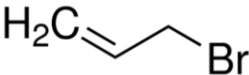


MATERIAL SAFETY DATA SHEET (MSDS)

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

1.1. Product identifier

| | |
|--------------------|---|
| Product form | : Substance |
| | : |
| CAS-No. | : 106-95-6 |
| Product code | : 00876 |
| Chemical structure | :  |
| Synonyms | : 3-Bromo-1-propene |

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

SPAN LAB
 UNIT NO. 14, SKY INDUSTRIAL ESTATE, WALIV, VASAI (E)
 401208 Mumbai - INDIA
 PH: +91 9820509929
info@spanlab.in www.spanlab.in

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

| | |
|---|------|
| Flammable liquids, Category 2 | H225 |
| Acute toxicity (oral), Category 3 | H301 |
| Skin corrosion/irritation, Category 1B | H314 |
| Hazardous to the aquatic environment — Acute Hazard, Category 1 | H400 |

Full text of H statements : see section 16

ALLYL BROMIDE FOR SYNTHESIS

Safety Data Sheet

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

F; R11
T; R23
T; R25
C; R34
N; R50

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS02

GHS05

GHS06

GHS09

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapour.
H301 - Toxic if swallowed.
H314 - Causes severe skin burns and eye damage.
H400 - Very toxic to aquatic life.

Precautionary statements (CLP) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P301+P310 - IF SWALLOWED: Immediately call a doctor.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a doctor.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : ALLYL BROMIDE FOR SYNTHESIS
CAS-No. : 106-95-6

Full text of R- and H-statements: see section 16

3.2. Mixtures

Not applicable

ALLYL BROMIDE FOR SYNTHESIS

Safety Data Sheet

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
- First-aid measures after skin contact : Get immediate medical advice/attention. Wash with plenty of water/....
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
- First-aid measures after ingestion : Rinse mouth. Immediately call a POISON CENTER/doctor. Do NOT induce vomiting.

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

- Symptoms/effects : Causes severe skin burns and eye damage.
- Symptoms/effects after ingestion : Toxic if swallowed.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Carbon dioxide. Dry powder. Foam. Water spray.
- Unsuitable extinguishing media : Do not use extinguishing media containing water.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Highly flammable liquid and vapour.
- Explosion hazard : May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Use personal protective equipment as required.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Very toxic to aquatic life.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : On land, sweep or shovel into suitable containers. Collect spillage.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.
- Precautions for safe handling : Keep away from sources of ignition - No smoking. Use only non-sparking tools. Avoid contact with skin and eyes. Do not breathe vapours. Take precautionary measures against static discharge.

ALLYL BROMIDE FOR SYNTHESIS

Safety Data Sheet

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment.
Storage conditions : Keep in fireproof place. Keep container tightly closed.
Incompatible materials : Heat sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Hand protection : Protective gloves
Eye protection : Chemical goggles or face shield
Skin and body protection : Wear suitable protective clothing
Respiratory protection : [In case of inadequate ventilation] wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Molecular mass : 120.98 g/mol
Colour : Clear Colorless.
Odour : unpleasant.
Odour threshold : No data available
pH : No data available
Relative evaporation rate (butylacetate=1) : No data available
Melting point : -119 °C
Freezing point : No data available
Boiling point : 70 - 71 °C
Flash point : -1 °C
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : Flammable
Highly flammable liquid and vapour.

ALLYL BROMIDE FOR SYNTHESIS

Safety Data Sheet

| | |
|----------------------------------|----------------------------|
| Vapour pressure | : No data available |
| Relative vapour density at 20 °C | : 4.2 |
| Relative density | : No data available |
| Density | : 1.39 g/cm ³ |
| Solubility | : Water: 3.83 g/l at 25 °C |
| Log Pow | : 1.79 |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : 0.043 - 0.073 vol % |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : Corrosive vapours.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Open flame. Heat. Sparks.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

May release flammable gases. Thermal decomposition generates : Corrosive vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

| | |
|-----------------------------------|--|
| Acute toxicity | : Oral: Toxic if swallowed. |
| Skin corrosion/irritation | : Causes severe skin burns and eye damage. |
| Serious eye damage/irritation | : Serious eye damage, category 1, implicit |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| STOT-single exposure | : Not classified |

ALLYL BROMIDE FOR SYNTHESIS

Safety Data Sheet

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Potential adverse human health effects and symptoms : Toxic if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Very toxic to aquatic life.

