

# safety data sheet

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU



## Auramine O (C.I. 41000) for microscopy

article number: **0319**  
Version: **1.0 en**

date of compilation: 30.01.2017

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

#### 1.1 Product identifier

|                                 |                                    |
|---------------------------------|------------------------------------|
| Identification of the substance | <b>Auramine O</b>                  |
| Article number                  | 0319                               |
| Registration number (REACH)     | This information is not available. |
| Index No                        | 612-097-00-2                       |
| EC number                       | 219-567-2                          |
| CAS number                      | 2465-27-2                          |

#### 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](mailto:sicherheit@carlroth.de)

**Website:** [www.carlroth.de](http://www.carlroth.de)

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

**e-mail (competent person)** : [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)

#### 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)

| Classification acc. to GHS |   |                           |                  |
|----------------------------|---|---------------------------|------------------|
| Section                    | Hazard class  | Hazard class and category | Hazard statement |
| 3.10                       | acute toxicity (oral)                                 | (Acute Tox. 4)            | H302             |
| 3.3                        | serious eye damage/eye irritation                     | (Eye Irrit. 2)            | H319             |
| 3.6                        | carcinogenicity                                       | (Carc. 2)                 | H351             |
| 4.1C                       | hazardous to the aquatic environment - chronic hazard | (Aquatic Chronic 2)       | H411             |

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### Remarks

For full text of Hazard- and EU Hazard-statements: see SECTION 16.

## 2.2 Label elements

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

#### Signal word

Warning

#### Pictograms



#### Hazard statements

|      |  |
|------|--|
| H302 | Harmful if swallowed.                            |
| H319 | Causes serious eye irritation.                   |
| H351 | Suspected of causing cancer.                     |
| H411 | 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

|                |  |
|----------------|--|
| P301+P312      | IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  |
| 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.  |
| P391           | Collect spillage.  |

For professional users only

#### Labelling of packages where the contents do not exceed 125 ml

Signal word: **Warning**

Symbol(s)



|           |  |
|-----------|--|
| H351      | Suspected of causing cancer.   |
| P280      | Wear protective gloves/protective clothing/eye protection/face protection. |
| P308+P313 | IF exposed or concerned: Get medical advice/attention.                     |

## 2.3 Other hazards

There is no additional information.

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### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

|                   |                     |
|-------------------|---------------------|
| Name of substance | Auramine O          |
| Index No          | 612-097-00-2        |
| EC number         | 219-567-2           |
| CAS number        | 2465-27-2           |
| Molecular formula | $C_{17}H_{22}ClN_3$ |
| Molar mass        | 303,8 g/mol         |

### 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

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

Rinse mouth with water (only if the person is conscious). In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Call a doctor.

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

Headache, Cough, Vomiting, Irritation, Cardiac arrhythmias, Blood pressure drop, Cyanosis (blue coloured blood)

#### 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 fire-fighting measures to the fire surroundings  
water spray, foam, dry extinguishing powder, carbon dioxide (CO<sub>2</sub>)

##### 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 (NO<sub>x</sub>), carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), 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

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. Do not breathe dust. Avoid contact with skin, eyes and clothes.

#### 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.

#### 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

Use extractor hood (laboratory).

#### 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.

#### 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 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.

- **type of material**

NBR (Nitrile rubber)

- **material thickness**

>0,11 mm

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- **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: Dust formation. Particulate filter device (EN 143). P2 (filters at least 94 % 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                             |
| Colour          | yellow                            |
| Odour           | this information is not available |
| Odour threshold | No data available                 |

#### Other physical and chemical parameters

|   |  |
|---|--|
| pH (value)                              | 6 - 7 (10 <sup>g/l</sup> , 20 °C)              |
| Melting point/freezing point            | 265 °C slow decomposition                      |
| Initial boiling point and boiling range | This information is not available.             |
| Flash point                             | not applicable                                 |
| Evaporation rate                        | no data available                              |
| Flammability (solid, gas)               | Non-flammable                                  |
| <u>Explosive limits</u>                 |  |
| • 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.             |
| Bulk density                            | 430 kg/m <sup>3</sup>                          |
| Relative density                        | Information on this property is not available. |

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### Solubility(ies)

Water solubility 10 g/l at 20 °C

### Partition coefficient

n-octanol/water (log KOW) 2,98

Auto-ignition temperature Information on this property is not available.

Decomposition temperature no data available

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

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

### 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

| Exposure route | Endpoint | Value       | Species |
|----------------|----------|-------------|---------|
| oral           | LD50     | 1.000 mg/kg | rat     |

#### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

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### Serious eye damage/eye irritation

Causes serious eye irritation.

### Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

### Summary of evaluation of the CMR properties

#### Carcinogenicity:

Suspected of causing cancer

#### • 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

data are not available

#### • If on skin

data are not available

### Other information

Cardiac arrhythmias, Headache, Dyspnoea, Blood pressure drop, Spasms, Cyanosis (blue coloured blood)

## SECTION 12: Ecological information

### 12.1 Toxicity

Toxic to aquatic life with long lasting effects.

