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

1.1 Product identifiers

<table>
<thead>
<tr>
<th>Product name</th>
<th>Benzyl isothiocyanate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Number</td>
<td>252492</td>
</tr>
<tr>
<td>Brand</td>
<td>Aldrich</td>
</tr>
<tr>
<td>REACH No.</td>
<td>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.</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>622-78-6</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Company</th>
<th>Sigma-Aldrich Chemie BV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stationsplein 4</td>
</tr>
<tr>
<td></td>
<td>3331 LL ZWIJNDRECHT</td>
</tr>
<tr>
<td></td>
<td>NETHERLANDS</td>
</tr>
<tr>
<td>Telephone</td>
<td>+31 78-620-5411</td>
</tr>
<tr>
<td>Fax</td>
<td>+31 78-620-5421</td>
</tr>
<tr>
<td>E-mail address</td>
<td><a href="mailto:eurtechserv@sial.com">eurtechserv@sial.com</a></td>
</tr>
</tbody>
</table>

1.4 Emergency telephone number

| Emergency Phone #   | 112                     |

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008**

- Acute toxicity, Inhalation (Category 4), H332
- Acute toxicity, Dermal (Category 4), H312
- Acute toxicity, Oral (Category 4), H302
- Skin irritation (Category 2), H315
- Eye irritation (Category 2), H319
- Respiratory sensitisation (Category 1), H334
- Specific target organ toxicity - single exposure (Category 3), H335

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**

<table>
<thead>
<tr>
<th>Xn</th>
<th>Harmful</th>
</tr>
</thead>
<tbody>
<tr>
<td>R20/21/22, R36/37/38, R42/43</td>
<td></td>
</tr>
</tbody>
</table>

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**

<table>
<thead>
<tr>
<th>Pictogram</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal word</td>
</tr>
</tbody>
</table>

Aldrich - 252492
Hazard statement(s)
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.

Precautionary statement(s)
P261 Avoid breathing vapours.
P280 Wear protective gloves/ protective clothing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

Supplemental Hazard Statements
none

2.3 Other hazards
Lachrymator.

SECTION 3: Composition/information on ingredients

3.1 Substances
Synonyms:
Isothiocyanotaomethylbenzene
Benzyl mustard oil

Formula: $C_8H_7NS$
Molecular Weight: 149.21 g/mol
CAS-No.: 622-78-6
EC-No.: 210-753-9

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

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzyl isothiocyanate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>622-78-6</td>
<td>Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2; Resp. Sens. 1; STOT SE 3; H302, H312, H315, H319, H332, H334, H335</td>
</tr>
<tr>
<td>EC-No.</td>
<td>210-753-9</td>
<td>&lt;= 100 %</td>
</tr>
</tbody>
</table>

Hazardous ingredients according to Directive 1999/45/EC

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzyl isothiocyanate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>622-78-6</td>
<td>Xn, R20/21/22 - R36/37/38 - R42/43</td>
</tr>
<tr>
<td>EC-No.</td>
<td>210-753-9</td>
<td>&lt;= 100 %</td>
</tr>
</tbody>
</table>

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

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. 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.

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 (NOx), Sulphur oxides.

5.3 Advice for firefighters
Wear self-contained breathing apparatus for fire fighting if necessary.

5.4 Further information
No data available.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

6.2 Environmental precautions
Do not let product enter drains.

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.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Normal measures for preventive fire protection. 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.

Recommended storage temperature: 2 - 8 °C


7.3 Specific end use(s)
A part from the uses mentioned in section 1.2 no other specific uses are stipulated.
SECTION 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
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.

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
Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance Form: liquid
Color: dark brown
b) Odour no data available
c) Odour Threshold no data available
d) pH no data available
e) Melting point/freezing point no data available
f) Initial boiling point and boiling range 242 - 243 °C - lit.
g) Flash point > 110 °C - closed cup
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  1,125 g/cm³ 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
no data available

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
Heat.

10.5 Incompatible materials
Strong oxidizing agents, Alcohols, Strong bases, Amines, acids

10.6 Hazardous decomposition products
Other decomposition products - no data available
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

   Acute toxicity
   no data available

   Skin corrosion/irritation
   no data available

   Serious eye damage/eye irritation
   no data available

   Respiratory or skin sensitisation
   Germ cell mutagenicity
   Hamster ovary
   Cytogenetic analysis
   Hamster ovary
   DNA damage
   Hamster ovary
   Sister chromatid exchange
Mammal
Cytogenetic analysis

Mammal
Other mutation test systems

**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

**Specific target organ toxicity - single exposure**

Inhalation - May cause respiratory irritation.

**Specific target organ toxicity - repeated exposure**

no data available

**Aspiration hazard**

no data available

**Additional Information**

RTECS: NX8250000

Cough, Shortness of breath, Headache, Nausea, Vomiting

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**SECTION 12: Ecological information**

12.1 **Toxicity**

Toxicity to daphnia and other aquatic invertebrates

LC50 - Daphnia magna (Water flea) - 0.043 mg/l - 48 h

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**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 **Other adverse effects**

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. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

---

**SECTION 14: Transport information**

14.1 **UN number**

ADR/RID: -

IMDG: -

IATA: 3334
14.2 UN proper shipping name
ADR/RID: Not dangerous goods
IMDG: Not dangerous goods
IATA: Aviation regulated liquid, n.o.s. (Benzyl isothiocyanate)

14.3 Transport hazard class(es)
ADR/RID: -               IMDG: -               IATA: 9

14.4 Packaging group
ADR/RID: -               IMDG: -               IATA: III

14.5 Environmental hazards
ADR/RID: no               IMDG Marine pollutant: no               IATA: no

14.6 Special precautions for user
no data available

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

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.
Acute tox.       Acute toxicity
Eye Irrit.       Eye irritation
H302            Harmful if swallowed.
H312            Harmful in contact with skin.
H315            Causes skin irritation.
H319            Causes serious eye irritation.
H332            Harmful if inhaled.
H334            May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335            May cause respiratory irritation.
Resp. Sens.     Respiratory sensitisation
Skin Irrit.     Skin irritation

Full text of R-phrases referred to under sections 2 and 3
Xn            Harmful
R20/21/22      Harmful by inhalation, in contact with skin and if swallowed.
R36/37/38      Irritating to eyes, respiratory system and skin.
R42/43         May cause sensitisation by inhalation and skin contact.

Further information
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