# Safety Data Sheet

## 1. IDENTIFICATION OF THE SUBSTANCES/MIXTURE AND OF THE COMPANY/UNDERTAKING

**1.1. Product Identifiers**

**Product Code(s)** HB17774

**Product Name** Thioflavin X

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

**Recommended use** For research use only – Not for human use

**Uses advised against** No information available

**1.3. Details of the supplier of the safety data sheet**

**Supplier**

HelloBio Ltd
Unit 3 IO Centre
Cabot Park
Moorend Farm Avenue
Avonmouth
Bristol
BS 11 0QL
UK
Tel: +44 (0)117 318 0505
Fax: +44 (01179 811 601

For further information, please contact: **technicalsupport@hellobio.com**

**1.4. Emergency Telephone number**

**Emergency telephone** **-** Tel: +44 (0)117 318 0505

## 2. HAZARDS IDENTIFICATION

**2.1. Classification of the substance or mixture**

**GHS/CLP – REGULATION (EC) No 1272/2008**

| | |
|---|---|
| Acute toxicity (Oral) | Category 3 |
| Serious eye damage/eye irritation | Category 1 |
| Skin sensitization | Category 1 |
| Acute aquatic hazard | Category 1 |
| Long-term aquatic hazard | Category 1 |

**DSD/DPD – Classification according to EU Directives 67/548/EEC or 1999/45/EC**

T - Toxic

R23/24/25 – Toxic by inhalation, in contact with skin and if swallowed

### 2.2. Label Elements

**Signal Word**
Danger

**Hazard Statements**
H301-Toxic if swallowed
H318-Causes serious eye damage
H317-May cause an allergic skin reaction
H400-Very toxic to aquatic life
H410-Very toxic to aquatic life with long lasting effects

**Precautionary Statements**
P261-Avoid breathing dust/fume/gas/mist/vapours/spray
P270-Do not eat, drink or smoke when using this product.
P280-Wear protective gloves, face protection.
P301+P310+P330-IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth.
P302+P352+P333+P313+P362+P364-IF ON SKIN: Wash with plenty of soap and water. If skinirritation or rash occurs: Take off contaminated clothing. And wash it before reuse.
P305+P351+P338+P310-IF IN EYES: Rinse cautiously with water for several minutes. Remove contactlenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

**Other hazards**
Caution – substance not yet completely tested

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances

| | | |
|---|---|---|
| Product Name: | Thioflavin X | |
| Synonyms: | 6-methoxy-3-methyl-2-(4-pyrrolidin-1-ylphenyl) -1,3-benzothiazol-3-ium iodide | |
| Formula: | $C_{19}H_{21}IN_2OS$ | Molecular Weight: 452.35 |
| CAS Number | 2683063-26-3 | |

## 4. FIRST AID MEASURES

### 4.1. Description of first aid measures

**General advice** — If symptoms persist, call a physician.

**Eye contact** — Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms persist, call a physician.

| | |
|---|---|
| **Skin Contact** | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician. |
| **Ingestion** | Rinse mouth. If symptoms persist, call a physician |
| **Inhalation** | Move to fresh air. If symptoms persist, call a physician. |

**4.2. Most important symptoms and effects, both acute and delayed**
To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

**4.3. Indication of immediate medical attention and special treatment needed**
Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

## 5. FIRE-FIGHTING MEASURES

**5.1. Extinguishing media**
**Suitable extinguishing media**
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

**5.2. Special hazards arising from the substance or mixture**
In combustion, may emit toxic fumes.

**5.3. Precautions for fire-fighters**
Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

## 6. ACCIDENTAL RELEASE MEASURES

**6.1. Personal precautions, protective equipment and emergency procedures**
Do not take action without suitable protective clothing – see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapours, mist, dust or gas.

**6.2. Environmental precautions**
Do not let product enter drains.

**6.3. Methods and materials for containment and cleaning up**
Cover spillage with suitable absorbent material. Using non-spark tools, sweep up material and place in an appropriate container. Decontaminate spill site with 10% caustic solution and ventilate area until disposal is complete. Hold all material for appropriate disposal as described under section 13 of SDS.

