

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Colour Standard ROTI®Calipure Reag. Ph.Eur, Primary solution, red

article number: **1HAT**
Version: **GHS 1.0 en**

date of compilation: 2021-02-17

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

1.1 Product identifier

Identification of the substance **Colour Standard ROTI®Calipure Reag. Ph.Eur, Primary solution, red**

Article number 1HAT

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

Relevant identified uses: Laboratory and analytical use
Laboratory chemical

Uses advised against: Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household).

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

| Name | Street | Postal code/city | Telephone | Website |
|--|-----------------|--------------------|-----------|---------|
| NSW Poisons Information Centre Childrens Hospital | Hawkesbury Road | 2145 Westmead, NSW | 131126 | |

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

| Section | Hazard class | Cat-egory | Hazard class and category | Hazard statement |
|---------|--|-----------|---------------------------|------------------|
| 2.16 | Substance or mixture corrosive to metals | 1 | Met. Corr. 1 | H290 |
| 3.4R | Respiratory sensitisation | 1 | Resp. Sens. 1 | H334 |
| 3.4S | Skin sensitisation | 1 | Skin Sens. 1 | H317 |
| 3.5 | Germ cell mutagenicity | 2 | Muta. 2 | H341 |
| 3.6 | Carcinogenicity | 1B | Carc. 1B | H350 |
| 3.7 | Reproductive toxicity | 1B | Repr. 1B | H360F |

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Colour Standard ROTI®Calipure Reag. Ph.Eur, Primary solution, red

article number: 1HAT

For full text of abbreviations: see SECTION 16

2.2 Label elements

Labelling

Signal word

Danger

Pictograms

GHS05, GHS08



Hazard statements

| | |
|-------|---|
| H290 | May be corrosive to metals |
| H317 | May cause an allergic skin reaction |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled |
| H341 | Suspected of causing genetic defects |
| H350 | May cause cancer |
| H360F | May damage fertility |

Precautionary statements

Precautionary statements - prevention

| | |
|------|---|
| P261 | Avoid breathing dust/fume/gas/mist/vapours/spray |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection |

Precautionary statements - response

| | |
|-----------|--|
| P302+P352 | IF ON SKIN: Wash with plenty of soap and water |
| P308+P313 | IF exposed or concerned: Get medical advice/attention |
| P333+P313 | If skin irritation or rash occurs: Get medical advice/attention |
| P342+P311 | If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician |
| P390 | Absorb spillage to prevent material damage |

Precautionary statements - disposal

| | |
|------|--|
| P501 | Dispose of contents/container to industrial combustion plant |
|------|--|

For professional users only

Hazardous ingredients for labelling: Cobalt(II) chloride

2.3 Other hazards

There is no additional information.

SECTION 3: Composition/information on ingredients

3.1 Substances

not relevant (mixture)

3.2 Mixtures

Safety data sheet Safety data sheet





acc. to Safe Work Australia - Code of Practice



Colour Standard ROTI® Calipure Reag. Ph.Eur, Primary solution, red

article number: 1HAT

Description of the mixture

| Name of substance | Identifier | Wt% | Classification acc. to GHS | Pictograms | Notes |
|--------------------------|---------------------|-----|--|---|------------------|
| Cobalt(II) chloride | CAS No 7646-79-9 | < 6 | Acute Tox. 4 / H302 Resp. Sens. 1 / H334 Skin Sens. 1 / H317 Muta. 2 / H341 Carc. 1B / H350i Repr. 1B / H360F |   | 1(a) IARC: 2B |
| Hydrochloric acid % | CAS No 7647-01-0 | < 1 | Met. Corr. 1 / H290 Skin Corr. 1A / H314 Eye Dam. 1 / H318 STOT SE 3 / H335 |   | B(a) IOELV |

Notes

- 1(a): The concentration stated is the percentage by weight of the metallic element calculated with reference to the total weight of the mixture
B(a): The classification refers to an aqueous solution
IARC: IARC group 2B: possibly carcinogenic to humans (International Agency for Research on Cancer)
2B:
IOELV: Substance with a community indicative occupational exposure limit value

For full text of abbreviations: see SECTION 16

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. After contact with skin, wash immediately with plenty of water. In case of skin reactions, consult a physician.

Following eye contact

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

Following ingestion

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

4.2 Most important symptoms and effects, both acute and delayed

Allergic reactions

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 firefighting measures to the fire surroundings
water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Non-combustible.

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. 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

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 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.

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Colour Standard ROTI® Calipure Reag. Ph.Eur, Primary solution, red

article number: 1HAT

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provision of sufficient ventilation. Avoid exposure.

