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

1.1 Product identifier

Identification of the substance: 8-Hydroxyquinoline

Article number: 2557

Registration number (REACH): This information is not available.

EC number: 205-711-1

CAS number: 148-24-3

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

Identified uses: laboratory chemical

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG
Schoemperlenstr. 3-5
D-76185 Karlsruhe
Germany

Telephone: +49 (0) 721 - 56 06 0
Telefax: +49 (0) 721 - 56 06 149
e-mail: sicherheit@carlroth.de
Website: www.carlroth.de

Competent person responsible for the safety data sheet: Department Health, Safety and Environment

1.4 Emergency telephone number

Emergency information service: Poison Centre Munich: +49/(0)89 19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

<table>
<thead>
<tr>
<th>Section</th>
<th>Hazard class</th>
<th>Hazard class and category</th>
<th>Hazard statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1O</td>
<td>acute toxicity (oral)</td>
<td>(Acute Tox. 4)</td>
<td>H302</td>
</tr>
<tr>
<td>3.1D</td>
<td>acute toxicity (dermal)</td>
<td>(Acute Tox. 3)</td>
<td>H311</td>
</tr>
<tr>
<td>3.3</td>
<td>serious eye damage/eye irritation</td>
<td>(Eye Irrit. 2B)</td>
<td>H320</td>
</tr>
<tr>
<td>4.1A</td>
<td>hazardous to the aquatic environment - acute hazard</td>
<td>(Aquatic Acute 1)</td>
<td>H400</td>
</tr>
<tr>
<td>4.1C</td>
<td>hazardous to the aquatic environment - chronic hazard</td>
<td>(Aquatic Chronic 1)</td>
<td>H410</td>
</tr>
</tbody>
</table>
2.2 Label elements

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

Signal word
Danger

Pictograms

Hazard statements
H302  Harmful if swallowed.
H311  Toxic in contact with skin.
H320  Causes eye irritation.
H410  Very toxic to aquatic life with long lasting effects.

Precautionary statements

Precautionary statements - prevention
P280  Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements - response
P302+P352  IF ON SKIN: Wash with plenty of water.
P312  Call a POISON CENTER/doctor if you feel unwell.
P321  Specific treatment (see on this label).
P391  Collect spillage.

Precautionary statements - disposal
P501  Dispose of contents/container to industrial combustion plant.

Labelling of packages where the contents do not exceed 125 ml
Signal word: Danger

Symbol(s)

H311  Toxic in contact with skin.
H320  Causes eye irritation.

2.3 Other hazards

There is no additional information.
8-Hydroxyquinoline ≥99.5 %, p.a., ACS
article number: 2557

SECTION 3: Composition/information on ingredients

3.1 Substances

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>8-Hydroxyquinoline</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC number</td>
<td>205-711-1</td>
</tr>
<tr>
<td>CAS number</td>
<td>148-24-3</td>
</tr>
<tr>
<td>Molecular formula</td>
<td>(C_9H_7NO)</td>
</tr>
<tr>
<td>Molar mass</td>
<td>145.2 g/mol</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes
Take off immediately all contaminated clothing. Self-protection of the first aider.

Following inhalation
Provide fresh air. If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

Following skin contact
After contact with skin, wash immediately with plenty of water.

Following eye contact
Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

Following ingestion
Rinse mouth with water (only if the person is conscious). Call a doctor.

4.2 Most important symptoms and effects, both acute and delayed
Irritant effects, Cough, Nausea, Vomiting, Diarrhoea, Dyspnoea

4.3 Indication of any immediate medical attention and special treatment needed
none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Co-ordinate fire-fighting measures to the fire surroundings
water spray, foam, dry extinguishing powder, carbon dioxide (CO2)

Unsuitable extinguishing media
water jet
5.2 Special hazards arising from the substance or mixture
Hazardous combustion products
In case of fire may be liberated: nitrogen oxides (NOx), carbon monoxide (CO), carbon dioxide (CO2)

5.3 Advice for firefighters
Do not allow firefighting water to enter drains or water courses. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
For non-emergency personnel
Avoid contact with skin and eyes.

