(es)

ADR/RID Class	6.1
IMDG Class	6.1
IATA	6.1

14.4 Packing group

III

14.5 Environmental hazards

Classified as a Marine Pollutant.

14.6 Special precautions for user

Not known.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

No information available.

15. Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006, the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

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

No data available.

15.2 Chemical safety assessment

No chemical safety report/assessment was carried out for this product.

16. Other information

LEGEND

Acronyms

ADN : European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS : Chemical Abstracts Service
CLP : Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DNEL : Derived No Effect Level
EC : European Community
EINECS : European Inventory of Existing Commercial Chemical Substances
IATA : International Air Transport Association
IBC : Intermediate Bulk Container
ICAO : International Civil Aviation Organization

IMDG : International Maritime Dangerous Goods
LTEL : Long term exposure limit
PBT : Persistent, Bioaccumulative and Toxic
PNEC : Predicted No Effect Concentration
REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals
RID : Regulations concerning the International Carriage of Dangerous Goods by Rail
STEL : Short term exposure limit
STOT : Specific Target Organ Toxicity
UN : United Nations
vPvB : very Persistent and very Bioaccumulative

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