

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

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

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**1.1 Product identifier**

Product Name	Graphene monolayer film on quartz
Synonyms	Graphene, monolayer graphene film
Chemical Name	Graphene
Chemical Formula	CxHy
CAS No.	1034343-98-0
EC No.	n/a
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

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**SECTION 2: HAZARDS IDENTIFICATION**

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**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.

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**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

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**3.1 Substances**

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

**3.2 Mixtures**

Not applicable.

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**SECTION 4: FIRST AID MEASURES**

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**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.

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**SECTION 5: FIREFIGHTING MEASURES**

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**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.

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

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**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**

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

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 clear substrate  
Colour: Clear  
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.
<b>9.2 Other information</b>	None.

**SECTION 10: STABILITY AND REACTIVITY**

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

**SECTION 11: TOXICOLOGICAL INFORMATION**

<b>11.1 Information on toxicological effects</b>	
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.
<b>11.2 Other information</b>	Not known.

**SECTION 12: ECOLOGICAL INFORMATION**

<b>12.1 Toxicity</b>	
Toxicity - Aquatic invertebrates	Not known.
Toxicity - Fish	Not known.
Toxicity - Algae	Not known.
Toxicity - Sediment Compartment	Not classified.
Toxicity - Terrestrial Compartment	Not classified.
<b>12.2 Persistence and Degradation</b>	Not known.
<b>12.3 Bioaccumulative potential</b>	Not known.
<b>12.4 Mobility in soil</b>	Not known.
<b>12.5 Results of PBT and vPvB assessment</b>	Not known.
<b>12.6 Other adverse effects</b>	Not known.

**SECTION 13: DISPOSAL CONSIDERATIONS**

<b>13.1 Waste treatment methods</b>	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.
<b>13.2 Additional Information</b>	Disposal should be in accordance with local, state or national legislation.

**SECTION 14: TRANSPORT INFORMATION**

IATA/IMO/RID/ADR Not classified as hazardous for transport.

**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) 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

**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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