6.2 Environmental precautions
Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up
Advices on how to contain a spill
Covering of drains.

Advices on how to clean up a spill
Take up mechanically. Control of dust.

Other information relating to spills and releases
Place in appropriate containers for disposal. Ventilate affected area.

Reference to other sections
Hazardous combustion products: see section 5. Personal protective equipment: see section 8.
Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Provide adequate ventilation. Handle and open container with care. Avoid dust formation.

• Measures to prevent fire as well as aerosol and dust generation
Removal of dust deposits.

Advice on general occupational hygiene
Thorough skin-cleansing after handling the product.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed. Store in a dry place.

Incompatible substances or mixtures
Observe hints for combined storage.
Consideration of other advice

Store locked up.

• **Ventilation requirements**
  Use local and general ventilation.

• **Specific designs for storage rooms or vessels**
  Recommended storage temperature: 15 - 25 °C.

### 7.3 Specific end use(s)
No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

**National limit values**

#### Occupational exposure limit values (Workplace Exposure Limits)

<table>
<thead>
<tr>
<th>Country</th>
<th>Name of agent</th>
<th>Notation</th>
<th>Identifier</th>
<th>TWA [mg/m³]</th>
<th>STEL [mg/m³]</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>JP</td>
<td>particulates not otherwise classified</td>
<td>dust</td>
<td>OEL</td>
<td>8</td>
<td></td>
<td>JSOH</td>
</tr>
<tr>
<td>JP</td>
<td>particulates not otherwise classified</td>
<td>r</td>
<td>OEL</td>
<td>2</td>
<td></td>
<td>JSOH</td>
</tr>
<tr>
<td>JP</td>
<td>dust</td>
<td>less3silica, dust</td>
<td>OEL</td>
<td>4</td>
<td></td>
<td>JSOH</td>
</tr>
<tr>
<td>JP</td>
<td>dust</td>
<td>less3silica, r</td>
<td>OEL</td>
<td>1</td>
<td></td>
<td>JSOH</td>
</tr>
</tbody>
</table>

**Notation**
- dust: As dust
- less3silica: Containing less than 3% crystalline silica
- r: Respirable fraction
- STEL: Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period unless otherwise specified
- TWA: Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average

### 8.2 Exposure controls

#### Individual protection measures (personal protective equipment)

- **Eye/face protection**
  Use safety goggles with side protection.

- **Skin protection**
  - **hand protection**
    Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
NBR (Nitrile rubber) >0.11 mm.

>480 minutes (permeation: level 6)

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P3 (filters at least 99.95 % of airborne particles, colour code: White).

Environmental exposure controls
Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

**Appearance**

- Physical state: solid (powder, crystalline)
- Colour: light yellow
- Odour: this information is not available
- Odour threshold: No data available

**Other physical and chemical parameters**

- pH (value): This information is not available.
- Melting point/freezing point: 72 - 75 °C
- Initial boiling point and boiling range: 267 °C
- Flash point: not applicable
- Evaporation rate: no data available
- Flammability (solid, gas): These information are not available

**Explosive limits**

- lower explosion limit (LEL): this information is not available
- upper explosion limit (UEL): this information is not available
- Explosion limits of dust clouds: these information are not available
- Vapour pressure: This information is not available.
- Density: This information is not available.
- Vapour density: This information is not available.
- Relative density: Information on this property is not available.
8-Hydroxyquinoline ≥99.5%, p.a., ACS

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Solubility(ies)
Water solubility 0,56 g/l at 20 °C
Partition coefficient
n-octanol/water (log KOW) 2,02 (TOXNET) (exp. Lit.)
Auto-ignition temperature Information on this property is not available.
Decomposition temperature no data available
Viscosity not relevant (solid matter)
Explosive properties none
Oxidising properties none

9.2 Other information
There is no additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity
Dust explosibility.

10.2 Chemical stability
May cause decomposition by long-term light influence.

10.3 Possibility of hazardous reactions
Violent reaction with: Strong oxidiser, Strong acid

10.4 Conditions to avoid
Direct light irradiation.

10.5 Incompatible materials
There is no additional information.

10.6 Hazardous decomposition products
Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Exposure route</th>
<th>Endpoint</th>
<th>Value</th>
<th>Species</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>oral</td>
<td>LD50</td>
<td>1,200 mg/kg</td>
<td>rat</td>
<td>TOXNET</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation
Shall not be classified as corrosive/irritant to skin.
8-Hydroxyquinoline ≥99.5%, p.a., ACS

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Serious eye damage/eye irritation
Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation
Shall not be classified as a respiratory or skin sensitiser.

