2-Butyne, 1-bromo- (cas 3355-28-0) MSDS

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

1.1 Product identifiers
   Product name : 1-Bromo-2-butene
   Product Number : 427292
   Brand : 
   CAS-No. : 3355-28-0

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]
   Flammable liquids (Category 3)
   Classification according to EU Directives 67/548/EEC or 1999/45/EC
   Flammable.

2.2 Label elements
   Labelling according Regulation (EC) No 1272/2008 [CLP]
   Pictogram

   Signal word Warning
   Hazard statement(s) H226 Flammable liquid and vapour.
   Precautionary statement(s) none
   Supplemental Hazard Statements none

   Hazard symbol(s) none
   R-phrase(s) R10 Flammable.
   S-phrase(s) S16 Keep away from sources of ignition - No smoking.

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances
   Formula : C4H5Br
   Molecular Weight : 132.99 g/mol
   Component Concentration
   1-Bromo-2-butene CAS-No. 3355-28-0 -

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. Consult a physician.
In case of eye contact
Flush eyes with water as a precaution.

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

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
For small (incipient) fires, use media such as “alcohol” foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

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
Avoid breathing vapors, mist or gas. Remove all sources of ignition. 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).

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

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

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.

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

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**

Impervious clothing, Flame retardant antistatic protective clothing. 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 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).

9. **PHYSICAL AND CHEMICAL PROPERTIES**

9.1 Information on basic physical and chemical properties

- **a)** Appearance
  - Form: clear, liquid
  - Colour: yellow

- **b)** Odour
  - no data available

- **c)** Odour Threshold
  - no data available

- **d)** pH
  - no data available

- **e)** Melting point/freezing point
  - no data available

- **f)** Initial boiling point and boiling range
  - 40 - 41 ??C at 27 hPa - lit.

- **g)** Flash point
  - 36 ??C - closed cup

- **h)** Evaporation rate
  - no data available

- **i)** Flammability (solid, gas)
  - no data available

- **j)** Upper/lower flammability or explosive limits
  - no data available

- **k)** Vapour pressure
  - no data available

- **l)** Vapour density
  - no data available

- **m)** Relative density
  - 1,519 g/cm3 at 25 ??C

- **n)** Water solubility
  - no data available

- **o)** Partition coefficient: n-octanol/water
  - no data available

- **p)** Autoignition temperature
  - no data available

- **q)** Decomposition temperature
  - no data available

- **r)** Viscosity
  - no data available

- **s)** Explosive properties
  - no data available

- **t)** Oxidizing properties
  - no data available

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

10.6 Hazardous decomposition products

- Other decomposition products - no data available
11. **TOXICOLOGICAL INFORMATION**

11.1 Information on toxicological effects

**Acute toxicity**
no data available

**Skin corrosion/irritation**
no data available

**Serious eye damage/eye irritation**
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.

**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 harmful if inhaled. May cause respiratory tract irritation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingestion</td>
<td>May be harmful if swallowed.</td>
</tr>
<tr>
<td>Skin</td>
<td>May be harmful if absorbed through skin. May cause skin irritation.</td>
</tr>
<tr>
<td>Eyes</td>
<td>May cause eye irritation.</td>
</tr>
</tbody>
</table>

**Signs and Symptoms of Exposure**

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

**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**
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. 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

14.1 UN number

14.2 UN proper shipping name
ADR/RID: FLAMMABLE LIQUID, N.O.S. (1-Bromo-2-butynel)
IMDG: FLAMMABLE LIQUID, N.O.S. (1-Bromo-2-butynel)
IATA: Flammable liquid, n.o.s. (1-Bromo-2-butynel)

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

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

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 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.