Safety data sheet
Safe Work Australia - Code of Practice

Rhodamine B (C.I. 45170) for microscopy

article number: T130
Version: GHS 2.0 en
Replaces version of: 2016-05-30
Version: (GHS 1)

date of compilation: 2016-05-30
Revision: 2019-04-24

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

1.1 Product identifier

Identification of the substance
Rhodamine B (C.I. 45170)

Article number
T130

Registration number (REACH)
It is not required to list the identified uses because the substance is not subject to registration according to REACH (< 1 t/a)

EC number
201-383-9

CAS number
81-88-9

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

Identified uses:
laboratory chemical
laboratory and analytical use

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

e-mail (competent person): sicherheit@carlroth.de

1.4 Emergency telephone number

<table>
<thead>
<tr>
<th>Name</th>
<th>Street</th>
<th>Postal code/city</th>
<th>Telephone</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSW Poisons Information Centre</td>
<td>Hawkesbury Road</td>
<td>2145 Westmead, NSW</td>
<td>131126</td>
<td></td>
</tr>
<tr>
<td>Childrens Hospital</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to GHS
**Classification acc. to GHS**

<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>3.3</td>
<td>serious eye damage/eye irritation</td>
<td>(Eye Dam. 1)</td>
<td>H318</td>
</tr>
<tr>
<td>4.1C</td>
<td>hazardous to the aquatic environment - chronic hazard</td>
<td>(Aquatic Chronic 3)</td>
<td>H412</td>
</tr>
</tbody>
</table>

**2.2 Label elements**

**Labelling GHS**

**Signal word** Danger

**Pictograms**

GHS05

**Hazard statements**

H318 Causes serious eye damage
H412 Harmful to aquatic life with long lasting effects

**Precautionary statements**

**Precautionary statements - prevention**

P273 Avoid release to the environment.
P280 Wear eye protection/face protection.

**Precautionary statements - response**

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.

**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)**

- H318 Causes serious eye damage.
- H412 Harmful to aquatic life with long lasting effects.
- P280 Wear eye protection/face protection.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTER or doctor/physician.

**2.3 Other hazards**

There is no additional information.
SECTION 3: Composition/information on ingredients

3.1 Substances

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>9-(2-Carboxyphenyl)-3,6-bis(diethylamino)xanthylum chloride</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC number</td>
<td>201-383-9</td>
</tr>
<tr>
<td>CAS number</td>
<td>81-88-9</td>
</tr>
<tr>
<td>Molecular formula</td>
<td>C₂₈H₃₁ClN₂O₃</td>
</tr>
<tr>
<td>Molar mass</td>
<td>479 g/mol</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1 Description of first aid measures

**General notes**
Take off contaminated clothing.

**Following inhalation**
Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

**Following skin contact**
Rinse skin with water/shower. In all cases of doubt, or when symptoms persist, seek medical advice.

**Following eye contact**
In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

**Following ingestion**
Rinse mouth. Call a doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed
Irritant effects, Risk of serious damage to eyes, Risk of blindness, Methaemoglobinaemia, Headache, Cardiac arrhythmias, Blood pressure drop, Dyspnoea, Spasms, Cyanosis (blue coloured blood)

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
Combustible.

Hazardous combustion products
In case of fire may be liberated: nitrogen oxides (NOx), carbon monoxide (CO), carbon dioxide (CO2), hydrogen chloride (HCl)

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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe dust.

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.

6.4 Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid dust formation.

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

Advice on general occupational hygiene
Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities
Store in a dry place. Keep container tightly closed.
Incompatible substances or mixtures
Observe hints for combined storage.

Consideration of other advice
• 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)
Data are not available.

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. 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.
  • type of material
    NBR (Nitrile rubber)
  • material thickness
    >0,11 mm
  • breakthrough times of the glove material
    >480 minutes (permeation: level 6)
  • other protection measures
    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). P1 (filters at least 80 % 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: green
- Odour: odourless
- Odour threshold: No data available

**Other physical and chemical parameters**
- pH (value): 3 – 4 (water: 10 g/l, 20 °C)
- Melting point/freezing point: 199 – 201 °C
- Initial boiling point and boiling range: This information is not available.
- 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: 1.31 g/cm³ at 20 °C
- Vapour density: This information is not available.
- Bulk density: ~ 250 kg/m³
- Relative density: Information on this property is not available.

**Solubility(ies)**
- Water solubility: 15 g/l at 20 °C

**Partition coefficient**
- n-octanol/water (log KOW): ≥1.9 – ≤2 (ECHA)
- Auto-ignition temperature: Information on this property is not available.
- Decomposition temperature: >245 °C
Viscosity: not relevant (solid matter)
Explosive properties: Shall not be classified as explosive
Oxidising properties: none

9.2 Other information
There is no additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity
The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

10.2 Chemical stability
The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions
Violent reaction with: Strong oxidiser

10.4 Conditions to avoid
Keep away from heat. Decomposition takes place from temperatures above: >245 °C.

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
Shall not be classified as acutely toxic.

Skin corrosion/irritation
Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation
Causes serious eye damage.

