

## SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 5.7 Revision Date 06.03.2015

Print Date 08.11.2016

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifiers**

Product name : Benzothiazole

Product Number : W325600

Brand : Aldrich

REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

CAS-No. : 95-16-9

**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 : Sigma-Aldrich Company Ltd.  
The Old Brickyard  
NEW ROAD, GILLINGHAM  
Dorset  
SP8 4XT  
UNITED KINGDOM

Telephone : +44 (0)1747 833000

Fax : +44 (0)1747 833313

E-mail address : eurtechserv@sial.com

**1.4 Emergency telephone number**

Emergency Phone # : +44 (0)870 8200418 (CHEMTREC)

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

Acute toxicity, Oral (Category 3), H301  
Acute toxicity, Dermal (Category 3), H311  
Eye irritation (Category 2), H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

T Toxic R20, R24, R25, R36

For the full text of the R-phrases mentioned in this Section, see Section 16.

**2.2 Label elements****Labelling according Regulation (EC) No 1272/2008**

Pictogram



Signal word Danger

Hazard statement(s)

H301 + H311

Toxic if swallowed or in contact with skin

H319	Causes serious eye irritation.
Precautionary statement(s)	
P280	Wear protective gloves/ protective clothing.
P301 + P310 + P330	IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. Rinse mouth.
P302 + P352 + P312	IF ON SKIN: Wash with plenty of water. Call a POISON CENTER or doctor/ physician 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.
Supplemental Hazard Statements	none

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

Hazard symbol(s) T Toxic



R-phrase(s)	
R20	Harmful by inhalation.
R24	Toxic in contact with skin.
R25	Toxic if swallowed.
R36	Irritating to eyes.
S-phrase(s)	
S23	Do not breathe vapour.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37	Wear suitable protective clothing and gloves.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**2.3 Other hazards**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**SECTION 3: Composition/information on ingredients**

**3.2 Mixtures**

Formula : C<sub>7</sub>H<sub>5</sub>NS  
Molecular weight : 135.19 g/mol

**Hazardous ingredients according to Regulation (EC) No 1272/2008**

Component	Classification	Concentration
<b>Benzothiazole</b>		
CAS-No. 95-16-9 EC-No. 202-396-2	Acute Tox. 3; Acute Tox. 4; Acute Tox. 3; Eye Irrit. 2; H301 + H311, H319, H332	<= 100 %

**Hazardous ingredients according to Directive 1999/45/EC**

Component	Classification	Concentration
<b>Benzothiazole</b>		
CAS-No. 95-16-9 EC-No. 202-396-2	T, R20 - R24 - R25 - R36	<= 100 %

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

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## SECTION 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. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### 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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

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## SECTION 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>), Sulphur oxides

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

No data available

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## SECTION 6: Accidental release measures

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

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

Evacuate personnel to safe areas.

For personal protection see section 8.

### 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

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

For precautions see section 2.2.

## 7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

## 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

##### Eye/face protection

Face shield and safety glasses 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.

##### Full contact

Material: butyl-rubber

Minimum layer thickness: 0.3 mm

Break through time: 480 min

Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M)

##### Splash contact

Material: butyl-rubber

Minimum layer thickness: 0.3 mm

Break through time: 480 min

Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de,

test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

##### 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 respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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).

#### **Control of environmental exposure**

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

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### **SECTION 9: Physical and chemical properties**

#### **9.1 Information on basic physical and chemical properties**

- |   |  |
|---|--|
| a) Appearance                                   | Form: clear, liquid<br>Colour: dark yellow                         |
| b) Odour  | No data available  |
| c) Odour Threshold                              | No data available  |
| d) pH   | No data available  |
| e) Melting point/freezing point                 | Melting point/range: 2 °C - lit.                                   |
| f) Initial boiling point and boiling range      | 231 °C - lit.  |
| g) Flash point                                  | 113 °C - closed cup  |
| h) Evaporation rate                             | No data available  |
| i) Flammability (solid, gas)                    | No data available  |
| j) Upper/lower flammability or explosive limits | Upper explosion limit: 8.2 %(V)<br>Lower explosion limit: 0.9 %(V) |
| k) Vapour pressure                              | 45 hPa at 131 °C   |
| l) Vapour density                               | 4.67 - (Air = 1.0)   |
| m) Relative density                             | 1.238 g/cm <sup>3</sup> at 25 °C                                   |
| n) Water solubility                             | No data available  |
| o) Partition coefficient: n-octanol/water       | No data available  |
| p) Auto-ignition 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**

Relative vapour density 4.67 - (Air = 1.0)

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### **SECTION 10: Stability and reactivity**

#### **10.1 Reactivity**

No data available

#### **10.2 Chemical stability**

Stable under recommended storage conditions.

#### **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  
In the event of fire: see section 5

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### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

##### Acute toxicity

No data available

LD50 Oral - Rat - male - 257 mg/kg (Benzothiazole)

LD50 Oral - Rat - female - 178 mg/kg (Benzothiazole)

LC50 Inhalation - Rat - male and female - 4 h - 5 mg/l (Benzothiazole)  
(OECD Test Guideline 403)

LD50 Dermal - Rat - male - 1,231 mg/kg (Benzothiazole)

LD50 Dermal - Rat - female - 933 mg/kg (Benzothiazole)

##### Skin corrosion/irritation

No data available

Skin - Rabbit (Benzothiazole)

Result: No skin irritation - 4 h  
(Draize Test)

##### Serious eye damage/eye irritation

No data available

Eyes - Rabbit (Benzothiazole)

Result: Irritating to eyes. - 24 h

##### Respiratory or skin sensitisation

No data available

No data available (Benzothiazole)

##### Germ cell mutagenicity

No data available

No data available (Benzothiazole)

##### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

##### Reproductive toxicity

No data available (Benzothiazole)

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

##### Additional Information

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. (Benzothiazole)

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## SECTION 12: Ecological information

### 12.1 Toxicity

No data available

Toxicity to daphnia and other aquatic invertebrates      NOEC - Daphnia magna (Water flea) - 1.5 mg/l - 21 d (Benzothiazole)

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Other adverse effects

Harmful to aquatic life.

No data available

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

#### Contaminated packaging

Dispose of as unused product.

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## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: 2810

IMDG: 2810

IATA: 2810

### 14.2 UN proper shipping name

ADR/RID: TOXIC LIQUID, ORGANIC, N.O.S. (Benzothiazole)

IMDG: TOXIC LIQUID, ORGANIC, N.O.S. (Benzothiazole)

IATA: Toxic liquid, organic, n.o.s. (Benzothiazole)

### 14.3 Transport hazard class(es)

ADR/RID: 6.1

IMDG: 6.1

IATA: 6.1

### 14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

### 14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

### 14.6 Special precautions for user

No data available

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**SECTION 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**

For this product a chemical safety assessment was not carried out

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**SECTION 16: Other information****Full text of H-Statements referred to under sections 2 and 3.**

Acute Tox.	Acute toxicity
Eye Irrit.	Eye irritation
H301	Toxic if swallowed.
H301 + H311	Toxic if swallowed or in contact with skin
H311	Toxic in contact with skin.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.

**Full text of R-phrases referred to under sections 2 and 3**

T	Toxic
R20	Harmful by inhalation.
R24	Toxic in contact with skin.
R25	Toxic if swallowed.
R36	Irritating to eyes.

**Further information**

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