SAFETY DATA SHEET

Revision Date: 12/12/2022
Revision #: 3

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  Ir(ppy)3
Synonyms  Tris[2-phenylpyridine]iridium(III), Tris(2-phenylpyridinato)iridium(III), Tris[2-phenylpyridine-c2,n]iridium(III)

Chemical Name  Tris[2-(2-pyridinyl)phenyl]iridium(III)

Chemical Formula  C33H24IrN3

CAS No. 94928-86-6
EC No. Not applicable.
Index 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, Research and development use only

1.3 Details of the supplier of the safety data sheet

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

1.4 Emergency telephone number

Emergency Phone #  +44 (0) 20 3885 0382 (CHEMTREC)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Regulation (EC) No. 1272/2008 (CLP)  Skin Irrit. 2: Causes skin irritation
Eye Irrit. 2: Causes serious eye irritation
STOT SE 3: May cause respiratory irritation

2.2 Label elements

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

Product Name  Ir(ppy)3

Hazard Pictogram(s)  GHS07

Signal Word(s)  Warning

Hazard Statement(s)  H315: Causes skin irritation
H319: Causes serious eye irritation
H335: May cause respiratory irritation

Precautionary Statement(s)  P302 + P352: IF ON SKIN: Wash with plenty of water.
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.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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>
</tr>
</thead>
<tbody>
<tr>
<td>Tris[2-(2-pyridinyl)phenyl]iridium(III)</td>
<td>94928-86-6</td>
<td>Not available.</td>
<td>&lt;= 100</td>
<td>Skin Irrit. 2 H315, Eye Irrit. 2 H319, STOT SE 3 H335</td>
</tr>
</tbody>
</table>

3.2 Mixtures
Not applicable.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

**General Advice**
First aiders should ensure they have taken adequate steps to protect themselves from exposure (see Section 8 for recommended personal protection equipment), show this safety data sheet to the doctor in attendance.

**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
Most important symptoms and effects, both acute and delayed, are included on labelling (Section 2.2) and in Section 11.

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
Carbon oxides
Nitrogen oxides (NOx)
Iridium oxides

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
Follow safe handling advice and personal protective equipment recommendations (as per section 8). Provide adequate ventilation.

6.2 Environmental precautions
Avoid release to the environment.

6.3 Methods and material for containment and cleaning up
Sweep up spilled substance - avoid making dust. Use vacuum equipment for collecting spill 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

**Advice on safe handling**
Avoid inhalation, ingestion, and contact with skin and eyes. Use only in a well-ventilated area. Wear protective clothing as per section 8.

**Hygiene measures**
Keep away from food and drink. Wash hands after handling, before breaks, and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

**Storage temperature**
Ambient.

**Storage life**
Product is air, and light sensitive. Store in the dark. Handle and store under inert gas.

**Incompatible materials**
None known.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.
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 and/or exhaust. 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 tested and approved under appropriate government standards such as EN166 (EU).

Hand protection
Handle with gloves. Gloves must be inspected prior to use and proper glove removal techniques should be used. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Body protection
Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls.

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
Physical State
Solid: Powder.

Colour
Yellow.

Odour
Not known.

Odour threshold
Not known.

Melting point/freezing point
451 °C (lit.)

Initial boiling point and boiling range
Not known.

Flammability
Not known.

Lower and upper explosion limit
Not known.

Flash Point
Not known.

Auto-ignition temperature (°C)
Not known.

Decomposition temperature (°C)
Not known.

pH
Not known.

Kinematic viscosity
Not known.

Solubility(ies)
Solubility (Water): Not known.
Solubility (Other): Not known.

Partition coefficient: n-octanol/water (log value)
Not known.

Vapour pressure
Not known.

Density
Not known.

Relative density
Not known.

Relative vapour density
Not known.

Particle characteristics
Not known.

9.2 Other information
None.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity
None anticipated.

10.2 Chemical Stability
Stable under recommended storage 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
In the event of fire: see Section 5

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 Information on other hazards
11.2.1 Endocrine disrupting properties: None known.
11.2.2 Information on other hazards: None known.

SECTION 12: ECOLOGICAL INFORMATION

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
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties
Not known.

12.7 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

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)
Not listed
Not listed
Regulation (EC) N° 1005/2009 on substances that deplete the ozone layer
Not listed
Not listed
concerning the export and import of hazardous chemicals
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

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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