#### Aquatic toxicity (acute)

| Endpoint | Value    | Species   | Exposure time |
|----------|----------|---|---------------|
| LC50     | 3,2 mg/l | japanese ricefish/medaka ( <i>Oryzias latipes</i> ) | 48 h          |
| LC50     | 1 mg/l   | <i>Poecilia reticulata</i>                          | 96 h          |

#### Aquatic toxicity (chronic)

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



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### 12.2 Process of degradability

Theoretical Oxygen Demand with nitrification: 2,387 mg/mg  
Theoretical Oxygen Demand: 2,106 mg/mg  
Theoretical Carbon Dioxide: 2,462 mg/mg

### 12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

n-octanol/water (log KOW) 2,98

### 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.

#### Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

### 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                  | 3077  |
| 14.2 | UN proper shipping name    | <b>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.</b>                       |
|      | Hazardous ingredients      | Auramine O  |
| 14.3 | Transport hazard class(es) |   |
|      | Class                      | 9 (miscellaneous dangerous substances and articles) (environmentally hazardous) |
| 14.4 | Packing group              | III (substance presenting low danger)   |
| 14.5 | Environmental hazards      | hazardous to the aquatic environment  |

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### 14.6 Special precautions for user



Provisions for dangerous goods (ADR) should be complied within the premises.

### 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)

|  |   |
|--|---|
| UN number  | 3077  |
| Proper shipping name   | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.                                    |
| Particulars in the transport document  | UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (Auramine O), 9, III, (-) |
| Class  | 9   |
| Classification code  | M7  |
| Packing group  | III   |
| Danger label(s)  | 9 + "fish and tree"   |
|  |   |
|  |   |
| Environmental hazards  | yes (hazardous to the aquatic environment)  |
| Special provisions (SP)  | 274, 335, 375, 601  |
| Excepted quantities (EQ)   | E1  |
| Limited quantities (LQ)  | 5 kg  |
| Transport category (TC)  | 3   |
| Tunnel restriction code (TRC)  | -   |
| Hazard identification No   | 90  |

#### • International Maritime Dangerous Goods Code (IMDG)

|  |  |
|--|--|
| UN number                                | 3077   |
| Proper shipping name                     | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.                               |
| Particulars in the shipper's declaration | UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (Auramine O), 9, III |
| Class                                    | 9  |
| Marine pollutant                         | yes (hazardous to the aquatic environment)                                       |
| Packing group                            | III  |
| Danger label(s)                          | 9 + "fish and tree"  |

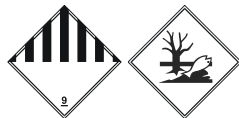
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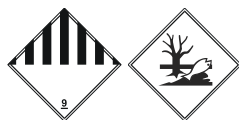


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|  |  |
|--|--|
| Special provisions (SP)  | 274, 335, 966, 967, 969  |
| Excepted quantities (EQ)   | E1   |
| Limited quantities (LQ)  | 5 kg   |
| EmS  | F-A, S-F   |
| Stowage category   | A  |
| <b>• International Civil Aviation Organization (ICAO-IATA/DGR)</b> |  |
| UN number  | 3077   |
| Proper shipping name   | Environmentally hazardous substance, solid, n.o.s.                               |
| Particulars in the shipper's declaration                           | UN3077, Environmentally hazardous substance, solid, n.o.s., (Auramine O), 9, III |
| Class  | 9  |
| Environmental hazards  | yes (hazardous to the aquatic environment)                                       |
| Packing group  | III  |
|  | 9 + "fish and tree"  |



|                          |                            |
|--------------------------|----------------------------|
| Special provisions (SP)  | A97, A158, A179, A197, 274 |
| Excepted quantities (EQ) | E1                         |
| Limited quantities (LQ)  | 30 kg                      |

## 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.

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### • List of substances subject to authorisation (REACH, Annex XIV)

not listed

### • Seveso Directive

#### 2012/18/EU (Seveso III)

| No | Dangerous substance/hazard categories                                | Qualifying quantity (tonnes) for the application of lower and upper-tier requirements |     | Notes |
|----|--|---|-----|-------|
| E2 | environmental hazards (hazardous to the aquatic environment, cat. 2) | 200   | 500 | 57)   |

#### Notation

57) Hazardous to the Aquatic Environment in category Chronic 2

### 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)

## 15.2 Chemical Safety Assessment

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

## SECTION 16: Other information

### Abbreviations and acronyms

| Abbr.  | Descriptions of used abbreviations  |
|--------|---|
| ADN    | 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) |
| ADR    | Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)                                       |
| CAS    | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)  |
| CLP    | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures  |
| CMR    | Carcinogenic, Mutagenic or toxic for Reproduction   |
| DGR    | Dangerous Goods Regulations (see IATA/DGR)  |
| EINECS | European Inventory of Existing Commercial Chemical Substances   |
| ELINCS | European List of Notified Chemical Substances   |
| EmS    | Emergency Schedule  |
| GHS    | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations   |
| IATA   | International Air Transport Association   |

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| Abbr.    | Descriptions of used abbreviations  |
|----------|---|
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA)  |
| ICAO     | International Civil Aviation Organization   |
| IMDG     | International Maritime Dangerous Goods Code   |
| index No | the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008  |
| MARPOL   | International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")   |
| NLP      | No-Longer Polymer   |
| PBT      | Persistent, Bioaccumulative and Toxic   |
| REACH    | Registration, Evaluation, Authorisation and Restriction of Chemicals  |
| RID      | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail) |
| vPvB     | very Persistent and very Bioaccumulative  |

### Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)

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

| Code | Text  |
|------|---|
| H302 | harmful if swallowed                            |
| H319 | causes serious eye irritation                   |
| H351 | suspected of causing cancer                     |
| H411 | toxic to aquatic life with long lasting effects |

### 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.