SECTION 1: Identification

1.1. Identification

Product name: ALLYL-3,4-DIMETHOXYBENZENE
Product code: ENEA0075
Product form: Substance
Physical state: Liquid
Formula: C11H14O2
Synonyms:
- METHYLEUGENOL
- EUGENYL METHYL ETHER
- 1,3,4-EUGENOL METHYL ETHER
- 1,2-DIMETHOXY-4-ALLYLBENZENE

Chemical family: ORGANIC

1.2. Recommended use and restrictions on use

Recommended use: Chemical intermediate

1.3. Supplier

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 - www.gelest.com

1.4. Emergency telephone number

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

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification
- Acute toxicity (oral) Category 4: H302 - Harmful if swallowed
- Carcinogenicity Category 1B: H350 - May cause cancer
- Specific target organ toxicity (repeated exposure) Category 2: H373 - May cause damage to organs through prolonged or repeated exposure

Full text of H statements: see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US):
- !: Danger
- :

Signal word (GHS US): Danger

Hazard statements (GHS US):
- H302 - Harmful if swallowed
- H350 - May cause cancer
- H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements (GHS US):
- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P260 - Wear protective gloves/protective clothing/eye protection/face protection.
- P308+P313 - If exposed or concerned: Get medical advice/attention.
- P266 - Do not breathe vapors.
- P264 - Wash hands thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P330 - Rinse mouth.
- P301+P312 - If swallowed: Call a doctor if you feel unwell.
- P405 - Store locked up.
- P501 - Dispose of contents/container to licensed waste disposal facility.

2.3. Hazards not otherwise classified (HNOC)

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable
ALLYL-3,4-DIMETHOXYBENZENE
Safety Data Sheet

SECTION 3: Composition/Information on ingredients

3.1. Substances
Substance type: Mono-constituent
Name: ALLYL-3,4-DIMETHOXYBENZENE
CAS-No.: 93-15-2

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allyl-3,4-dimethoxybenzene</td>
<td>(CAS-No.) 93-15-2</td>
<td>95 - 100</td>
<td>Acute Tox. 4 (Oral), H302</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Carc. 1B, H350</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STOT RE 2, H373</td>
</tr>
</tbody>
</table>

Full text of hazard classes and 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 victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.

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

4.2. Most important symptoms and effects (acute and delayed)
Symptoms/effects: May cause damage to organs through prolonged or repeated exposure.
Symptoms/effects after inhalation: May cause irritation to the respiratory tract.
Symptoms/effects after skin contact: May cause skin irritation. May be harmful in contact with skin.
Symptoms/effects after eye contact: May cause eye irritation.
Symptoms/effects after ingestion: Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

4.3. Immediate medical attention and special treatment, if necessary
No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media
Unsuitable extinguishing media: None known.

5.2. Specific hazards arising from the chemical
Fire hazard: Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

5.3. Special protective equipment and precautions for fire-fighters
Firefighting instructions: Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers.
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 vapor and mist.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Protective equipment: Wear protective equipment as described in Section 8.
Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders
Protective equipment: Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions
Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.
6.3. Methods and material for containment and cleaning up
For containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up: Clean up any spills as soon as possible, using an absorbent material to collect it.

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
Precautions for safe handling: Avoid all eye and skin contact and do not breathe vapor and mist. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only in well ventilated areas.
Hygiene measures: Wash contaminated clothing before reuse. 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
Storage conditions: Keep container tightly closed. Store locked up.
Incompatible materials: Oxidizing agent.
Storage area: Store in a well-ventilated place. Store away from heat.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
No additional information available

8.2. Appropriate engineering controls
Appropriate engineering controls: Provide local exhaust or general room ventilation.

8.3. Individual protection measures/Personal protective equipment

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:
Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified organic vapor (black cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid.</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>178.23 g/mol</td>
</tr>
<tr>
<td>Color</td>
<td>Clear to straw.</td>
</tr>
<tr>
<td>Odor</td>
<td>Distinct. Carnation-like.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
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<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
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<tr>
<td>Melting point</td>
<td>-4 °C</td>
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<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>254 - 255 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>110 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
</tbody>
</table>
ALLYL-3,4-DIMETHOXYBENZENE
Safety Data Sheet

Decomposition temperature : No data available
Flammability (solid, gas) : No data available
Vapor pressure : < 0.1 mm Hg @ 20°C
Relative vapor density at 20 °C : No data available
Relative density : 1.035
% Volatiles : < 3 %
Solubility : Insoluble 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
Oxidizing properties : No data available
Explosion limits : No data available

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Decomposes when heated above 150°C in the presence of metal salts.

