

MATERIAL SAFETY DATA SHEET

L-(+)-Amethopterin hydrate

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Name: Methotrexate Hydrate Date: 26th January 2018 Version: Discofinechem4
Company: Discovery Fine Chemicals Ltd
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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 irritation (Category 2)

Eye irritation (Category 2)

Reproductive toxicity (Category 1B)

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Toxic if swallowed. Irritating to eyes and skin. May cause harm to the unborn child.

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.

Supplemental Hazard Statements: none

According to European Directive 67/548/EEC as amended.

Hazard symbol(s)



R-phrases(s)

R61 May cause harm to the unborn child.

R25 Also toxic if swallowed.

R36/38 Irritating to eyes and skin.

S-phrases(s)

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).

S53 Avoid exposure - obtain special instructions before use.

Caution - substance not yet tested completely.

Restricted to professional users.

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms: L-Amethopterin, Methylaminopterin, 4-Amino-10-methylfolic acid, Antifolan, Methotrexate,

L-4-Amino-N10-methylpteroylglutamic acid, MTX

Formula: C₂₀H₂₂N₈O₅·xH₂O, Molecular Weight: 454.44 g/mol

Component: Methotrexate hydrate

Cas No: 59-05-2 (133073-73-1) Concentration: -

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. Take victim immediately to hospital. 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

Symptoms and signs of poisoning are: Nausea, Dizziness, Headache, Changes in the blood count, anemia, Drowsiness, Gastrointestinal disturbance, Vomiting, Diarrhoea, Fever, hair loss, mouth ulcers, Fatigue, chills, Anorexia., Blurred vision, increased susceptibility to infections

4.3 Indication of any immediate medical attention and special treatment needed - no data available

5. FIREFIGHTING 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 (NO_x)

5.3 Advice for firefighters - Wear self contained breathing apparatus for firefighting 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 dust formation. Avoid breathing vapors, mist or gas.

Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

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 - Pick up and arrange disposal without creating dust. Sweep up and shovel. 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 formation of dust and aerosols.

Avoid exposure - obtain special instructions before use.

Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: -20 °C. Keep in a dry place.

7.3 Specific end uses - no data available

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 - Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection - Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

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

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 workplace.

Respiratory protection - Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to 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).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- a) Appearance: Form: powder, Colour: yellow
- b) Odour - no data available
- c) Odour Threshold - no data available
- d) pH - no data available
- e) Melting point/freezing point - 185 - 204 °C
- f) Initial boiling point and boiling range - no data available
- g) Flash point - no data available
- h) Evaporation rate - no data available
- i) Flammability (solid, gas) - no data available
- j) Upper/lower flammability or explosive limits - no data available
- k) Vapour pressure - no data available
- l) Vapour density - no data available
- m) Relative density - no data available
- n) Water solubility - no data available
- o) Partition coefficient: n-octanol/water - no data available
- p) Auto-ignition temperature - no data available
- q) Decomposition temperature - no data available
- r) Viscosity - no data available
- s) Explosive properties - no data available
- t) 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 - Avoid moisture. Light.

10.5 Incompatible materials - Strong oxidizing agents, Strong acids

10.6 Hazardous decomposition products - Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity - no data available

Skin corrosion/irritation - no data available

Serious eye damage/eye irritation - no data available

Respiratory or skin sensitization - no data available

Germ cell mutagenicity - no data available

Carcinogenicity - This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

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

May cause congenital malformation in the fetus.

Presumed human reproductive toxicant

Specific target organ toxicity - single exposure - no data available

Specific target organ toxicity - repeated exposure - no data available

Aspiration hazard - no data available

Potential health effects

Inhalation - May be harmful if inhaled. Causes respiratory tract irritation.

Ingestion - Toxic if swallowed.

Skin - May be harmful if absorbed through skin. Causes skin irritation.

Eyes - Causes serious eye irritation.

Signs and Symptoms of Exposure: Symptoms and signs of poisoning are: Nausea, Dizziness, Headache, Changes in the blood count, anemia, Drowsiness, Gastrointestinal disturbance, Vomiting, Diarrhoea, Fever, hair loss, mouth ulcers, Fatigue, chills, Anorexia., Blurred vision, increased susceptibility to infections

Additional Information: RTECS: Not available

12. ECOLOGICAL INFORMATION

12.1 Toxicity - no data available

12.2 Persistence and degradability - no data available

12.3 Bio-accumulative potential - no data available

12.4 Mobility in soil - no data available

12.5 Results of PBT and vPvB assessment - no data available

12.6 Other adverse effects - no data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product - Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging - Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID: 1544 IMDG: 1544 IATA: 1544

14.2 UN proper shipping name

ADR/RID: ALKALOIDS, SOLID, N.O.S. (Methotrexate)

IMDG: ALKALOIDS, SOLID, N.O.S. (Methotrexate)

IATA: Alkaloids, solid, n.o.s. (Methotrexate)

14.3 Transport hazard class(es)

ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1

14.4 Packaging group

ADR/RID: III IMDG: III IATA: III

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user - no data available

15. REGULATORY INFORMATION

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

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

no data available

15.2 Chemical Safety Assessment - no data available

16. OTHER INFORMATION

Further information

Text of H-code(s) and R-phrases(s) mentioned in Section 2 and 3

H301 Toxic if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H360 May damage fertility or the unborn child.

R61 May cause harm to the unborn child.

R25 Also toxic if swallowed.

R36/38 Irritating to eyes and skin.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product.