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

ALLYL BROMIDE FOR SYNTHESIS (106-95-6)

| | |
|---------|------|
| Log Pow | 1.79 |
|---------|------|

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Additional information : Handle empty containers with care because residual vapours are flammable.

Ecology - waste materials : Hazardous waste due to toxicity.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : 1099

UN-No. (IMDG) : 1099

UN-No. (IATA) : 1099

UN-No. (ADN) : 1099

ALLYL BROMIDE FOR SYNTHESIS

Safety Data Sheet

UN-No. (RID) : 1099

14.2. UN proper shipping name

Proper Shipping Name (ADR) : ALLYL BROMIDE
Proper Shipping Name (IMDG) : ALLYL BROMIDE
Proper Shipping Name (IATA) : Allyl bromide
Proper Shipping Name (ADN) : ALLYL BROMIDE
Proper Shipping Name (RID) : ALLYL BROMIDE
Transport document description (ADR) : UN 1099 ALLYL BROMIDE, 3 (6.1), I, (C/E), ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG) : UN 1099 ALLYL BROMIDE, 3 (6.1), I, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS (-1°C c.c.)
Transport document description (IATA) : UN 1099 Allyl bromide, 3 (6.1), I, ENVIRONMENTALLY HAZARDOUS
Transport document description (ADN) : UN 1099 ALLYL BROMIDE, 3 (6.1), I, ENVIRONMENTALLY HAZARDOUS
Transport document description (RID) : UN 1099 ALLYL BROMIDE, 3 (6.1), I, ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 3 (6.1)
Danger labels (ADR) : 3, 6.1



IMDG

Transport hazard class(es) (IMDG) : 3 (6.1)
Danger labels (IMDG) : 3, 6.1



IATA

Transport hazard class(es) (IATA) : 3 (6.1)
Hazard labels (IATA) : 3, 6.1



ADN

Transport hazard class(es) (ADN) : 3 (6.1)
Danger labels (ADN) : 3, 6.1



RID

ALLYL BROMIDE FOR SYNTHESIS

Safety Data Sheet

Transport hazard class(es) (RID) : 3 (6.1)
Danger labels (RID) : 3, 6.1



14.4. Packing group

Packing group (ADR) : I
Packing group (IMDG) : I
Packing group (IATA) : I
Packing group (ADN) : I
Packing group (RID) : I

14.5. Environmental hazards

Dangerous for the environment : Yes
Marine pollutant : Yes
Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : FT1
Limited quantities (ADR) : 0
Excepted quantities (ADR) : E0
Packing instructions (ADR) : P001
Mixed packing provisions (ADR) : MP7, MP17
Portable tank and bulk container instructions (ADR) : T14
Portable tank and bulk container special provisions (ADR) : TP2
Tank code (ADR) : L10CH
Tank special provisions (ADR) : TU14, TU15, TE21
Vehicle for tank carriage : FL
Transport category (ADR) : 1
Special provisions for carriage - Loading, unloading and handling (ADR) : CV13, CV28
Special provisions for carriage - Operation (ADR) : S2, S22
Hazard identification number (Kemler No.) : 336
Orange plates :



Tunnel restriction code (ADR) : C/E
EAC code : 2WE
APP code : A(fl)

- Transport by sea

Limited quantities (IMDG) : 0
Excepted quantities (IMDG) : E0
Packing instructions (IMDG) : P001
Tank instructions (IMDG) : T14
Tank special provisions (IMDG) : TP2, TP13

