MEFLOQUINE HYDROCHLORIDE CRS
Safety Data Sheet
Date of issue: 27/06/2013
Revision date: 27/06/2013
Supersedes: 16/12/2009
Version: 6.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Product form: Substance
Trade name: MEFLOQUINE HYDROCHLORIDE CRS
EC no: 257-412-0
CAS No: 51773-92-3
Product code: M0253000
Other means of identification: RTECS No: VC0308000

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

1.2.1. Relevant identified uses
Main use category: The product is intended for research, analysis and scientific education.
Use of the substance/mixture: For professional use only
Function or use category: Laboratory chemicals

1.2.2. Uses advised against
No additional information available

1.3. Details of the supplier of the safety data sheet
European Directorate for the Quality of Medicines & Healthcare
EDQM, Council of Europe
F-67081 Strasbourg
T +33(0)388412035 - F +33(0)388412771

1.4. Emergency telephone number
Emergency number: +44(0)1235239670

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Acute Tox. 4 (Dermal) H312
Acute Tox. 4 (Inhalation) H332
Acute Tox. 4 (Oral) H302
Aquatic Acute 1 H400

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC
Xn; R20/21/22
N; R50
Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects
No additional information available
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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP):

![GHS07](image1)

![GHS09](image2)

Signal word (CLP): Warning

Hazard statements (CLP):

- H302 - Harmful if swallowed
- H312 - Harmful in contact with skin
- H332 - Harmful if inhaled
- H400 - Very toxic to aquatic life

Precautionary statements (CLP):

- P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
- P264 - Wash hands and other exposed areas thoroughly after handling
- P273 - Avoid release to the environment
- P280 - Wear protective gloves/protective clothing/eye protection/face protection
- P301 + P312 - IF SWALLOWED: call a POISON CENTER or doctor/physician if you feel unwell
- P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
- P304 + P340 - IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing
- P312 - Call a POISON CENTER/doctor/physician if you feel unwell
- P330 - Rinse mouth
- P391 - Collect spillage
- P501 - Dispose of contents/container to: Hazardous waste. Comply with applicable regulations

2.3. Other hazards

Other hazards not contributing to the classification: Exposure may produce an allergic reaction.

SECTION 3: Composition/information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Directive 67/548/EEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEFLOQUINE HYDROCHLORIDE</td>
<td>(CAS No)51773-92-3</td>
<td>≤ 100</td>
<td>Xn; R20/21/22</td>
</tr>
<tr>
<td>(Main constituent)</td>
<td>(EC no)257-412-0</td>
<td></td>
<td>N; R50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
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<tr>
<td>MEFLOQUINE HYDROCHLORIDE</td>
<td>(CAS No)51773-92-3</td>
<td>≤ 100</td>
<td>Acute Tox. 4 (Dermal), H312</td>
</tr>
<tr>
<td>(Main constituent)</td>
<td>(EC no)257-412-0</td>
<td></td>
<td>Acute Tox. 4 (Inhalation), H332</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 4 (Oral), H302</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic Acute 1, H400</td>
</tr>
</tbody>
</table>

Full text of R-, H- and EUH-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation: Move to fresh air in case of accidental inhalation. Assure fresh air breathing.

First-aid measures after skin contact: Rinse skin with water/shower.

First-aid measures after eye contact: Rinse with water while holding the eyes wide open. Contact lenses should be removed.

First-aid measures after ingestion: Rinse mouth out with water.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries: See Heading 2.

4.3. Indication of any immediate medical attention and special treatment needed

In all cases of doubt, or when symptoms persist, seek medical attention.
## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

| Suitable extinguishing media | Use extinguishing media appropriate for surrounding fire. Extinguishing blanket. Carbon dioxide. Dry powder. Large amounts: Not applicable. |
| Unsuitable extinguishing media | Water may be ineffective in firefighting due to low solubility. |

### 5.2. Special hazards arising from the substance or mixture

| Precautionary measures fire | Small amounts: Use normal individual fire protective equipment. Large amounts: Not applicable. |

### 5.3. Advice for firefighters

No additional information available

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### General measures
Avoid raising dust. Wear suitable protective clothing, gloves and eye or face protection. Large amounts: Not applicable.

#### 6.1.1. For non-emergency personnel

**Protective equipment**
See Headings 7 and 8.

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

No additional information available

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up
Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting. Ensure waste is collected and contained. Clean thoroughly. Poorly soluble in water. Clean with the help of detergents.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed
Small amounts: See Heading 1. When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

Precautions for safe handling
Handle and open container with care. See Heading 8.

