

Safety data sheet Safety data sheet

acc. to Safe Work Australia - Code of Practice



Schiff's reagent , for microscopy

article number: **X900**
Version: **GHS 3.0 en**
Replaces version of: 2021-10-19
Version: (GHS 2)

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Revision: 2023-03-01

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

1.1 Product identifier

Identification of the substance **Schiff's reagent , for microscopy**
Article number X900

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

Relevant identified uses: Laboratory chemical
Laboratory and analytical use
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 |
| 3.2 | Skin corrosion/irritation | 2 | Skin Irrit. 2 | H315 |
| 3.3 | Serious eye damage/eye irritation | 2 | Eye Irrit. 2 | H319 |
| 3.6 | Carcinogenicity | 1B | Carc. 1B | H350 |

For full text of abbreviations: see SECTION 16

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2.2 Label elements

Labelling

Signal word

Danger

Pictograms

GHS05, GHS08



Hazard statements

| | |
|------|-------------------------------|
| H290 | May be corrosive to metals |
| H315 | Causes skin irritation |
| H319 | Causes serious eye irritation |
| H350 | May cause cancer |

Precautionary statements

Precautionary statements - prevention

P280 Wear protective gloves

Precautionary statements - response

| | |
|----------------|---|
| P302+P352 | IF ON SKIN: Wash with plenty of soap and water |
| 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 |
| P337+P313 | If eye irritation persists: Get medical advice/attention |
| 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:

C.I. Basic Red 9

2.3 Other hazards

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of $\geq 0,1\%$.

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SECTION 3: Composition/information on ingredients

3.1 Substances

not relevant (mixture)

3.2 Mixtures

Description of the mixture

| Name of substance | Identifier | Wt% | Classification acc. to GHS | Pictograms | Notes |
|--------------------------|---------------------|-------------|---|---|----------|
| Hydrochloric acid % | CAS No 7647-01-0 | < 5 | Met. Corr. 1 / H290 Skin Corr. 1 / H314 Eye Dam. 1 / H318 STOT SE 3 / H335 |   | B(a) |
| C.I. Basic Red 9 | CAS No 569-61-9 | 0.1 - < 0.5 | Carc. 1B / H350 |  | IARC: 2B |

Notes

B(a): The classification refers to an aqueous solution

IARC: IARC group 2B: possibly carcinogenic to humans (International Agency for Research on Cancer)

2B:

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. In case of skin irritation, consult a physician.

Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist.

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

Irritation

4.3 Indication of any immediate medical attention and special treatment needed

none

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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.

Hazardous combustion products

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

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

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray.

6.2 Environmental precautions

Keep away from drains, surface and ground water. The product is an acid. Before discharge into sewage plants the product normally needs to be neutralised.

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.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provide adequate 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 in a cool place.

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)

| Cou ntr y | Name of agent | CAS No | Identi- fier | TW A [pp m] | TWA [mg/ m ³] | STE L [pp m] | STEL [mg/ m ³] | Ceil- ing- C [pp m] | Ceil- ing- C [mg/ m ³] | Nota- tion | Source |
|-----------|---------------------------------------|-----------|--------------|-------------|---------------------------|--------------|----------------------------|---------------------|------------------------------------|------------|--------|
| AU | hydrogen chloride (hydrochloric acid) | 7647-01-0 | WES | | | | | 5 | 7.5 | | WES |

Notation

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

| Relevant DNELs of components of the mixture | | | | | | |
|---|-----------|------------|----------------------|------------------------------------|-------------------|---------------------------|
| Name of sub- stance | CAS No | End- point | Threshol d level | Protection goal, route of exposure | Used in | Exposure time |
| Hydrochloric acid % | 7647-01-0 | DNEL | 8 mg/m ³ | human, inhalat- ory | worker (industry) | chronic - local ef- fects |
| Hydrochloric acid % | 7647-01-0 | DNEL | 15 mg/m ³ | human, inhalat- ory | worker (industry) | acute - local ef- fects |

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8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection



Use safety goggle 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)

• 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: E (against acidic gases like sulphur dioxide or hydrogen chloride, colour code: Yellow).