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

Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice

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)

| Country | Name of agent | CAS No | Identifier | TWA [ppm] | TWA [mg/m ³] | STEL [ppm] | STEL [mg/m ³] | Ceiling-C [ppm] | Ceiling-C [mg/m ³] | Notation | Source |
|---------|---------------------------------------|-----------|------------|-----------|--------------------------|------------|---------------------------|-----------------|--------------------------------|----------|--------|
| AU | hydrogen chloride (hydrochloric acid) | 7647-01-0 | WES | | | | | 5 | 7.5 | | WES |

Notation

Ceiling-C
STEL Ceiling value is a limit value above which exposure should not occur
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 (unless otherwise specified)

| Relevant DNELs of components of the mixture | | | | | | |
|---|-----------|-----------|------------------------|------------------------------------|-------------------|-------------------------|
| Name of substance | CAS No | End-point | Threshold level | Protection goal, route of exposure | Used in | Exposure time |
| Cobalt(II) chloride | 7646-79-9 | DNEL | 88.1 µg/m ³ | human, inhalatory | worker (industry) | chronic - local effects |
| Hydrochloric acid ... % | 7647-01-0 | DNEL | 8 mg/m ³ | human, inhalatory | worker (industry) | chronic - local effects |
| Hydrochloric acid ... % | 7647-01-0 | DNEL | 15 mg/m ³ | human, inhalatory | worker (industry) | acute - local effects |

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Colour Standard ROTI® Calipure Reag. Ph.Eur, Primary solution, red

article number: 1HAT

| Relevant PNECs of components of the mixture | | | | | | |
|---|-----------|-----------|-----------------|-----------------------|------------------------------|------------------------------|
| Name of substance | CAS No | End-point | Threshold level | Organism | Environmental compartment | Exposure time |
| Cobalt(II) chloride | 7646-79-9 | PNEC | 0.62 µg/l | aquatic organisms | freshwater | short-term (single instance) |
| Cobalt(II) chloride | 7646-79-9 | PNEC | 2.36 µg/l | aquatic organisms | marine water | short-term (single instance) |
| Cobalt(II) chloride | 7646-79-9 | PNEC | 0.37 mg/l | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) |
| Cobalt(II) chloride | 7646-79-9 | PNEC | 53.8 mg/kg | aquatic organisms | freshwater sediment | short-term (single instance) |
| Cobalt(II) chloride | 7646-79-9 | PNEC | 69.8 mg/kg | aquatic organisms | marine sediment | short-term (single instance) |
| Cobalt(II) chloride | 7646-79-9 | PNEC | 10.9 mg/kg | terrestrial organisms | soil | short-term (single instance) |

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. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

• type of material

NBR (Nitrile rubber)

• material thickness

>0,11 mm

• breakthrough times of the glove material

>480 minutes (permeation: level 6)

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Colour Standard ROTI® Calipure Reag. Ph.Eur, Primary solution, red

article number: 1HAT

• other protection measures

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

Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation. Type: B-P2 (combined filters for acidic gases and particles, colour code: Grey/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

| | |
|--|----------------------------------|
| Physical state | liquid |
| Colour | acc. to product description |
| Odour | characteristic |
| Melting point/freezing point | not determined |
| Boiling point or initial boiling point and boiling range | 100 °C at 1,013 hPa |
| Flammability | non-combustible |
| Lower and upper explosion limit | not determined |
| Flash point | not determined |
| Auto-ignition temperature | not determined |
| Decomposition temperature | not relevant |
| pH (value) | not determined |
| Kinematic viscosity | not determined |
| <u>Solubility(ies)</u> | |
| Water solubility | miscible in any proportion |
| <u>Partition coefficient</u> | |
| Partition coefficient n-octanol/water (log value): | not relevant (inorganic) |
| Vapour pressure | 23 hPa at 20 °C |
| Density | ~1.14 g/cm ³ at 20 °C |
| Particle characteristics | no data available |

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Colour Standard ROTI®Calipure Reag. Ph.Eur, Primary solution, red

article number: 1HAT

Other safety parameters

Oxidising properties none

9.2 Other information

Information with regard to physical hazard classes:

Corrosive to metals category 1: corrosive to metals

Other safety characteristics:

Miscibility completely miscible with water

SECTION 10: Stability and reactivity

10.1 Reactivity

Substance or mixture corrosive to metals.

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

No known hazardous reactions.

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

different metals

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to GHS

Acute toxicity

Shall not be classified as acutely toxic.

| Acute toxicity estimate (ATE) of components of the mixture | | | |
|--|-----------|----------------|-----------|
| Name of substance | CAS No | Exposure route | ATE |
| Cobalt(II) chloride | 7646-79-9 | oral | 418 mg/kg |

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Colour Standard ROTI® Calipure Reag. Ph.Eur, Primary solution, red

article number: 1HAT

| Acute toxicity of components of the mixture | | | | | |
|---|-----------|----------------|----------|-----------|---------|
| Name of substance | CAS No | Exposure route | Endpoint | Value | Species |
| Cobalt(II) chloride | 7646-79-9 | oral | LD50 | 418 mg/kg | rat |

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Germ cell mutagenicity

Suspected of causing genetic defects.

