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

1.1 Product identifiers

Product name : Vinylbenzyl chloride
Product Number : 338729
Brand : Aldrich
CAS-No. : 30030-25-2

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

Identified uses : Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Inc.
            3050 SPRUCE ST
            ST. LOUIS MO  63103
            UNITED STATES
Telephone : +1 314 771-5765
Fax : +1 800 325-5052

1.4 Emergency telephone

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 4), H302
Acute toxicity, Inhalation (Category 3), H331
Acute toxicity, Dermal (Category 3), H311
Skin irritation (Category 2), H315
Eye irritation (Category 2A), H319
Skin sensitization (Category 1), H317
Carcinogenicity (Category 2), H351
Reproductive toxicity (Category 2), H361
Short-term (acute) aquatic hazard (Category 1), H400
Long-term (chronic) aquatic hazard (Category 1), H410

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

2.2 GHS Label elements, including precautionary statements

Aldrich - 338729
2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Lachrymator.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : (Chloromethyl)styrene
The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the US and Canada

**Formula**: \( \text{C}_9\text{H}_9\text{Cl} \)

**Molecular weight**: 152.62 g/mol

**CAS-No.**: 30030-25-2

**EC-No.**: 250-005-9

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>ar-Vinylbenzyl chloride</td>
<td>Acute Tox. 4; Acute Tox. 3; Skin Irrit. 2; Eye Irrit. 2A; Skin Sens. 1; Aquatic Acute 1; Aquatic Chronic 1; H302, H331, H311, H315, H319, H317, H400, H410</td>
<td>&lt;= 100 %</td>
</tr>
<tr>
<td></td>
<td>M-Factor - Aquatic Acute: 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M-Factor - Aquatic Chronic: 1</td>
<td></td>
</tr>
<tr>
<td>nitromethane</td>
<td>Flam. Liq. 3; Acute Tox. 4; Carc. 2; Repr. 2; H226, H302, H332, H351, H361</td>
<td>&gt;= 0.1 - &lt; 1 %</td>
</tr>
</tbody>
</table>

For the full text of the H-Statements 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**
First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

**If inhaled**
After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

**In case of skin contact**
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician immediately.

**In case of eye contact**
After eye contact: rinse out with plenty of water. Call an ophthalmologist. Remove contact lenses.

**If swallowed**
After swallowing: immediately make victim drink water (two glasses at most). 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
Water Foam Carbon dioxide (CO2) Dry powder

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides
Hydrogen chloride gas
Combustible.
Vapors are heavier than air and may spread along floors.
Forms explosive mixtures with air on intense heating.
Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
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

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling
Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.
Hygiene measures
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions
Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Storage stability
Recommended storage temperature
2 - 8 °C
Product is sensitive to light and moisture.

Storage class
Storage class (TRGS 510): 6.1C: Combustible, acute toxic Cat.3 / toxic compounds or compounds which causing chronic effects

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>nitromethane</td>
<td>75-52-5</td>
<td>TWA</td>
<td>20 ppm</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
<tr>
<td>Remarks</td>
<td></td>
<td></td>
<td></td>
<td>Confirmed animal carcinogen with unknown relevance to humans</td>
</tr>
<tr>
<td>TWA</td>
<td></td>
<td>100 ppm</td>
<td>250 mg/m³</td>
<td>USA. Occupational Exposure Limits (OSHA) - Table Z-1</td>
</tr>
<tr>
<td>PEL</td>
<td></td>
<td>2 ppm</td>
<td>5 mg/m³</td>
<td>California permissible exposure limits for chemical contaminants</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Appropriate engineering controls
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment

Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection required

Body Protection
protective clothing
**Respiratory protection**
required when vapours/aerosols are generated.
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

**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: clear, liquid  
| b) Odor | No data available  
| c) Odor Threshold | No data available  
| d) pH | No data available  
| e) Melting point/freezing point | Melting point/range: < -20 °C (< -4 °F) - OECD Test Guideline 102  
| f) Initial boiling point and boiling range | 229 °C 444 °F - lit.  
| g) Flash point | 101 °C (214 °F) - closed cup - Regulation (EC) No. 440/2008, Annex, A.9  
| h) Evaporation rate | No data available  
| i) Flammability (solid, gas) | No data available  
| j) Upper/lower flammability or explosive limits | No data available  
| k) Vapor pressure | 0.31 hPa at 25 °C (77 °F) - OECD Test Guideline 104  
| l) Vapor density | No data available  
| m) Density | 1.074 g/mL at 25 °C (77 °F) - lit.  
| n) Water solubility | 0.002 g/l at 20 °C (68 °F) - OECD Test Guideline 105  
| o) Partition coefficient: n-octanol/water | log Pow: 3.48 - 3.52 at 30 °C (86 °F) - OECD Test Guideline 117 - Bioaccumulation is not expected.  
| 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 | none  

Aldrich - 338729
9.2 Other safety information
Surface tension 58 mN/m at 21.4 °C (70.5 °F) - OECD Test Guideline 115

SECTION 10: Stability and reactivity

10.1 Reactivity
Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical.

10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
Exposure to light may affect product quality. Avoid moisture. Strong heating.