Hygiene measures
Handle in accordance with good industrial hygiene and safety procedures.

### 7.2. Conditions for safe storage, including any incompatibilities

#### Technical measures
Comply with applicable regulations.

#### Storage conditions
To guarantee the quality and properties of the product, keep dry. Keep in a cool, well-ventilated place away from heat. Store in original container.

#### Incompatible products
Strong oxidizing agents.

### 7.3. Specific end use(s)
See Heading 1.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

**Hand protection**
Gloves.

**Skin and body protection**
Lab coat.

**Respiratory protection**
Quarter mask (DIN EN 140).
SECTION 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>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Crystalline powder. white. light yellow. Powder.</td>
</tr>
<tr>
<td>Colour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>216 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Self ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Methanol. Water: &lt; 1 mg/l</td>
</tr>
<tr>
<td>Log Pow</td>
<td>2.681 at 20°C</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

Small amounts: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. Large amounts: Not applicable.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Small amounts: None under normal use. Large amounts: Not applicable.

10.6. Hazardous decomposition products

When heated to decomposition, emits dangerous fumes. Large amounts: Not applicable.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>880 mg/kg</td>
</tr>
<tr>
<td>ATE (oral)</td>
<td>500,000 mg/kg</td>
</tr>
<tr>
<td>ATE (dermal)</td>
<td>1100,000 mg/kg</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Not classified

Serious eye damage/irritation: Not classified

Respiratory or skin sensitisation: Not classified

Acute toxicity: Harmful in contact with skin. Harmful if inhaled. Harmful if swallowed.
MEFLOQUINE HYDROCHLORIDE CRS

Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
Specific target organ toxicity (single exposure) : Not classified
Specific target organ toxicity (repeated exposure) : Not classified
Aspiration hazard : Not classified
Potential Adverse human health effects and symptoms : Avoid any direct contact with the product. Small amounts: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. Large amounts: Not applicable.

SECTION 12: Ecological information

12.1. Toxicity

MEFLOQUINE HYDROCHLORIDE CRS(51773-92-3)
LC50 fishes 1 2,1 mg/l LC50-96 Hour - fish
EC50 Daphnia 1 1,8 mg/l EC50 - 48 Hour - Daphnia magna

12.2. Persistence and degradability
MEFLOQUINE HYDROCHLORIDE CRS(51773-92-3)
Biodegradation 91

12.3. Bioaccumulative potential
MEFLOQUINE HYDROCHLORIDE CRS(51773-92-3)
Log Pow 2,681 at 20°C

12.4. Mobility in soil
No additional information available

12.5. Results of PBT and vPvB assessment
No additional information available

12.6. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Regional legislation (waste) : Dispose in a safe manner in accordance with local/national regulations.
Waste disposal recommendations : Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.

SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

14.1. UN number
UN-No. : 3077
UN-No. (IATA) : 3077
UN-No. (IMDG) : 3077

14.2. UN proper shipping name
Proper Shipping Name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Transport document description : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III, (E)

14.3. Transport hazard class(es)
Class (UN) : 9
Class (IATA) : 9
Class (IMDG) : 9

14.4. Packing group
Packing group (UN) : III
Packing group (IMDG) : III
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14.5. Environmental hazards

Dangerous for the environment:

Other information:
No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

Hazard identification number (Kemler No.): 90
Classification code (UN): M7
Orange plates:

Tunnel restriction code: E
LO: LQ27
Excepted quantities (ADR): E1

14.6.2. Transport by sea

Ship Safety Act:
Miscellaneous dangerous substances & articles
MFAG-No: 171

14.6.3. Air transport

Civil Aeronautics Law:
Miscellaneous dangerous substances & articles

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of R-, H- and EUH-phrases:

Acute Tox. 4 (Dermal) Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation) Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral) Acute toxicity (oral), Category 4
Aquatic Acute 1 Hazardous to the aquatic environment — AcuteHazard, Category 1
H302 Harmful if swallowed
H312 Harmful in contact with skin
H332 Harmful if inhaled
H400 Very toxic to aquatic life
R20/21/22 Harmful by inhalation, in contact with skin and if swallowed
R50 Very toxic to aquatic organisms
N Dangerous for the environment
Xn Harmful

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.