Carcinogenicity

May cause cancer.

Reproductive toxicity

May damage fertility.

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

Data are not available.

• If inhaled

May produce an allergic reaction, cough, Dyspnoea

• If on skin

May produce an allergic reaction, pruritis, localised redness

Other information

Other adverse effects: Cardiovascular system, Renal impairment, Blood pressure drop, Diarrhoea

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Colour Standard ROTI® Calipure Reag. Ph.Eur, Primary solution, red

article number: 1HAT

SECTION 12: Ecological information

12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

| Aquatic toxicity (acute) of components of the mixture | | | | | |
|---|-----------|----------|-------------|-----------------------|---------------|
| Name of substance | CAS No | Endpoint | Value | Species | Exposure time |
| Cobalt(II) chloride | 7646-79-9 | LC50 | 1.512 mg/l | fish | 96 h |
| Cobalt(II) chloride | 7646-79-9 | EC50 | 2,618 µg/l | aquatic invertebrates | 48 h |
| Cobalt(II) chloride | 7646-79-9 | ErC50 | 71,314 µg/l | algae | 96 h |

| Aquatic toxicity (chronic) of components of the mixture | | | | | |
|---|-----------|----------|-----------|-----------------------|---------------|
| Name of substance | CAS No | Endpoint | Value | Species | Exposure time |
| Cobalt(II) chloride | 7646-79-9 | EC50 | 82.2 µg/l | aquatic invertebrates | 21 d |

Biodegradation

The methods for determining the biological degradability are not applicable to inorganic substances.

12.2 Process of degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

| Bioaccumulative potential of components of the mixture | | | | |
|--|-----------|-----|---------|----------|
| Name of substance | CAS No | BCF | Log KOW | BOD5/COD |
| Cobalt(II) chloride | 7646-79-9 | 23 | | |

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Endocrine disrupting properties

None of the ingredients are listed.

12.7 Other adverse effects

Data are not available.

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Colour Standard ROTI®Calipure Reag. Ph.Eur, Primary solution, red

article number: 1HAT

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.

Waste treatment of containers/packagings

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

Relevant provisions relating to waste(Basel Convention)

Properties of waste which render it hazardous

H8 Corrosives

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

| | |
|-----------|------------|
| UN RTDG | UN 1760 |
| IMDG-Code | UN 1760 |
| ICAO-TI | UN 1760 |

14.2 UN proper shipping name

| | |
|--|--------------------------|
| UN RTDG | CORROSIVE LIQUID, N.O.S. |
| IMDG-Code | CORROSIVE LIQUID, N.O.S. |
| ICAO-TI | Corrosive liquid, n.o.s. |
| Technical name (hazardous ingredients) | Hydrochloric acid ... % |

14.3 Transport hazard class(es)

| | |
|-----------|---|
| UN RTDG | 8 |
| IMDG-Code | 8 |
| ICAO-TI | 8 |

14.4 Packing group

| | |
|-----------|-----|
| UN RTDG | III |
| IMDG-Code | III |
| ICAO-TI | III |

14.5 Environmental hazards

hazardous to the aquatic environment

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Colour Standard ROTI®Calipure Reag. Ph.Eur, Primary solution, red

article number: **1HAT**

Environmentally hazardous substance (aquatic environment): Cobalt(II) chloride

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.

Information for each of the UN Model Regulations

Transport information National regulations Additional information (UN RTDG)

| | |
|------------------------------|---|
| UN number | 1760 |
| Proper shipping name | CORROSIVE LIQUID, N.O.S. |
| Class | 8 |
| Environmental hazards | Yes Hazardous to the aquatic environment |
| Packing group | III |
| Danger label(s) | 8 Fish and tree |



Special provisions (SP) 223, 274
UN RTDG

Excepted quantities (EQ) E1
UN RTDG

Limited quantities (LQ) 5 L
UN RTDG

International Maritime Dangerous Goods Code (IMDG) - Additional information

Marine pollutant yes (hazardous to the aquatic environment), (Cobalt(II) chloride)

Danger label(s) 8, "Fish and tree"



Special provisions (SP) 223, 274

Excepted quantities (EQ) E1

Limited quantities (LQ) 5 L

EmS F-A, S-B

Stowage category A

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Colour Standard ROTI® Calipure Reag. Ph.Eur, Primary solution, red

article number: 1HAT

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Environmental hazards yes (hazardous to the aquatic environment)

Danger label(s) 8



Special provisions (SP) A3

Excepted quantities (EQ) E1

Limited quantities (LQ) 1 L

SECTION 15: Regulatory information

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

There is no additional information.

