



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

**1.1. Product identifier**

Product form : Substance  
 Physical state : Liquid  
 Substance name : ALLYL BROMIDE  
 Product code : ENEA0050  
 Formula : C3H5Br  
 Synonyms : 3-BROMOPROPENE; 2-PROPENYL BROMIDE; 1-BROMO-2-PROPENE; 3-BROMOPROPYLENE  
 Chemical family : ESTER

**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 : Chemical intermediate

**1.2.2. Uses advised against**

No additional information available

**1.3. Details of the supplier of the safety data sheet**

**GELEST, INC.**  
 11 East Steel Road  
 Morrisville, PA 19067  
**USA**  
 T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST  
[info@gelest.com](mailto:info@gelest.com) - [www.gelest.com](http://www.gelest.com)

**GELEST INC.**  
 Fritz-Klatte-Strasse 8  
 65933 Frankfurt  
**Germany**  
 T +49 (0) 69 3535106-500 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM  
[info@gelestde.com](mailto:info@gelestde.com) - [www.gelestde.com](http://www.gelestde.com)

**1.4. Emergency telephone number**

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

**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  
 Acute toxicity (inhalation:vapour) Category 3      H331  
 Skin corrosion/irritation, Category 2      H315  
 Serious eye damage/eye irritation, Category 2      H319

Full text of H statements : see section 16

**Adverse physicochemical, human health and environmental effects**

No additional information available

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### 2.2. Label elements

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

Hazard pictograms (CLP) :



GHS02

GHS06

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapour.  
H301+H331 - Toxic if swallowed or if inhaled.  
H315 - Causes skin irritation.  
H319 - Causes serious eye irritation.

Precautionary statements (CLP) :

P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P264 - Wash hands thoroughly after handling.  
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P240 - Ground/bond container and receiving equipment.  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.  
P311 - Call a doctor.

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Substance type : Mono-constituent  
Name : ALLYL BROMIDE  
CAS-No. : 106-95-6  
EC-No. : 203-446-6

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Allyl bromide	(CAS-No.) 106-95-6 (EC-No.) 203-446-6	> 98	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Inhalation:vapour), H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319

Full text of H-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Get immediate medical advice/attention.

First-aid measures after skin contact : Wash with plenty of water/.... Get medical advice/attention.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

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

Symptoms/effects after inhalation : Toxic if inhaled. May cause irritation to the respiratory tract.

Symptoms/effects after skin contact : Causes skin irritation.

Symptoms/effects after eye contact : Causes serious eye irritation.

Symptoms/effects after ingestion : Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Water fog. Foam. Carbon dioxide. Dry chemical.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapour. Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

Explosion hazard : May form flammable/explosive vapour-air mixture.

### 5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapour and mist.

## SECTION 6: Accidental release measures

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

General measures : Eliminate every possible source of ignition. Use special care to avoid static electric charges.

#### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or shovel spills into appropriate container for disposal. Use only non-sparking tools.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## 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 : Avoid all eye and skin contact and do not breathe vapour and mist. Provide good ventilation in process area to prevent formation of vapour. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Use only non-sparking tools.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

### 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. Use explosion-proof electrical equipment.

Storage conditions : Keep container tightly closed.

Incompatible materials : Amines. Aluminium chloride. Iron. Magnesium. Oxidizing agent. Zinc.

Storage area : Store in a well-ventilated place. Store away from heat.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Allyl bromide (106-95-6)		
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	0.1 ppm
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	0.2 ppm

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### 8.2. Exposure controls

#### Appropriate engineering controls:

Provide local exhaust or general room ventilation.

#### Personal protective equipment:

Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

#### Hand protection:

Neoprene or nitrile rubber gloves

#### Eye protection:

Chemical goggles. Contact lenses should not be worn

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

NIOSH-certified organic vapor (black cartridge) respirator.

