

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	C106 Dye
Synonyms	-
Chemical Name	Cis-Bis(isothiocyanato)(2,2'-bipyridyl-4,4'-dicarboxylato)( 4,4'-bis(5-(hexylthio)thiophen-2-yl)-2,2'-bipyridyl)ruthenium(II)
Chemical Formula	C44H44N6O4RuS6
CAS No.	1152310-69-4
EC No.	Not available.
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:	+441 142999180
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**

Regulation (EC) No. 1272/2008 (CLP)	Skin Irrit. 2: Causes skin irritation Skin Sens. 1: May cause an allergic skin reaction Eye Irrit. 2A: Causes serious eye irritation STOT SE 3: May cause respiratory irritation
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**2.2 Label elements**

Product Name	According to Regulation (EC) No. 1272/2008 (CLP) C106 Dye
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Hazard Pictogram(s)



GHS07

Signal Word(s)	Warning
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Hazard Statement(s)	H315: Causes skin irritation H317: May cause an allergic skin reaction H319: Causes serious eye irritation H335: May cause respiratory irritation
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Precautionary Statement(s)	P264: Wash hands thoroughly after handling. P302 + P352 + P333 + P313: IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312: Call a POISON CENTER or doctor if you feel unwell. P337 + P313: If eye irritation persists: Get medical advice/attention.
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**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**

HAZARDOUS INGREDIENT(S)	CAS No.	%W/W	Hazard Statement(s)
Cis-Bis(isothiocyanato)(2,2'-bipyridyl-4,4'-dicarboxylato)(4,4'-bis(5-(hexylthio)thiophen-2-yl)-2,2'-bipyridyl)ruthenium(II)	1152310-69-4	<= 100	Skin Irrit. 2 H315 Skin Sens. 1 H317 Eye Irrit. 2A H319 STOT SE 3 H335

**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.

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**SECTION 7: HANDLING AND STORAGE**


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**7.1 Precautions for safe handling**

Avoid breathing vapours/mist/dust/aerosols. 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.
Storage life	Ambient.
Incompatible materials	Product is light sensitive. Store in the dark.
	None known.

**7.3 Specific end use(s)**

Not known. See Section: 1.2.

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**


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**8.1 Control parameters**
**8.1.1 Occupational Exposure Limits**

No Occupational Exposure Limit assigned.

**Occupational Exposure Limits**

SUBSTANCE.	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m <sup>3</sup> )	STEL (ppm)	STEL (mg/m <sup>3</sup> )	Note

Region	Source
EU	EU Occupational Exposure Limits
United Kingdom	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.

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**


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**9.1 Information on basic physical and chemical properties**

Appearance	Solid: Powder. Colour: Black.
Odour	Not known.
Odour threshold	Not known.
pH	Not known.
Melting point/freezing point	196 °C (lit.)
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): Acetonitrile:tert-butyl alcohol (1:1 v/v)
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.

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**SECTION 10: STABILITY AND REACTIVITY**


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**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.

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**SECTION 11: TOXICOLOGICAL INFORMATION**

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**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.

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**SECTION 12: ECOLOGICAL INFORMATION**

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**12.1 Toxicity**

Toxicity - Aquatic invertebrates	No data available.
Toxicity - Fish	No data available.
Toxicity - Algae	No data available.
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.

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**SECTION 13: DISPOSAL CONSIDERATIONS**

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**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.

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**SECTION 14: TRANSPORT INFORMATION**

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IATA/IMO/RID/ADR

Not classified as hazardous for transport.

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**SECTION 15: REGULATORY INFORMATION**

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**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

REACH: ANNEX XIV list of substances subject to authorisation

REACH: Annex XVII Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

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

**National regulations**

Other Not known.

**15.2 Chemical Safety Assessment**

A REACH chemical safety assessment has not been carried out.

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**SECTION 16: OTHER INFORMATION**

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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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