



# Aaron Chemistry GmbH

## SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 5.0 Revision Date 13.11.2012

Print Date 09.10.2017

GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1 Product identifiers

Product name : Benzidine

Product Number : 52253  
Brand : Aaron Chemistry GmbH  
Index-No. : 612-042-00-2  
CAS-No. : 92-87-5

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

Identified uses : Laboratory chemicals, Manufacture of substances

#### 1.3 Details of the supplier of the safety data sheet

Company : Aaron Chemistry GmbH  
Am Fischweiher 41-43  
D-82481 Mittenwald  
Telephone : +49 8823 917521  
Fax : +49 8823 917523  
E-mail address : info@aaron-chemistry.de

#### 1.4 Emergency telephone number

Emergency Phone # : +49 8823 917521

### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**Carcinogenicity (Category 1A)  
Acute toxicity, Oral (Category 4)  
Acute aquatic toxicity (Category 1)  
Chronic aquatic toxicity (Category 1)**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

May cause cancer. Harmful if swallowed. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### 2.2 Label elements

**Labelling according Regulation (EC) No 1272/2008 [CLP]**

Pictogram



Signal word : Danger

Hazard statement(s)

H302 : Harmful if swallowed.  
H350 : May cause cancer.  
H410 : Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P201 : Obtain special instructions before use.  
P273 : Avoid release to the environment.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P501 Dispose of contents/ container to an approved waste disposal plant.

Supplemental Hazard Statements none

Restricted to professional users.

**According to European Directive 67/548/EEC as amended.**

Hazard symbol(s)



R-phrase(s)

R45

May cause cancer.

R22

Also harmful if swallowed.

R50/53

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s)

S53

Avoid exposure - obtain special instructions before use.

S45

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S60

This material and its container must be disposed of as hazardous waste.

S61

Avoid release to the environment. Refer to special instructions/ Safety data sheets.

Restricted to professional users.

**2.3 Other hazards - none**

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1 Substances**

Synonyms : 4,4'-Diaminobiphenyl

Formula : C<sub>12</sub>H<sub>12</sub>N<sub>2</sub>

Molecular Weight : 184,24 g/mol

Component	Concentration
<b>Benzidine</b>	
CAS-No.	92-87-5
EC-No.	202-199-1
Index-No.	612-042-00-2
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**4. FIRST AID MEASURES**

**4.1 Description of first aid measures**

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Flush eyes with water as a precaution.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

Liver injury may occur., Kidney injury may occur., Blood disorders, Nausea, Vomiting

- 4.3 Indication of any immediate medical attention and special treatment needed**  
no data available

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**5. FIREFIGHTING MEASURES**

**5.1 Extinguishing media**

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**5.2 Special hazards arising from the substance or mixture**

Carbon oxides, nitrogen oxides (NO<sub>x</sub>)

**5.3 Advice for firefighters**

Wear self contained breathing apparatus for fire fighting if necessary.

**5.4 Further information**

no data available

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**6. ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

**6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

**6.3 Methods and materials for containment and cleaning up**

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections**

For disposal see section 13.

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**7. HANDLING AND STORAGE**

**7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use.

Provide appropriate exhaust ventilation at places where dust is formed.

**7.2 Conditions for safe storage, including any incompatibilities**

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Light sensitive.

**7.3 Specific end uses**

no data available

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters**

**Components with workplace control parameters**

**8.2 Exposure controls**

**Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Personal protective equipment**

**Eye/face protection**

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

**Body Protection**

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

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**9. PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties**

- |   |                                  |
|---|----------------------------------|
| a) Appearance                                   | Form: powder<br>Colour: beige    |
| b) Odour  | no data available                |
| c) Odour Threshold                              | no data available                |
| d) pH   | no data available                |
| e) Melting point/freezing point                 | Melting point/range: 127 °C      |
| f) Initial boiling point and boiling range      | 400 °C at 1.013 hPa              |
| g) Flash point                                  | no data available                |
| h) Evaporation rate                             | no data available                |
| i) Flammability (solid, gas)                    | no data available                |
| j) Upper/lower flammability or explosive limits | no data available                |
| k) Vapour pressure                              | no data available                |
| l) Vapour density                               | no data available                |
| m) Relative density                             | 1,250 g/cm <sup>3</sup> at 20 °C |
| n) Water solubility                             | no data available                |
| o) Partition coefficient: n-octanol/water       | log Pow: 1,34                    |
| p) Autoignition temperature                     | no data available                |
| q) Decomposition temperature                    | no data available                |
| r) Viscosity                                    | no data available                |
| s) Explosive properties                         | no data available                |
| t) Oxidizing properties                         | no data available                |

**9.2 Other safety information**

no data available

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## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

no data available

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

Strong oxidizing agents

### 10.6 Hazardous decomposition products

Other decomposition products - no data available

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - rat - 309 mg/kg

#### Skin corrosion/irritation

no data available

#### Serious eye damage/eye irritation

no data available

#### Respiratory or skin sensitization

no data available

#### Germ cell mutagenicity

no data available

#### Carcinogenicity

Repeated absorption may result in bladder tumors. This is or contains a component that has been reported to be carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Human carcinogen.

IARC: 1 - Group 1: Carcinogenic to humans (Benzidine)

#### Reproductive toxicity

no data available

#### Specific target organ toxicity - single exposure

no data available

#### Specific target organ toxicity - repeated exposure

no data available

#### Aspiration hazard

no data available

#### Potential health effects

##### Inhalation

May be harmful if inhaled. May cause respiratory tract irritation.

##### Ingestion

Harmful if swallowed.

##### Skin

May be harmful if absorbed through skin. May cause skin irritation.

##### Eyes

May cause eye irritation.

#### Signs and Symptoms of Exposure

Liver injury may occur., Kidney injury may occur., Blood disorders, Nausea, Vomiting

## Additional Information

RTECS: DC9625000

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### 12. ECOLOGICAL INFORMATION

#### 12.1 Toxicity

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 7,4 mg/l - 96,0 h

#### 12.2 Persistence and degradability

#### 12.3 Bioaccumulative potential

Bioaccumulation Leuciscus idus (Golden orfe) - 3 d -50 µg/l  
Bioconcentration factor (BCF): 83

#### 12.4 Mobility in soil

no data available

#### 12.5 Results of PBT and vPvB assessment

no data available

#### 12.6 Other adverse effects

Very toxic to aquatic life.

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### 13. DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

##### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

##### Contaminated packaging

Dispose of as unused product.

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### 14. TRANSPORT INFORMATION

#### 14.1 UN number

ADR/RID: 1885

IMDG: 1885

IATA: 1885

#### 14.2 UN proper shipping name

ADR/RID: BENZIDINE

IMDG: BENZIDINE

IATA: Benzidine

#### 14.3 Transport hazard class(es)

ADR/RID: 6.1

IMDG: 6.1

IATA: 6.1

#### 14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

#### 14.5 Environmental hazards

ADR/RID: yes

IMDG Marine pollutant: yes

IATA: no

#### 14.6 Special precautions for user

no data available

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### 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

no data available

#### 15.2 Chemical Safety Assessment

no data available

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**16. OTHER INFORMATION****Further information**

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