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Appearance	: Clear liquid.
Molecular mass	: 120.98 g/mol
Colour	: Straw yellow.
Odour	: Strong. Disagreeable. Lachrymator.
Odour threshold	: No data available
Refractive index	: 1.469
pH	: No data available
Relative evaporation rate (butylacetate=1)	: 7
Melting point	: No data available
Freezing point	: 119 °C
Boiling point	: 70 - 71 °C
Flash point	: -2 °C
Auto-ignition temperature	: 295 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Highly flammable liquid and vapour.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: 4.17
Relative density	: 1.398
% Volatiles	: 100 %
Solubility	: Slightly. Soluble in water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 4.4 - 7.3 vol % (lower; upper)

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Unstable.

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### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Heat. Open flame. Sparks.

### 10.5. Incompatible materials

Aluminium chloride. Amines. Iron. Magnesium. Oxidizing agent. Zinc.

### 10.6. Hazardous decomposition products

Organic acid vapors.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Oral: Toxic if swallowed. Inhalation:vapour: Toxic if inhaled.

#### ALLYL BROMIDE (106-95-6)

LD50 oral rat	120 mg/kg
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#### Allyl bromide (106-95-6)

LD50 oral rat	120 mg/kg
LD50 oral guinea pig	30 mg/kg
LC50 inhalation rat (mg/l)	10 mg/l (Exposure time: 30 min)
ATE CLP (oral)	120 mg/kg bodyweight
ATE CLP (vapours)	10 mg/l/4h
ATE CLP (dust,mist)	10 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.  
Serious eye damage/irritation : Causes serious eye irritation.  
Respiratory or skin sensitisation : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified  
Mouse feeding and inhalation studies classify this material as an equivocal tumorigenic agent. (RTECS UC7350000/UC7026FO)  
Reproductive toxicity : Not classified  
STOT-single exposure : Not classified  
STOT-repeated exposure : Not classified  
Aspiration hazard : Not classified  
Symptoms/effects after inhalation : Toxic if inhaled. May cause irritation to the respiratory tract.  
Symptoms/effects after skin contact : Causes skin irritation.  
Symptoms/effects after eye contact : Causes serious eye irritation.  
Symptoms/effects after ingestion : Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.  
Reason for classification : Expert judgment

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - water : Very toxic to aquatic life.  
Acute aquatic toxicity : Not classified  
Chronic aquatic toxicity : Not classified

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 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

Other adverse effects : Harmful to aquatic life if released to open waters.

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### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

- Product/Packaging disposal recommendations : Incinerate. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.
- Additional information : Handle empty containers with care because residual vapours are flammable.
- Ecology - waste materials : Avoid release to the environment.

### SECTION 14: Transport information

#### 14.1. UN number

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
- 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)
- Transport document description (IMDG) : UN 1099 ALLYL BROMIDE, 3 (6.1), I, MARINE POLLUTANT (-1°C c.c.)
- Transport document description (IATA) : UN 1099 Allyl bromide, 3 (6.1), I
- Transport document description (ADN) : UN 1099 ALLYL BROMIDE, 3 (6.1), I
- Transport document description (RID) : UN 1099 ALLYL BROMIDE, 3 (6.1), I

#### 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

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Transport hazard class(es) (ADN) : 3 (6.1)

Danger labels (ADN) : 3, 6.1



### RID

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 : No

Marine pollutant : Yes (IMDG only)

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

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Excepted quantities (IMDG)	: E0
Packing instructions (IMDG)	: P001
Tank instructions (IMDG)	: T14
Tank special provisions (IMDG)	: TP2, TP13
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 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 is not on the REACH Candidate List

ALLYL BROMIDE is not on the REACH Annex XIV List

% Volatiles : 100 %



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### 15.1.2. National regulations

#### Germany

Reference to AwSV : Water hazard class (WGK) 2, significant hazard to water (Classification according to VwVwS, Annex 3; 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

Danish National Regulations : 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

Abbreviations and acronyms:

Abbreviations and acronyms:	Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor
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Other information : Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

Acute Tox. 3 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.

SDS EU (REACH Annex II) - Custom

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