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

1.1 Product identifier

Product Name: Manganese phosphorus triselenide powder

Synonyms: Manganese selenophosphate

Chemical Name: Manganese phosphorus triselenide

Chemical Formula: MnPSe3

Product code: M2210C*

CAS No.: Not available.

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

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

Regulation (EC) No. 1272/2008 (CLP)

Acute Tox. 3: Toxic if swallowed.

Acute Tox. 3: Toxic if inhaled.

STOT RE 2: May cause damage to organs through prolonged or repeated exposure.

Aquatic Chronic 1: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

According to Regulation (EC) No. 1272/2008 (CLP)

Product Name: Manganese phosphorus triselenide powder

Signal Word(s): Danger

Hazard Statement(s):

H301 + H331: Toxic if swallowed or if inhaled.

H373: May cause damage to organs through prolonged or repeated exposure.

H410: Very toxic to aquatic life with long lasting effects.

Precautionary Statement(s):

P260: Do not breathe dust/fume/gas/mist/vapours/spray.


P304 + P340 + P311: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician.

2.3 Other hazards

None known.

2.4 Additional Information

Not applicable.
SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

<table>
<thead>
<tr>
<th>Hazardous ingredient(s)</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>%W/W</th>
<th>Hazard Statement(s)</th>
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<td>Manganese phosphorus triselenide</td>
<td>Not available.</td>
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<td>&lt;100 Acute Tox. 3 H301</td>
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<td>Aquatic Acute 1 H400</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Aquatic Chronic 1 H410</td>
</tr>
</tbody>
</table>

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. Call a POISON CENTER or doctor/physician.

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
Immediately call a POISON CENTER or doctor/physician. Rinse mouth.

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
Firefighters 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. Store locked up.

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 A suitable mask with filter type A (EN14387 or EN405) may be appropriate.

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: powder
Colour: Dark brown

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 Toxic if swallowed.
Acute toxicity - Skin Contact Not classified.
Acute toxicity - Inhalation Toxic if inhaled.
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 May cause damage to organs through prolonged or repeated exposure.
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.

12.6 Other adverse effects
Not known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Dispose of contents in accordance with local, state or national legislation. Recycle only completely emptied packaging. Normal disposal is via incineration operated by an accredited disposal contractor. Send to a licensed recycler, reclaimer or incinerator.

13.2 Additional Information
Disposal should be in accordance with local, state or national legislation.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number
UN No. 3283

14.2 UN proper shipping name
UN proper shipping name Selenium compound, solid, n.o.s.

14.3 Transport hazard class(es)
ADR/RID 6.1
IMDG 6.1
IATA 6.1

14.4 Packing group
Packing group III

14.5 Environmental hazards
Environmental hazards Classified as a Marine Pollutant.

14.6 Special precautions for user
Special precautions for user Not known.
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
Not known.

SECTION 15: REGULATORY INFORMATION

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

| European Regulations - Authorisations and/or Restrictions On Use | Not listed |
| High Concern for Authorisation | Not listed |
| REACH: ANNEX XIV list of substances subject to authorisation | Not listed |
| REACH: Annex XVII Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles | Not listed |
| Community Rolling Action Plan (CoRAP) | Not listed |
| Regulation (EC) N° 1005/2009 on substances that deplete the ozone layer | Not listed |
| National regulations | Not known |

15.2 Chemical Safety Assessment
A REACH chemical safety assessment has not been carried out.

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements:

LEGEND

<table>
<thead>
<tr>
<th>Acronyms</th>
<th>Definition</th>
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<tbody>
<tr>
<td>ADN</td>
<td>European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways</td>
</tr>
<tr>
<td>ADR</td>
<td>European Agreement concerning the International Carriage of Dangerous Goods by Road</td>
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<tr>
<td>CAS</td>
<td>Chemical Abstracts Service</td>
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<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
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<td>DNEL</td>
<td>Derived No Effect Level</td>
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<td>European Community</td>
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<td>EINECS</td>
<td>European Inventory of Existing Commercial Chemical Substances</td>
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<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods</td>
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<td>LTEL</td>
<td>Long Term Exposure Limit</td>
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<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
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<tr>
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<td>Predicted No Effect Concentration</td>
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<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
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<td>Regulations concerning the International Carriage of Dangerous Goods by Rail</td>
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<td>Specific Target Organ Toxicity</td>
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<td>United Nations</td>
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<tr>
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