10.5 Incompatible materials
Strong oxidizing agents

10.6 Hazardous decomposition products
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
Acute toxicity estimate Oral - 500 mg/kg (Calculation method)
LD50 Oral - Rat - 500 - 1,000 mg/kg
Remarks: (ECHA)
Acute toxicity estimate Inhalation - 4 h - 5 mg/l - vapor (Calculation method)

Acute toxicity estimate Inhalation - 4 h - 5 mg/l - vapor
(Expert judgment)
Acute toxicity estimate Dermal - 300 mg/kg (Calculation method)
LD50 Dermal - Rabbit - 500 - 1,000 mg/kg
Remarks: (External MSDS)

Skin corrosion/irritation
Skin - reconstructed human epidermis (RhE)
Result: Irritating to skin. - 1 h (OECD Test Guideline 439)

Serious eye damage/eye irritation
Remarks: Causes serious eye irritation. (ECHA)

Respiratory or skin sensitization
May cause allergic skin reaction. (ECHA)
**Germ cell mutagenicity**
Test Type: Ames test  
Test system: S. typhimurium  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative

**Carcinogenicity**
IARC: 2B - Group 2B: Possibly carcinogenic to humans (nitromethane)  
NTP: RAHC - Reasonably anticipated to be a human carcinogen (nitromethane)  
OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA’s list of regulated carcinogens.

**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

11.2 Additional Information
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea  
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.  
Stomach - Irregularities - Based on Human Evidence

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**SECTION 12: Ecological information**

12.1 Toxicity

Toxicity to fish  
LC50 - Pimephales promelas (fathead minnow) - 0.31 mg/l - 96 h  
Remarks: (ECOTOX Database)

static test NOEC - Pimephales promelas (fathead minnow) - 1.2 mg/l - 96 h  
Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates  
flow-through test EC50 - Daphnia magna (Water flea) - 0.65 mg/l - 48 h  
(OECD Test Guideline 202)

Toxicity to algae  
static test ErC50 - Pseudokirchneriella subcapitata - 0.49 mg/l - 72 h  
(OECD Test Guideline 201)

12.2 Persistence and degradability

Biodegradability  
aerobic - Exposure time 28 d  
Result: 28.4 % - Not readily biodegradable.
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 Endocrine disrupting properties
   No data available

12.7 Other adverse effects
   No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

   **Product**
   Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information

**DOT (US)**
UN number: 2810  Class: 6.1  Packing group: III
Proper shipping name: Toxic, liquids, organic, n.o.s. (ar-Vinylbenzyl chloride)
Reportable Quantity (RQ): Poison Inhalation Hazard: No

**IMDG**
UN number: 2810  Class: 6.1  Packing group: III  EMS-No: F-A, S-A
Proper shipping name: TOXIC LIQUID, ORGANIC, N.O.S. (ar-Vinylbenzyl chloride)
Marine pollutant : yes

**IATA**
UN number: 2810  Class: 6.1  Packing group: III
Proper shipping name: Toxic liquid, organic, n.o.s. (ar-Vinylbenzyl chloride)

SECTION 15: Regulatory information

**SARA 302 Components**
This material does not contain any components with a section 302 EHS TPQ.

**SARA 313 Components**
The following components are subject to reporting levels established by SARA Title III, Section 313:

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Revision Date</th>
</tr>
</thead>
</table>

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**SARA 311/312 Hazards**
Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**
- ar-Vinylbenzyl chloride CAS-No. 30030-25-2 Revision Date 1994-04-01

**Pennsylvania Right To Know Components**
- ar-Vinylbenzyl chloride CAS-No. 30030-25-2 Revision Date 1994-04-01

**California Prop. 65 Components**
- nitromethane CAS-No. 75-52-5 Revision Date 2007-09-28

, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.nitromethane

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**SECTION 16: Other information**

**Further information**
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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Version: 6.5 Revision Date: 02/07/2023 Print Date: 07/29/2023