National regulations(Australia)

Australian Inventory of Chemical Substances(AICS)

All ingredients are listed or exempt from listing.

UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances

| Name of substance | CAS No | Listed in | HS code |
|--------------------------|-----------|-----------|---------|
| Hydrochloric acid % | 7647-01-0 | Table II | 2806.10 |

National inventories

| Country | Inventory | Status |
|---------|------------|--------------------------------|
| AU | AICS | all ingredients are listed |
| CA | DSL | all ingredients are listed |
| CN | IECSC | all ingredients are listed |
| EU | ECSI | all ingredients are listed |
| EU | REACH Reg. | all ingredients are listed |
| JP | CSCL-ENCS | all ingredients are listed |
| KR | KECI | all ingredients are listed |
| MX | INSQ | all ingredients are listed |
| NZ | NZIoC | all ingredients are listed |
| PH | PICCS | all ingredients are listed |
| TR | CICR | not all ingredients are listed |
| TW | TCSI | all ingredients are listed |
| US | TSCA | all ingredients are listed |

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 |

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Colour Standard ROTI® Calipure Reag. Ph.Eur, Primary solution, red

article number: 1HAT

Legend

| | |
|------------|---|
| KECI | Korea Existing Chemicals Inventory |
| NZIoC | New Zealand Inventory of Chemicals |
| PICCS | Philippine Inventory of Chemicals and Chemical Substances (PICCS) |
| REACH Reg. | REACH registered substances |
| TCSI | Taiwan Chemical Substance Inventory |
| TSCA | Toxic Substance Control Act |

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations |
|------------|--|
| Acute Tox. | Acute toxicity |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| BOD | Biochemical Oxygen Demand |
| Carc. | Carcinogenicity |
| CAS | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances) |
| Ceiling-C | Ceiling value |
| COD | Chemical oxygen demand |
| DGR | Dangerous Goods Regulations (see IATA/DGR) |
| DNEL | Derived No-Effect Level |
| EC50 | Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| ELINCS | European List of Notified Chemical Substances |
| EmS | Emergency Schedule |
| ErC50 | ≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control |
| Eye Dam. | Seriously damaging to the eye |
| Eye Irrit. | Irritant to the eye |
| GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations |
| HS | Harmonized Commodity Description and Coding System (Harmonized System, drawn up by the World Customs Organisation) |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA) |
| ICAO | International Civil Aviation Organization |
| ICAO-TI | Technical instructions for the safe transport of dangerous goods by air |
| IMDG | International Maritime Dangerous Goods Code |

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Colour Standard ROTI® Calipure Reag. Ph.Eur, Primary solution, red

article number: 1HAT

| Abbr. | Descriptions of used abbreviations |
|-------------|---|
| IMDG-Code | International Maritime Dangerous Goods Code |
| LC50 | Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval |
| LD50 | Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval |
| log KOW | n-Octanol/water |
| MARPOL | International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant") |
| Met. Corr. | Substance or mixture corrosive to metals |
| Muta. | Germ cell mutagenicity |
| NLP | No-Longer Polymer |
| PBT | Persistent, Bioaccumulative and Toxic |
| PNEC | Predicted No-Effect Concentration |
| ppm | Parts per million |
| Repr. | Reproductive toxicity |
| Resp. Sens. | Respiratory sensitisation |
| Skin Corr. | Corrosive to skin |
| Skin Irrit. | Irritant to skin |
| Skin Sens. | Skin sensitisation |
| STEL | Short-term exposure limit |
| STOT SE | Specific target organ toxicity - single exposure |
| TWA | Time-weighted average |
| UN RTDG | UN Recommendations on the Transport of Dangerous Good |
| vPvB | Very Persistent and very Bioaccumulative |
| WES | Safe Work Australia: Workplace exposure standards for airborne conatminants |

Key literature references and sources for data

Safe Work Australia's Code of Practice for Labelling of Workplace Hazardous Chemicals (under WHS Regulations).

UN Recommendations on the Transport of Dangerous Good. International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties. The classification is based on tested mixture.

Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

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

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Colour Standard ROTI® Calipure Reag. Ph.Eur, Primary solution, red

article number: 1HAT

| Code | Text |
|-------|--|
| H290 | May be corrosive to metals. |
| H302 | Harmful if swallowed. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H335 | May cause respiratory irritation. |
| H341 | Suspected of causing genetic defects. |
| H350 | May cause cancer. |
| H350i | May cause cancer by inhalation. |
| H360F | May damage fertility. |

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.