10.4. Conditions to avoid
No additional information available

10.5. Incompatible materials
Oxidizing agent.

10.6. Hazardous decomposition products
Organic acid vapors. including phenolic compounds.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity : Not classified

ALLYL-3,4-DIMETHOXYBENZENE (93-15-2)
ATE US (oral) 810 mg/kg body weight

Allyl-3,4-dimethoxybenzene (93-15-2)
LD50 oral rat 810 mg/kg RTECS Number: CY2450000
LD50 dermal rabbit > 2025 mg/kg
LD50 intraperitoneal mouse 540 mg/kg
ATE US (oral) 810 mg/kg body weight

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : May cause cancer.

Allyl-3,4-dimethoxybenzene (93-15-2)
IARC group 2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status 1 - Evidence of Carcinogenicity, 3 - Reasonably anticipated to be Human Carcinogen
In OSHA Hazard Communication Carcinogen list Yes

Reproductive toxicity : Not classified
Specific target organ toxicity – single exposure : Not classified
Specific target organ toxicity – repeated exposure : May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard: Not classified
Potential Adverse human health effects and symptoms: Repeated exposure can cause kidney damage.
Symptoms/effects after inhalation: May cause irritation to the respiratory tract.
Symptoms/effects after skin contact: May cause skin irritation. May be harmful in contact with skin.
Symptoms/effects after eye contact: May cause eye irritation.
Symptoms/effects after ingestion: Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity
No additional information available

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. Other adverse effects
Other adverse effects: This substance may be hazardous to the environment.
Effect on the ozone layer: No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods
Sewage disposal recommendations: Do not dispose of waste into sewer.
Product/Packaging disposal recommendations: Incinerate. Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number
Not regulated for transport.

14.2. UN proper shipping name
Not applicable

14.3. Additional information
Other information: No supplementary information available.

Transport by sea
No additional information available

Air transport
No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations
Allyl-3,4-dimethoxybenzene (93-15-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313
SARA Section 313 - Emission Reporting 0.1 %

15.2. International regulations
CANADA
Allyl-3,4-dimethoxybenzene (93-15-2)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations
Allyl-3,4-dimethoxybenzene (93-15-2)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
ALLYL-3,4-DIMETHOXYBENZENE
Safety Data Sheet

National regulations

**Allyl-3,4-dimethoxybenzene (93-15-2)**

- Listed on the AICS (Australian Inventory of Chemical Substances)
- Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
- Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
- Listed on the Japanese ISHL (Industrial Safety and Health Law)
- Listed on the Korean ECL (Existing Chemicals List)
- Listed on NZIoC (New Zealand Inventory of Chemicals)
- Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
- Japanese Pollutant Release and Transfer Register Law (PRTR Law)
- Listed on INSQL (Mexican National Inventory of Chemical Substances)
- Listed on NZIoC (New Zealand Inventory of Chemicals)
- Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
- Japanese Pollutant Release and Transfer Register Law (PRTR Law)
- Listed on INSQ (Mexican National Inventory of Chemical Substances)
- Listed on NZIoC (New Zealand Inventory of Chemicals)
- Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
- Japanese Pollutant Release and Transfer Register Law (PRTR Law)
- Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

**WARNING:**

This product can expose you to Allyl-3,4-dimethoxybenzene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

**Allyl-3,4-dimethoxybenzene (93-15-2)**

<table>
<thead>
<tr>
<th>U.S. - California - Proposition 65 - Carcinogens List</th>
<th>U.S. - California - Proposition 65 - Developmental Toxicity</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Female</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Male</th>
<th>No significant risk level (NSRL)</th>
<th>Maximum allowable dose level (MADL)</th>
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</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**Allyl-3,4-dimethoxybenzene (93-15-2)**

U.S. - New Jersey - Right to Know Hazardous Substance List

**SECTION 16: Other information**

Full text of H-phrases:

- **H302**: Harmful if swallowed
- **H350**: May cause cancer
- **H373**: May cause damage to organs through prolonged or repeated exposure

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.

**Hazard Rating**

- **Health**: 2 Moderate Hazard - Temporary or minor injury may occur
- **Flammability**: 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIb)
- **Physical**: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Prepared by safety and environmental affairs.

Date of issue: 09/21/2017 Version: 1.0

SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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