



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

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

1.1 Product identifier

Product Name	Tungsten disulfide monolayer film on sapphire substrate
Synonyms	Tungsten sulphide, tungsten sulfide, tungsten (IV) sulfide
Chemical Name	Tungsten disulfide
Chemical Formula	WS ₂
Product code	M2171
CAS No.	12138-09-9
EC No.	Not applicable.
REACH Registration No.	Not applicable.

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

Identified Use(s)	PC21 Laboratory chemicals
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1.3 Details of the supplier of the safety data sheet

Company Identification	Ossila Limited
Address of Supplier	Solpro Business Park Windsor Street Sheffield
Postal code	S4 7WB, UK
Telephone:	+441142999180
E-mail	info@ossila.com
Office hours	08:00 - 17:00

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 Label elements

The product does not need to be labelled in accordance with EC directives or respective national laws.

2.3 Other hazards

None known.

2.4 Additional Information

Not applicable.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

No components need to be disclosed according to the applicable regulations.

3.2 Mixtures

Not applicable.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation	Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell.
Skin Contact	Rinse skin with water. If skin irritation occurs, get medical advice/attention.
Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Ingestion	Rinse out mouth with water. Get medical advice/attention if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

SECTION 11: Most important symptoms and effects, both acute and delayed

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing media	As appropriate for surrounding fire.
Unsuitable 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.



SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Wear protective clothing as per section 8.

6.2 Environmental precautions

Avoid release to the environment.

6.3 Methods and material for containment and cleaning up

Sweep up spilled substance but avoid making dust. Use vacuum equipment for collecting spilt materials, where practicable. Dispose of contents in accordance with local, state or national legislation.

6.4 Reference to other sections

See Also Section 8, 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid breathing dust/aerosols. Use only in a well-ventilated area. Wear protective clothing as per section 8.

7.2 Conditions for safe storage, including any incompatibilities

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

Storage temperature

Ambient.

Storage life

Stable under normal conditions..

Incompatible materials

None known.

7.3 Specific end use(s)

Not known. See Section: 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters**8.1.1 Occupational Exposure Limits**

No Occupational Exposure Limit assigned.

8.2 Exposure controls**8.2.1. Appropriate engineering controls**

Ensure adequate ventilation. A washing facility/water for eye and skin cleaning purposes should be present.

8.2.2. Personal protection equipment

Eye Protection

Wear eye protection with side protection (EN166).



Skin protection

Wear protective clothing and gloves: Impervious gloves (EN 374).



Respiratory protection

Normally no personal respiratory protection is necessary.



Thermal hazards

None known.

**8.2.3. Environmental Exposure Controls** Avoid release to the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance

Solid transparent film on rigid transparent substrate

Colour:

Odour

Not known.

Odour threshold

Not known.

pH

Not known.

Melting point/freezing point

Not known.

Initial boiling point and boiling range

Not known.

Flash Point

Not known.

Evaporation rate

Not known.



Flammability (solid, gas)	Not known.
Upper/lower flammability or explosive limits	Not known.
Vapour pressure	Not known.
Vapour density	Not known.
Density (g/ml)	Not known.
Relative density	Not known.
Solubility(ies)	Solubility (Water): Not known. Solubility (Other): Not known.
Partition coefficient: n-octanol/water	Not known.
Auto-ignition temperature	Not known.
Decomposition Temperature (°C)	Not known.
Viscosity	Not known.
Explosive properties	Not known.
Oxidising properties	Not known.
9.2 Other information	None.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	None anticipated.
10.2 Chemical Stability	Stable under normal conditions.
10.3 Possibility of hazardous reactions	Not known.
10.4 Conditions to avoid	Not known.
10.5 Incompatible materials	Not known.
10.6 Hazardous decomposition products	No hazardous decomposition products known.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects	
Acute toxicity - Ingestion	Not classified.
Acute toxicity - Skin Contact	Not classified.
Acute toxicity - Inhalation	Not classified.
Skin corrosion/irritation	Not classified.
Serious eye damage/irritation	Not classified.
Skin sensitization data	Not classified.
Respiratory sensitization data	Not classified.
Germ cell mutagenicity	Not classified.
Carcinogenicity	Not classified.
Reproductive toxicity	Not classified.
Lactation	Not classified.
STOT - single exposure	Not classified.
STOT - repeated exposure	Not classified.
Aspiration hazard	Not classified.
11.2 Other information	Not known.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity	
Toxicity - Aquatic invertebrates	Not known.
Toxicity - Fish	Not known.
Toxicity - Algae	Not known.
Toxicity - Sediment Compartment	Not classified.
Toxicity - Terrestrial Compartment	Not classified.
12.2 Persistence and Degradation	Not known.
12.3 Bioaccumulative potential	Not known.
12.4 Mobility in soil	Not known.
12.5 Results of PBT and vPvB assessment	Not known.



STOT : Specific Target Organ Toxicity
UN : United Nations
vPvB : very Persistent and very Bioaccumulative

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