1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Divinylbenzene
Product Number : 414565
Brand : Aldrich
Supplier : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO  63103
USA
Telephone : +1 800-325-5832
Fax : +1 800-325-5052
Emergency Phone # (For both supplier and manufacturer) : (314) 776-6555
Preparation Information : Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Combustible Liquid, Target Organ Effect, Harmful by ingestion., Skin sensitiser, Irritant

Target Organs
Liver, Blood, Eyes, Kidney, Lungs

GHS Classification
Flammable liquids (Category 4)
Acute toxicity, Oral (Category 4)
Skin irritation (Category 2)
Serious eye damage (Category 1)
Skin sensitization (Category 1)
Specific target organ toxicity - single exposure (Category 3)

GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)
H227 Combustible liquid
H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.

Precautionary statement(s)
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves/ eye protection/ face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
HMIS Classification

Health hazard: 2
Chronic Health Hazard: *
Flammability: 2
Physical hazards: 0

NFPA Rating

Health hazard: 2
Fire: 2
Reactivity Hazard: 0

Potential Health Effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.
Skin Harmful if absorbed through skin. Causes skin irritation.
Eyes Causes eye irritation.
Ingestion Harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula: \( C_{10}H_{10} \)
Molecular Weight: 130.19 g/mol

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Divinylbenzene</td>
<td>Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2; Skin Sens. 1; STOT SE 3; H302, H315, H317, H319, H335</td>
<td>70 - 90 %</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>1321-74-0</td>
<td></td>
</tr>
<tr>
<td>EC-No.</td>
<td>215-325-5</td>
<td></td>
</tr>
</tbody>
</table>

| Ethylstyrene    | Acute Tox. 4; Eye Dam. 1; H302, H318 | 10 - 30 % |
| CAS-No.         | 28106-30-1     |               |
| EC-No.          | 248-846-1      |               |

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

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

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
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability
Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters
Wear self-contained breathing apparatus for fire fighting if necessary.
**Hazardous combustion products**
Hazardous decomposition products formed under fire conditions. - Carbon oxides

**Further information**
Use water spray to cool unopened containers.

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6. **ACCIDENTAL RELEASE MEASURES**

**Personal precautions**
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

**Environmental precautions**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods and materials for containment and cleaning up**
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

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7. **HANDLING AND STORAGE**

**Precautions for safe handling**
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

**Conditions for safe storage**
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

Light sensitive.

---

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Components with workplace control parameters**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Divinylbenzene</td>
<td>1321-74-0</td>
<td>TWA</td>
<td>10 ppm</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
</tbody>
</table>

**Remarks**
Upper Respiratory Tract irritation

- **TWA**
  - 10 ppm
  - 50 mg/m3
  - USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
  - USA. NIOSH Recommended Exposure Limits

Commercial product contains all 3 isomers, but m-isomer predominates. Usually contains an inhibitor to prevent polymerization.

**Personal protective equipment**

**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).

**Hand 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.
Eye protection
Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and 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.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Form clear, liquid
Colour colourless

Safety data
pH no data available
Melting point/freezing point: Melting point/range: < -50 °C (< -58 °F)
Boiling point 195 °C (383 °F) at 1,013 hPa (760 mmHg)
Flash point 64 °C (147 °F) - closed cup
Ignition temperature no data available
Auto-ignition temperature 470 °C (878 °F)
Lower explosion limit 0.7 %(V)
Upper explosion limit 6.5 %(V)
Vapour pressure 1.2 hPa (0.9 mmHg) at 30 °C (86 °F)
Density 0.914 g/cm³
Water solubility no data available
Partition coefficient: n-octanol/water no data available
Relative vapor density no data available
Odour no data available
Odour Threshold no data available
Evaporation rate no data available

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
no data available

Conditions to avoid
Heat, flames and sparks.

Materials to avoid
Strong oxidizing agents, Copper, Strong acids
Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50
no data available

Inhalation LC50
no data available

Dermal LD50
no data available

Other information on acute toxicity
no data available

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
Eyes: no data available

Respiratory or skin sensitization
no data available

Germ cell mutagenicity
no data available

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.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
no data available

Teratogenicity

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
no data available

Potential health effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion Harmful if swallowed.
Skin Harmful if absorbed through skin. Causes skin irritation.
Eyes       Causes eye irritation.

**Signs and Symptoms of Exposure**
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Synergistic effects**
no data available

**Additional Information**
RTECS: Not available

12. **ECOLOGICAL INFORMATION**

**Toxicity**
no data available

**Persistence and degradability**
no data available

**Bioaccumulative potential**
no data available

**Mobility in soil**
no data available

**PBT and vPvB assessment**
no data available

**Other adverse effects**
no data available

13. **DISPOSAL CONSIDERATIONS**

**Product**
This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. 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.

14. **TRANSPORT INFORMATION**

**DOT (US)**
NA-Number: 1993   Class: CBL   Packing group: III
Proper shipping name: Combustible liquid, n.o.s. (Divinylbenzene)
Reportable Quantity (RQ):
Marine Pollutant: No
Poison Inhalation Hazard: No

**IMDG**
Not dangerous goods

**IATA**
Not dangerous goods

15. **REGULATORY INFORMATION**

**OSHA Hazards**
Combustible Liquid, Target Organ Effect, Harmful by ingestion., Skin sensitiser, Irritant

**SARA 302 Components**
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards
Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

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Pennsylvania Right To Know Components

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<td>28106-30-1</td>
<td>1993-04-24</td>
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New Jersey Right To Know Components

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<td>Ethylstyrene</td>
<td>28106-30-1</td>
<td>1993-04-24</td>
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</tbody>
</table>

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Text of H-code(s) and R-phrase(s) mentioned in Section 3

- Acute Tox.          Acute toxicity
- Eye Dam.           Serious eye damage
- Eye Irrit.         Eye irritation
- H302               Harmful if swallowed.
- H315               Causes skin irritation.
- H317               May cause an allergic skin reaction.
- H318               Causes serious eye damage.
- H319               Causes serious eye irritation.
- H335               May cause respiratory irritation.
- Skin Irrit.       Skin irritation
- Skin Sens.        Skin sensitization
- STOT SE           Specific target organ toxicity - single exposure

Further information
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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.