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

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**
  data are not available

- **If in eyes**
  Causes serious eye damage, risk of blindness

- **If inhaled**
  data are not available

- **If on skin**
  data are not available

**Other information**

Other adverse effects: Methaemoglobinemia, Headache, Cardiac arrhythmias, Blood pressure drop, Dyspnoea, Spasms, Cyanosis (blue coloured blood)

**SECTION 12: Ecological information**

12.1 **Toxicity**

Harmful to aquatic life with long lasting effects.

**Aquatic toxicity (acute)**

<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>≤33.9 mg/l</td>
<td>fish</td>
<td>ECHA</td>
<td>48 h</td>
</tr>
</tbody>
</table>

**Aquatic toxicity (chronic)**

May cause long-term adverse effects in the aquatic environment.

12.2 **Process of degradability**

Not readily biodegradable. Theoretical Oxygen Demand with nitrification: 2.313 mg/mg

Theoretical Oxygen Demand: 2.171 mg/mg

Theoretical Carbon Dioxide: 2.572 mg/mg

<table>
<thead>
<tr>
<th>Process</th>
<th>Degradation rate</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>oxygen depletion</td>
<td>0 %</td>
<td>28 d</td>
</tr>
</tbody>
</table>

12.3 **Bioaccumulative potential**

Does not significantly accumulate in organisms.

n-octanol/water (log KOW) ≥1.9 – ≤2

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**

Data are not available.
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.

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 not assigned to a packing group

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.
  • International Maritime Dangerous Goods Code (IMDG)
    Not subject to IMDG.
  • International Civil Aviation Organization (ICAO-IATA/DGR)
    Not subject to ICAO-IATA.
SECTION 15: Regulatory information

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

National inventories

Substance is listed in the following national inventories:

<table>
<thead>
<tr>
<th>Country</th>
<th>National inventories</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>AU</td>
<td>AICS</td>
<td>substance is listed</td>
</tr>
<tr>
<td>CA</td>
<td>DSL</td>
<td>substance is listed</td>
</tr>
<tr>
<td>CN</td>
<td>IECSC</td>
<td>substance is listed</td>
</tr>
<tr>
<td>EU</td>
<td>ECSI</td>
<td>substance is listed</td>
</tr>
<tr>
<td>EU</td>
<td>REACH Reg.</td>
<td>substance is listed</td>
</tr>
<tr>
<td>JP</td>
<td>CSCL-ENCS</td>
<td>substance is listed</td>
</tr>
<tr>
<td>KR</td>
<td>KEICI</td>
<td>substance is listed</td>
</tr>
<tr>
<td>MX</td>
<td>INSQ</td>
<td>substance is listed</td>
</tr>
<tr>
<td>NZ</td>
<td>NZIoC</td>
<td>substance is listed</td>
</tr>
<tr>
<td>PH</td>
<td>PICCS</td>
<td>substance is listed</td>
</tr>
<tr>
<td>TR</td>
<td>CICR</td>
<td>substance is listed</td>
</tr>
<tr>
<td>TW</td>
<td>TCSI</td>
<td>substance is listed</td>
</tr>
<tr>
<td>US</td>
<td>TSCA</td>
<td>substance is listed</td>
</tr>
</tbody>
</table>

Legend

AICS: Australian Inventory of Chemical Substances
CICR: Chemical Inventory and Control Regulation
CSCL-ENCS: List of Existing and New Chemical Substances (CSCL-ENCS)
DSL: Domestic Substances List (DSL)
ECSI: EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC: Inventory of Existing Chemical Substances Produced or Imported in China
INSQ: National Inventory of Chemical Substances
KECI: Korea Existing Chemicals Inventory
NZIoC: New Zealand Inventory of Chemicals
PICCS: Philippine Inventory of Chemicals and Chemical Substances
REACH Reg.: REACH registered substances
TCSI: Taiwan Chemical Substance Inventory
TSCA: Toxic Substance Control Act

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>CMR</td>
<td>Carcinogenic, Mutagenic or toxic for Reproduction</td>
</tr>
</tbody>
</table>
Rhodamine B (C.I. 45170) for microscopy

article number: T130

<table>
<thead>
<tr>
<th>Abbr.</th>
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</tr>
</thead>
<tbody>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations (see IATA/DGR)</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Commercial Chemical Substances</td>
</tr>
<tr>
<td>ELINCS</td>
<td>European List of Notified Chemical Substances</td>
</tr>
<tr>
<td>GHS</td>
<td>“Globally Harmonized System of Classification and Labelling of Chemicals” developed by the United Nations</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport (IATA)</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships (abbr. of “Marine Pollutant”)</td>
</tr>
<tr>
<td>NLP</td>
<td>No-Longer Polymer</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)</td>
</tr>
<tr>
<td>vPvB</td>
<td>very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

Key literature references and sources for data
- UN Recommendations on the Transport of Dangerous Good
- Dangerous Goods Regulations (DGR) for the air transport (IATA)
- International Maritime Dangerous Goods Code (IMDG)

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>H318</td>
<td>causes serious eye damage</td>
</tr>
<tr>
<td>H412</td>
<td>harmful to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>

Disclaimer

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.