Summary of evaluation of the CMR properties
Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant

• Specific target organ toxicity - single exposure
Shall not be classified as a specific target organ toxicant (single exposure).

• Specific target organ toxicity - repeated exposure
Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard
Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed
nausea, vomiting, diarrhoea

• If in eyes
data are not available

• If inhaled
Irritation to respiratory tract, cough, Dyspnoea

• If on skin
Frequently or prolonged contact with skin may cause dermal irritation

Other information
None

SECTION 12: Ecological information

12.1 Toxicity
Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute)
Very toxic to aquatic organisms.

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
<th>Species</th>
<th>Source</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50</td>
<td>18 mg/l</td>
<td>fish</td>
<td>ECOTOX Database</td>
<td>96 h</td>
</tr>
</tbody>
</table>

Aquatic toxicity (chronic)
May cause long-term adverse effects in the aquatic environment.

12.2 Process of degradability
Theoretical Oxygen Demand with nitrification: 2,535 mg/mg
Theoretical Oxygen Demand: 2,094 mg/mg
Theoretical Carbon Dioxide: 2,729 mg/mg
8-Hydroxyquinoline ≥99.5 %, p.a., ACS

article number: 2557

12.3 Bioaccumulative potential
Does not significantly accumulate in organisms.
n-octanol/water (log KOW) 2,02

12.4 Mobility in soil
Data are not available.

12.5 Results of PBT and vPvB assessment
Data are not available.

12.6 Other adverse effects
Slightly hazardous to water.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information
Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

13.2 Relevant provisions relating to waste
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

13.3 Remarks
Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1 UN number (not subject to transport regulations)
14.2 UN proper shipping name not relevant
14.3 Transport hazard class(es) not relevant
Class -
14.4 Packing group not relevant
14.5 Environmental hazards none (non-environmentally hazardous acc. to the dangerous goods regulations)

14.6 Special precautions for user
There is no additional information.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code
The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations
• Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
Not subject to ADR, RID and ADN.
8-Hydroxyquinoline ≥99.5 %, p.a., ACS

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- International Maritime Dangerous Goods Code (IMDG)
  Not subject to IMDG.

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

- Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)
  Not listed.
- Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)
  Not listed.
- Regulation 850/2004/EC on persistent organic pollutants (POP)
  Not listed.
- Restrictions according to REACH, Annex XVII
  Not listed
- List of substances subject to authorisation (REACH, Annex XIV)
  Not listed

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II
  Not listed

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)
  Not listed

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)
  Not listed

National inventories
Substance is listed in the following national inventories:

- EINECS/ELINCS/NLP (Europe)
- REACH (Europe)

15.2 Chemical Safety Assessment
No Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>CMR</td>
<td>Carcinogenic, Mutagenic or toxic for Reproduction</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Commercial Chemical Substances</td>
</tr>
</tbody>
</table>
The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

### Key literature references and sources for data
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)

### List of relevant phrases (code and full text as stated in chapter 2 and 3)

<table>
<thead>
<tr>
<th>Code</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>H302</td>
<td>harmful if swallowed</td>
</tr>
<tr>
<td>H311</td>
<td>toxic in contact with skin</td>
</tr>
<tr>
<td>H320</td>
<td>causes eye irritation</td>
</tr>
<tr>
<td>H400</td>
<td>very toxic to aquatic life</td>
</tr>
<tr>
<td>H410</td>
<td>very toxic to aquatic life with long lasting effects</td>
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</tbody>
</table>

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