**6.4. Reference to other sections**
For required PPE see section 8. For disposal see section 13.

## 7. HANDLING AND STORAGE

**7.1. Precautions for safe handling**
Use in a chemical fume hood, with air supplied by an independent system. Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

**7.2. Conditions for safe storage, including any incompatibilities.**
Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use. Recommended storage temperature: Store at RT

**7.3. Specific end uses**
Use in a laboratory fume hood where possible. Refer to employer's COSHH risk assessment.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1. Control parameters**

**Components with workplace control parameters**
Contains no substances with occupational exposure limit values.

**8.2. Exposure controls**

**Appropriate engineering controls**
Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

**Personal protective equipment**

**Eye/face protection**
Use appropriate safety glasses.

**Skin protection**
Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before use. Wash and dry hands thoroughly after handling.

**Body protection**
Wear appropriate protective clothing.

**Respiratory protection**
If risk assessment indicates necessary, use a suitable respirator.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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

| | | | |
|---|---|---|---|
| Appearance | Orange solid | Vapour pressure | No data available |
| Odour | No data available | Vapour density | No data available |
| Odour threshold | No data available | Relative density | No data available |
| pH | No data available | Solubility(ies) | DMSO (100mM) and in EtOH (10 mM) |
| Melting/freezing point | No data available | Partition coefficient | No data available |
| Boiling point/range | No data available | Auto-ignition temperature | No data available |
| Flash Point | No data available | Decomposition temperature | No data available |
| Evaporation rate | No data available | Viscosity | No data available |
| Flammability (solid, gas) | No data available | Explosive properties | No data available |
| Upper/lower flammability or explosive limits | No data available | Oxidising properties | No data available |

**9.2. Other safety information**
No data available

## 10. STABILITY AND REACTIVITY

**10.1. Reactivity**
Stable under recommended transport or storage conditions.

**10.2. Chemical Stability**
Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**
Hazardous reactions will not occur under normal transport or storage conditions.

**10.4. Conditions to avoid**
Heat, moisture

**10.5. Incompatible materials**
Strong acids/alkalis, strong oxidising/reducing agents.

**10.6. Hazardous decomposition products**
Carbon monoxide (CO), Carbon dioxide ($CO_2$), Nitrogen oxides (NOx), Phosphorous oxides.

## 11. TOXICOLOGICAL INFORMATION

**11.1. Information on toxicological effects**

**Acute Toxicity**

| | |
|---|---|
| **Inhalation** | No Information available |
| **Eye contact** | No Information available |
| **Skin contact** | No Information available |
| **Ingestion** | orl-rat LD50:200 mg/kg |

**Chronic toxicity**

| | |
|---|---|
| **Corrosivity** | No Information available |
| **Sensitization** | No Information available |
| **Neurological effects** | No Information available |
| **Reproductive toxicity** | No Information available |
| **Mutagenic effects** | No Information available |
| **Target Organ Effects** | No Information available |

## 12. ECOLOGICAL INFORMATION

**12.1. Toxicity**
**Ecotoxicity effects**

Crustacea: 48h EC50:0.0197 mg/L (Daphnia magna)

Algae: 72h EC50:0.0298 mg/L (Pseudokirchneriella subcapitata)

**12.2. Persistence and degradability**
No Information available

**12.3. Bioaccumalative potential**
No Information available

**12.4. Mobility in soil**
No Information available

**12.5. Results of PBT and vPvB assessment**
No Information available

**12.6. Other adverse effects**
No Information available

## 13. DISPOSAL CONSIDERATIONS

**13.1. Waste treatment methods**

**Waste from residues/unused products**
Dispose of in accordance with local regulations

**Contaminated packaging**
Empty containers should be taken to an approved waste handling site for recycling or disposal.

**Other information**
According to the European Waste Catalogue. Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

## 14. TRANSPORT INFORMATION

**ADR**

| | |
|---|---|
| **Proper shipping name** | Toxic solid, organic, n.o.s |
| **Hazard Class** | 6.1 |
| **UN/ID No** | 2811 |
| **Packing Group** | III |

**IATA**

| | |
|---|---|
| **Proper shipping name** | Toxic solid, organic, n.o.s |
| **Hazard Class** | 6.1 |
| **UN/ID No** | 2811 |
| **Packing Group** | III |

**DOT**

| | |
|---|---|
| **Proper shipping name** | Toxic solid, organic, n.o.s |
| **Hazard Class** | 6.1 |
| **UN/ID No** | 2811 |
| **Packing Group** | III |

## 15. REGULATORY INFORMATION

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**
Water Hazard Classes (WGK) : Class 3 - Severe hazard to waters

**15.2. Chemical Safety Assessment**
No information available

## 16. OTHER INFORMATION

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This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation , disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless stated in the text.