ALLYL BROMIDE FOR SYNTHESIS

Safety Data Sheet

| | |
|------------------------------------|---|
| EmS-No. (Fire) | : F-E |
| EmS-No. (Spillage) | : S-D |
| Stowage category (IMDG) | : B |
| Stowage and handling (IMDG) | : SW2 |
| Flash point (IMDG) | : -1°C c.c. |
| Properties and observations (IMDG) | : Colourless to light yellow liquid with an irritating odour. Flashpoint: -1°C c.c. Explosive limits: 4.4% to 7.3% Immiscible with water. Highly toxic if swallowed, by skin contact or by inhalation. |

- Air transport

| | |
|--|-------------|
| PCA Excepted quantities (IATA) | : E0 |
| PCA Limited quantities (IATA) | : Forbidden |
| PCA limited quantity max net quantity (IATA) | : Forbidden |
| PCA packing instructions (IATA) | : Forbidden |
| PCA max net quantity (IATA) | : Forbidden |
| CAO packing instructions (IATA) | : 361 |
| CAO max net quantity (IATA) | : 30L |
| ERG code (IATA) | : 3P |

- Inland waterway transport

| | |
|-----------------------------------|----------------------|
| Classification code (ADN) | : FT1 |
| Special provisions (ADN) | : 802 |
| Limited quantities (ADN) | : 0 |
| Excepted quantities (ADN) | : E0 |
| Equipment required (ADN) | : PP, EP, EX, TOX, A |
| Ventilation (ADN) | : VE01, VE02 |
| Number of blue cones/lights (ADN) | : 2 |

- Rail transport

| | |
|---|--------------------------------|
| Classification code (RID) | : FT1 |
| Limited quantities (RID) | : 0 |
| Excepted quantities (RID) | : E0 |
| Packing instructions (RID) | : P001 |
| Mixed packing provisions (RID) | : MP7, MP17 |
| Portable tank and bulk container instructions (RID) | : T14 |
| Portable tank and bulk container special provisions (RID) | : TP2 |
| Tank codes for RID tanks (RID) | : L10CH |
| Special provisions for RID tanks (RID) | : TU14, TU15, TU38, TE21, TE22 |
| Transport category (RID) | : 1 |
| Special provisions for carriage - Loading, unloading and handling (RID) | : CW13, CW28 |
| Hazard identification number (RID) | : 336 |

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

ALLYL BROMIDE FOR SYNTHESIS is not on the REACH Candidate List

ALLYL BROMIDE FOR SYNTHESIS is not on the REACH Annex XIV List

ALLYL BROMIDE FOR SYNTHESIS

Safety Data Sheet

15.1.2. National regulations

Germany

Reference to AwSV : Water hazard class (WGK) 2, significant hazard to water (Classification according to AwSV; ID No. 5980)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

Denmark

Classification remarks : Emergency management guidelines for the storage of flammable liquids must be followed

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of R-, H- and EUH-statements:

| | |
|---------------------|---|
| Acute Tox. 3 (Oral) | Acute toxicity (oral), Category 3 |
| Aquatic Acute 1 | Hazardous to the aquatic environment — Acute Hazard, Category 1 |
| Flam. Liq. 2 | Flammable liquids, Category 2 |
| Skin Corr. 1B | Skin corrosion/irritation, Category 1B |
| H225 | Highly flammable liquid and vapour. |
| H301 | Toxic if swallowed. |
| H314 | Causes severe skin burns and eye damage. |
| H400 | Very toxic to aquatic life. |
| R11 | Highly flammable |
| R23 | Toxic by inhalation |
| R25 | Toxic if swallowed |
| R34 | Causes burns |

ALLYL BROMIDE FOR SYNTHESIS

Safety Data Sheet

| | |
|-----|---------------------------------|
| R50 | Very toxic to aquatic organisms |
| C | Corrosive |
| F | Highly flammable |
| N | Dangerous for the environment |
| T | Toxic |

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product