Environmental exposure controls

Keep away from drains, surface and ground water.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|--|---|
| Physical state | liquid |
| Colour | colourless |
| Odour | stinging |
| Melting point/freezing point | not determined |
| Boiling point or initial boiling point and boiling range | ~ ~100 °C |
| 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) | <2 (20 °C) |
| 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 |
| <u>Density and/or relative density</u> | |
| Density | ~ ~1 g/cm ³ at 20 °C |
| Relative vapour density | information on this property is not available |
| Particle characteristics | not relevant (liquid) |
| <u>Other safety parameters</u> | |
| 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 |

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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

Violent reaction with: strong oxidiser, Strong alkali

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.

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

May cause cancer.

Reproductive toxicity

Shall not be classified 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

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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 irritation, causes slight to moderate irritation

• If inhaled

irritant effects

• If on skin

Frequently or prolonged contact with skin may cause dermal irritation, causes skin irritation

• Other information

none

11.2 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of $\geq 0,1\%$.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

12.2 Persistence and 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 |
| C.I. Basic Red 9 | 569-61-9 | | -0.21 | |

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

Does not contain an endocrine disruptor (EDC) in a concentration of $\geq 0,1\%$.

12.7 Other adverse effects

Data are not available.

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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 1789 |
| IMDG-Code | UN 1789 |
| ICAO-TI | UN 1789 |

14.2 UN proper shipping name

| | |
|-----------|-------------------|
| UN RTDG | HYDROCHLORIC ACID |
| IMDG-Code | HYDROCHLORIC ACID |
| ICAO-TI | 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

non-environmentally hazardous acc. to the dangerous goods regulations

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14.6 Special precautions for user

There is no additional information.

14.7 Transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

Transport information National regulations Additional information (UN RTDG)

UN number 1789

Class 8

Packing group III

Danger label(s) 8



Special provisions (SP) 223
UN RTDG

Excepted quantities (EQ) E1
UN RTDG

Limited quantities (LQ) 5 L
UN RTDG

Emergency Action Code 2R

International Maritime Dangerous Goods Code (IMDG) - Additional information

Proper shipping name HYDROCHLORIC ACID

Particulars in the shipper's declaration UN1789, HYDROCHLORIC ACID, 8, III

Marine pollutant -

Danger label(s) 8



Special provisions (SP) 223

Excepted quantities (EQ) E1

Limited quantities (LQ) 5 L

EmS F-A, S-B

Stowage category C

Segregation group 1 - Acids

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

Proper shipping name Hydrochloric acid

Particulars in the shipper's declaration UN1789, Hydrochloric acid, 8, III

Danger label(s) 8



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| | |
|--------------------------|-----|
| 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.

Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

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 | AIIC | not 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. | not all ingredients are listed |
| JP | CSCL-ENCS | not all ingredients are listed |
| KR | KECI | not all ingredients are listed |
| MX | INSQ | not 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 as "ACTIVE" |

Legend

| | |
|------------|---|
| AIIC | Australian Inventory of Industrial Chemicals |
| 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 (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.

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SECTION 16: Other information

Indication of changes (revised safety data sheet)

| Section | Former entry (text/value) | Actual entry (text/value) | Safety-relevant |
|---------|---------------------------|--|-----------------|
| 2.3 | | Endocrine disrupting properties: Does not contain an endocrine disruptor (EDC) in a concentration of $\geq 0,1\%$. | yes |
| 14.8 | | Emergency Action Code: 2R | yes |
| 15.1 | | National inventories: change in the listing (table) | yes |

Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations |
|------------|--|
| 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 |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| ELINCS | European List of Notified Chemical Substances |
| EmS | Emergency Schedule |
| 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 |
| IMDG-Code | International Maritime Dangerous Goods Code |
| log KOW | n-Octanol/water |
| Met. Corr. | Substance or mixture corrosive to metals |

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| Abbr. | Descriptions of used abbreviations |
|-------------|---|
| NLP | No-Longer Polymer |
| PBT | Persistent, Bioaccumulative and Toxic |
| ppm | Parts per million |
| Skin Corr. | Corrosive to skin |
| Skin Irrit. | Irritant to skin |
| 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 contaminants |

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 section 2 and 3)

| Code | Text |
|------|--|
| H290 | May be corrosive to metals. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |
| H350 | May cause cancer. |

Disclaimer

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