1. Identification of the substances/ mixture and of the company/ undertaking

1.1 Product Identifiers
Product Code       RM2631
Product Name       (+)-Amethopterin hydrate

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses    Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet
Produced by HiMedia Laboratories Pvt. Ltd.
Address 23, Vadhani Indl.Estate, LBS Marg, Mumbai 400 086, India.
Tel. No. +91-22-2500 0970, +91-22-2500 1607
Fax No. +91-22-2500 2468

1.4 Emergency Tel. No.
Emergency Tel.No. Please contact the regional HiMedia representation in your country

2. Hazards Identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
Acute toxicity, oral (Category 3)
Skin corrosion/irritation (Category 2)
Serious eye damage/eye irritation (Category 2A)
Reproductive toxicity (Category 1A, 1B)

Classification according to EU Directives 67/548/EEC or 1999/45/EC
May cause harm to the unborn child.
Toxic if swallowed.
Irritating to eyes and skin.

2.2 Label elements
Labelling according Regulation (EC) No 1272/2008 [CLP]
Pictogram

Signal word Danger

Hazard Statement(s)
H301 Toxic if swallowed
H315 Causes skin irritation
H319 Causes serious eye irritation
H360 May damage fertility or the unborn child

Precautionary Statement(s)
P201 Obtain special instructions before use.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/attention.

Symbol(s)

![Red skull and crossbones symbol](image)

**R-Phrase(s)**
- **R61** May cause harm to the unborn child.
- **R25** Toxic if swallowed.
- **R36/38** Irritating to eyes and skin.

**S-Phrase(s)**
- **S53** Avoid exposure - obtain special instructions before use.
- **S26** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- **S36/37** Wear suitable protective clothing and gloves.
- **S45** In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

### 2.3 Other hazards - none

### 3. Composition/Information on Ingredients

#### 3.1 Substances

**Synonym**: MTX; Methylaminopterin

**Molecular Formula**: \( \text{C}_{20} \text{H}_{22} \text{N}_8 \text{O}_5 \cdot x \text{H}_2 \text{O} \)

**Molecular Weight**: 454.44 (anhydrous basis)

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>((\pm ))Amethopterin hydrate</td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>60388-53-6 (anhydrous basis)</td>
</tr>
<tr>
<td>EC-No.</td>
<td>262-213-7</td>
</tr>
</tbody>
</table>

### 4. First Aid Measures

#### 4.1 Description of first aid measures

**General advice**
Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled**
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**
Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 4.2 Most important symptoms and effects, both acute and delayed
No data available

#### 4.3 Indication of immediate medical attention and special treatment needed
No data available

### 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
Carbon oxides, nitrogen oxides (NOx)
5.3 Precautions for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information
No data available

6 Accidental Release Measures
6.1 Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see Section 13.

7 Handling and Storage
7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Normal measures for preventive fire protection.

7.3 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended Storage Temperature : Store below 30°C

7.3 Specific end uses
No data available

8 Exposure Controls/Personal Protection
8.1 Control parameters
Components with workplace control parameters

8.2 Exposure controls
Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Hygiene measure
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands face after working with the substance.

Eye/face protection
Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (Without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Wash and dry hands.
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific work place.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK(EN 14387) respirator cartridges as a backup to the engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Environment exposure controls
Do not empty into drains

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Yellow to orange crystals or powder</td>
</tr>
</tbody>
</table>

Odour                                    No data available
Odour Threshold                         No data available
Odour Threshold                         No data available
pH                                       No data available
Melting/freezing point                  No data available
Initial boiling point and boiling range  No data available
Flash point                             No data available
Upper/lower flammability or explosive limits No data available
Vapour pressure                         No data available
Vapour density                          No data available
Relative density                        No data available
Water Solubility                        No data available
Partition coefficient: n-octanol/Water    No data available
Autoignition Temperature                No data available
Decomposition Temperature               No data available
Viscosity                                No data available
Explosive properties                    No data available
Oxidizing properties                    No data available

9.2 Other safety information

No data available

10 Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

No data available

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Other decomposition products - No data available

11 Toxicological Information

11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>No data available</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>No data available</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>No data available</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>No data available</td>
</tr>
</tbody>
</table>

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available

Specific target organ toxicity- single exposure

No data available
Aspiration hazard
No data available

Potential Health Effects
Inhalation.
Refer Section 2
Skin
Refer Section 2
Eyes
Refer Section 2
Ingestion
Refer Section 2

Additional Information
RTECS : MA1224100

12 Ecological Information
12.1 Toxicity
No data available
12.2 Persistence and degradability
No data available
12.3 Bioaccumulative potential
No data available
12.4 Mobility in soil
No data available
12.5 PBT and vPvB assessment
No data available
12.6 Other adverse effects
No data available

13 Disposal Considerations
13.1 Waste treatments methods
Product
Offer surplus and non-recyclable solutions to a licenced disposal company. Contact a licenced professional waste disposal service to dispose of this material.

13.2 Contaminated packaging
Dispose of as unused product.

14 Transport Information
14.1 UN-No.
ADR/RID: 1544  IMDG: 1544  IATA: 1544

14.2 UN proper shipping name
ADR/RID : (±)-Amethopterin hydrate
IMDG : (±)-Amethopterin hydrate
IATA : (±)-Amethopterin hydrate

14.3 Transport hazard class(es)
ADR/RID: 6.1  IMDG: 6.1  IATA: 6.1

14.4 Packaging group
ADR/RID: 2  IMDG: 2  IATA: 2

14.5 Environmental hazards
ADR/RID: No  IMDG: Marine Pollutant:No  IATA: No

14.6 Special precautions for use
No data available

15 Regulatory Information
This safety datasheet complies with the requirements of Regulation(EC) No.1907/2006

15.1 Safety health and environment regulations/legislation specific for the substance or mixture
No data available

15.2 Chemical Safety Assessment
No data available

16 Other Information
Further information
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