# Bromoacetaldehyde diethyl acetal (cas 2032-35-1) MSDS

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1 Product identifiers

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product name</td>
<td>Bromoacetaldehyde diethyl acetal</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>2032-35-1</td>
</tr>
</tbody>
</table>

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

Identified uses: Laboratory chemicals, Manufacture of substances

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

- Acute toxicity, Oral (Category 3)
- Acute toxicity, Inhalation (Category 2)
- Skin irritation (Category 2)
- Eye irritation (Category 2)

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Harmful if swallowed. Toxic by inhalation. Irritating to eyes and skin.

### 2.2 Label elements

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

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Danger</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Signal word</th>
<th>Hazard statement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H301</td>
<td>Toxic if swallowed.</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>H330</td>
<td>Fatal if inhaled.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Precautionary statement(s)</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>P260</td>
<td>Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.</td>
</tr>
<tr>
<td>P284</td>
<td>Wear respiratory protection.</td>
</tr>
<tr>
<td>P301 + P310</td>
<td>IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.</td>
</tr>
<tr>
<td>P305 + P351 + P338</td>
<td>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</td>
</tr>
<tr>
<td>P310</td>
<td>Immediately call a POISON CENTER or doctor/ physician.</td>
</tr>
</tbody>
</table>

Supplemental Hazard Statements: none


<table>
<thead>
<tr>
<th>Hazard symbol(s)</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-phrasers</td>
<td></td>
</tr>
<tr>
<td>R22</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>R23</td>
<td>Toxic by inhalation.</td>
</tr>
<tr>
<td>R36/38</td>
<td>Irritating to eyes and skin.</td>
</tr>
<tr>
<td>S-phrase(s)</td>
<td></td>
</tr>
<tr>
<td>S26</td>
<td>In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.</td>
</tr>
<tr>
<td>S36/37</td>
<td>Wear suitable protective clothing and gloves.</td>
</tr>
</tbody>
</table>
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

<table>
<thead>
<tr>
<th>Substances</th>
<th>Synonyms</th>
<th>Formula</th>
<th>Molecular Weight</th>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Bromo-1,1-diethoxyethane</td>
<td>2-Bromoacetal</td>
<td>C6H13BrO2</td>
<td>197.07 g/mol</td>
<td>2-Bromo-1,1-diethoxyethane</td>
<td>-</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

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. Take victim immediately to hospital. 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.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation of vapors may cause: Lung irritation, Cough, Shortness of breath. Contact with skin can cause: I Irritation, Contact with eyes can cause: Eye irritation. Exposure may cause excessive lacrimation and a sensation of seeing halos or colored rings around lights. Effects due to ingestion may include: Gastrointestinal disturbance, Nausea, Headache, Dizziness

4.3 Indication of any immediate medical attention and special treatment needed

no data available

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Carbon oxides, hydrogen bromide gas

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. 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.
6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 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.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. 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

Protect from frost, heat and sunlight. May darken on storage.

7.3 Specific end uses
No data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

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

Skin 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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

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.

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
9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>a) Appearance</th>
<th>Form: clear, liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>b) Odour</td>
<td>Stench.</td>
</tr>
<tr>
<td>c) Odour Threshold</td>
<td>no data available</td>
</tr>
<tr>
<td>d) pH</td>
<td>no data available</td>
</tr>
<tr>
<td>e) Melting point/freezing point</td>
<td>no data available</td>
</tr>
<tr>
<td>f) Initial boiling point and boiling range</td>
<td>66 - 67 °C at 24 hPa - lit.</td>
</tr>
<tr>
<td>g) Flash point</td>
<td>65 °C - closed cup</td>
</tr>
<tr>
<td>h) Evaporation rate</td>
<td>no data available</td>
</tr>
<tr>
<td>i) Flammability (solid, gas)</td>
<td>no data available</td>
</tr>
<tr>
<td>j) Upper/lower flammability or explosive limits</td>
<td>no data available</td>
</tr>
<tr>
<td>k) Vapour pressure</td>
<td>no data available</td>
</tr>
<tr>
<td>l) Vapour density</td>
<td>no data available</td>
</tr>
<tr>
<td>m) Relative density</td>
<td>1.31 g/mL at 25 °C</td>
</tr>
<tr>
<td>n) Water solubility</td>
<td>no data available</td>
</tr>
<tr>
<td>o) Partition coefficient: n-octanol/water</td>
<td>no data available</td>
</tr>
<tr>
<td>p) Autoignition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>q) Decomposition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>r) Viscosity</td>
<td>no data available</td>
</tr>
<tr>
<td>s) Explosive properties</td>
<td>no data available</td>
</tr>
<tr>
<td>t) Oxidizing properties</td>
<td>no data available</td>
</tr>
</tbody>
</table>

9.2 Other safety information

no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

no data available

10.2 Chemical stability

no data available

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

Strong oxidizing agents, Acids

10.6 Hazardous decomposition products

Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION
11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - rat - 233 mg/kg
LC50 Inhalation - rat - 4 h - 0.61 mg/l

Skin corrosion/irritation
Skin - rabbit - Skin irritation - Draize Test

Serious eye damage/eye irritation
Eyes - rabbit - Eye irritation - Draize Test

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.

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

Potential health effects

<table>
<thead>
<tr>
<th>Inhalation</th>
<th>May be fatal if inhaled. Causes respiratory tract irritation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingestion</td>
<td>Toxic if swallowed.</td>
</tr>
<tr>
<td>Skin</td>
<td>May be harmful if absorbed through skin. Causes skin irritation.</td>
</tr>
<tr>
<td>Eyes</td>
<td>Causes serious eye irritation.</td>
</tr>
</tbody>
</table>

Signs and Symptoms of Exposure
Inhalation of vapors may cause: Lung irritation, Cough, Shortness of breath, Contact with skin can cause: Irritation, Contact with eyes can cause: Eye irritation, Exposure may cause excessive lacrimation and a sensation of seeing halos or colored rings around lights, Effects due to ingestion may include: Gastrointestinal disturbance, Nausea, Headache, Dizziness

Additional Information
RTECS: Not available

12. ECOLOGICAL INFORMATION

12.1 Toxicity
no data available

12.2 Persistence and degradability
no data available

12.3 Bioaccumulative potential
no data available

12.4 Mobility in soil
no data available

12.5 Results of PBT and vPvB assessment
no data available

12.6 Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
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.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN number

14.2 UN proper shipping name
ADR/RID: FLAMMABLE LIQUID, TOXIC, N.O.S. (2-Bromo-1,1-diethoxyethane)
IMDG: FLAMMABLE LIQUID, TOXIC, N.O.S.
IATA: Flammable liquid, toxic n.o.s. (2-Bromo-1,1-diethoxyethane)
Passenger Aircraft: Not permitted for transport

14.3 Transport hazard class(es)
ADR/RID: 3 (6.1)  IMDG: 3 (6.1)  IATA: 3 (6.1)

14.4 Packaging group
ADR/RID: II  IMDG: II  IATA: II

14.5 Environmental hazards
ADR/RID: no  IMDG Marine pollutant: no  IATA: no

14.6 Special precautions for user
no data available

15. REGULATORY INFORMATION
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
no data available

15.2 Chemical Safety Assessment
no data available

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 resent 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. guidechem shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.