

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 | Silver Indium Phosphorus Selenide Powder |
| Synonyms | Silver indium phosphorus selenide |
| Chemical Name | Silver indium phosphorus selenide |
| Chemical Formula | AgInP ₂ Se ₆ |
| CAS No. | N/A |
| 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

| | |
|--------------|--|
| Product Name | According to Regulation (EC) No. 1272/2008 (CLP) Silver Indium Phosphorus Selenide Powder |
|--------------|--|

Hazard Pictogram(s)



GHS06 GHS08 GHS09

| | |
|----------------|--------|
| 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) | P261: Avoid breathing dust/fume/gas/mist/vapours/spray. P273: Avoid release to the environment. P301 + P310 + P330: IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth. P304 + P340 + P311: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor. P314: Get medical advice/attention if you feel unwell. |
|----------------------------|--|

2.3 Other hazards

None known.

2.4 Additional Information

Not applicable.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

| Hazardous ingredient(s) | CAS No. | EC No. | %W/W | Hazard Statement(s) |
|-----------------------------------|---------|----------------|------|--|
| Silver indium phosphorus selenide | N/A | Not Applicable | ≤100 | Acute Tox. 3 H301 Acute Tox. 3 H331 STOT RE 2 H373 Aquatic Chronic 1 H410 |

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. If not breathing give artificial respiration. Call a POISON CENTER or doctor/physician. |
| Skin Contact | Wash with soap and flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a POISON CENTER or doctor/physician. |
| Eye Contact | Flush with copious amounts of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER or doctor/physician. |
| 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

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/fume/gas/mist/vapours/spray. Use only in a well-ventilated area. Wear protective clothing as per section 8. Wash hands thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

| | |
|------------------------|---|
| Storage temperature | Store in a well-ventilated place. Keep container tightly closed. Store locked up. |
| Storage life | Ambient. |
| Incompatible materials | Stable under normal conditions. |
| | 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

UK – EH40 Workplace Exposure Limits (WEL).

| Occupational Exposure Limits | | | | | | |
|--|---------|---------------------|------------------------------------|------------|---------------------------|------|
| SUBSTANCE. | CAS No. | LTCL (8 hr TWA ppm) | LTCL (8 hr TWA mg/m ³) | STEL (ppm) | STEL (mg/m ³) | Note |
| Selenium and compounds, except hydrogen selenide (as Se) | N/A | | 0.1 | | | |

Region: EU, United Kingdom
 Source: EU Occupational Exposure Limits, UK Workplace Exposure Limits EH40/2005 (Third edition, published 2018)

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 Gray. |
| 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 | No data available. |
| Acute toxicity - Skin Contact | No data available. |
| Acute toxicity - Inhalation | No data available. |
| Skin corrosion/irritation | No data available. |
| Serious eye damage/irritation | No data available. |
| Skin sensitization data | No data available. |
| Respiratory sensitization data | No data available. |
| Germ cell mutagenicity | No data available. |
| Carcinogenicity | No data available. |
| Reproductive toxicity | No data available. |
| Lactation | No data available. |
| STOT - single exposure | No data available. |
| STOT - repeated exposure | No data available. |
| Aspiration hazard | No data available. |

11.2 Other information

Not known.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

| | |
|------------------------------------|--------------------|
| Toxicity - Aquatic invertebrates | No data available. |
| Toxicity - Fish | Not known. |
| Toxicity - Algae | Not known. |
| Toxicity - Sediment Compartment | Not known. |
| Toxicity - Terrestrial Compartment | Not known. |

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. (Hafnium diselenide)

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 Not 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

Candidate List of Substances of Very 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° 850/2004 of the European Parliament and of the Council on persistent organic pollutants Not listed

Regulation (EC) N° 1005/2009 on substances that deplete the ozone layer Not listed

Regulation (EU) N° 649/2012 of the European Parliament and of the Council concerning the export and import of hazardous chemicals Not listed

Other Not known.

National regulations

Other 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

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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SAFETY DATA SHEET

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