



# SAFETY DATA SHEET

According to 1907/2006/EC, Article 31

## 1-Bromobutane

### Section 1: Identification of the substance/mixture and of the company / undertaking

#### 1.1 Product Identifier

|              |                 |
|--------------|-----------------|
| Product Name | 1-Bromobutane   |
| Other Names  | N-Butyl Bromide |
| CAS No.      | 109-65-9        |
| Index No.    | Not listed      |
| EC No.       | 203-691-9       |
| Product Code | S3201051        |

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

|             |                                                                 |
|-------------|-----------------------------------------------------------------|
| Product Use | Laboratory chemicals, manufacture of substances, Scientific R&D |
|-------------|-----------------------------------------------------------------|

#### 1.3 Details of the supplier of the safety data sheet

|                     |                                                                                    |
|---------------------|------------------------------------------------------------------------------------|
| Company             | Breckland Scientific Supplies Ltd                                                  |
| Address             | Antom Court, Tollgate Drive, Stafford, ST16 3AF                                    |
| Web                 | <a href="http://www.brecklandscientific.co.uk">www.brecklandscientific.co.uk</a>   |
| Telephone           | 01785 227 227                                                                      |
| Fax                 | 01785 227 444                                                                      |
| Email               | <a href="mailto:msds@brecklandscientific.co.uk">msds@brecklandscientific.co.uk</a> |
| Emergency Telephone | 09:00-17:00: 01785 227227 24hrs: 112                                               |

### Section 2: Hazard Identification

#### 2.1 Classification of the substance mixture

|                                       |                          |
|---------------------------------------|--------------------------|
| Classification -<br>(EC) No 1272/2008 | H225 H315 H319 H335 H411 |
|---------------------------------------|--------------------------|

#### 2.2 Label Elements

|                         |                                                                                                                                                                                                                                                                                                                                    |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hazard Pictograms       |                                                                                                                                                                                                                                                                                                                                    |
| Signal Word             | Danger                                                                                                                                                                                                                                                                                                                             |
| Hazard Statement        | H225 Highly flammable liquid and vapour H315 Causes skin irritation H319 Causes serious eye irritation H335 May cause respiratory irritation H411 Toxic to aquatic life with long-lasting effects                                                                                                                                  |
| Precautionary Statement | P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261 Avoid breathing dust/fumes/gas/mist/vapours/spray. P281 Use PPE as required P305+P351+P338 IF IN EYES Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. |

### Section 3: Composition/information on ingredients

#### 3.1 Substances - 67/548/EEC/1999/45/EC

| Chemical Name & Code | CAS No. | Classification | Concentration |
|----------------------|---------|----------------|---------------|
|                      |         |                |               |
|                      |         |                |               |
|                      |         |                |               |
|                      |         |                |               |
|                      |         |                |               |
|                      |         |                |               |

All percentages are by weight.

If above table is empty - no components need to be disclosed according to the applicable regulations

### Section 4: First Aid Measures

#### 4.1 Description of first aid measures

|                     |                                                                                                                                                                                              |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inhalation          | Move the exposed person to fresh air. If breathing stops, provide artificial respiration.                                                                                                    |
| Eye Contact         | Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical attention.                                                                                      |
| Skin Contact        | Remove all contaminated clothes and footwear immediately unless stuck to skin. Wash off immediately with plenty of soap and water. Seek medical attention if irritation or symptoms persist. |
| Ingestion           | DO NOT INDUCE VOMITING. Never give anything by mouth to an unconscious person. Rinse mouth thoroughly. Seek medical attention.                                                               |
| General Information | If you feel unwell, seek medical advice (show the label where possible).                                                                                                                     |

### Section 5: Firefighting Measures

|                                                        |                                                                                                        |
|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| 5.1 Extinguishing media                                | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment |
| 5.2 Special hazards arising from substances or mixture | No data available                                                                                      |
| 5.3 Advice for firefighters                            | Wear suitable respiratory equipment when necessary                                                     |

### Section 6: Accidental Release Measures

|                                                                        |                                                                                                                                                                                       |
|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6.1 Personal precaution, protective equipment and emergency procedures | Wear suitable protective clothing. Avoid breathing vapours, mist or gas. Avoid formation of dust. Ensure adequate ventilation of the working area. Evacuate personnel to a safe area. |
| 6.2 Environmental precautions                                          | If safe to do so, prevent further leakage or spillage. Do not let product enter drains.                                                                                               |
| 6.3 Methods and materials for containments and cleaning up             | Avoid raising dust. Sweep up. Transfer to suitable, labelled containers for disposal.                                                                                                 |

### Section 7: Handling and Storage

|                                   |                                                                                                                                                                                   |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7.1 Precautions for safe handling | Handle in accordance with good industrial hygiene and safety practice. Never carry a bottle by its top. Avoid formation of dust. Ensure adequate ventilation of the working area. |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7.2 Conditions for safe storage including any incompatibilities. | <p>Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a specific flammables area such as a specialist fire-resistant cabinet. Do not store more than 50L in a laboratory. Keep away from heat and sources of ignition. Never store flammable chemicals in the same room as gas cylinders. Keep away from oxidising agents. Keep in properly labeled containers.</p> <p>General principles of chemical storage: Store the minimum stock levels of hazardous chemicals, always disposing of chemicals that are no longer required. Store large breakable containers, particularly of liquids, below shoulder height. Ensure containers and bottle tops are sealed properly to avoid unnecessary leakage of vapours. Ensure hazard labels are clear and never store in direct sunlight.</p> |
|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Section 8: Exposure controls/ personal protection

### 8.1 Control parameters

#### 8.1.1 Exposure limit values

|                                   |                     |                                 |
|-----------------------------------|---------------------|---------------------------------|
| 1-Bromobutane<br>CAS No: 109-65-9 | Long Term (8hr TWA) | Short Term (15 min period STEL) |
| ppm                               | N/A                 | N/A                             |
| mg/m <sup>3</sup>                 | N/A                 | N/A                             |

Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.

Figures are based upon UK EH40 WEL (Workplace Exposure Limits)

### 8.2 Exposure Controls

|                        |                                                                                                                                                                                                                                                |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Engineering Measures   | Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the working day. Ensure adequate ventilation of the working area. Ensure quickly accessible eye-wash stations are available. |
| Eye / face protection  | Wear appropriate well-fitting protective eyeglasses or chemical safety goggles as described by EN166 (EU Standard)                                                                                                                             |
| Skin / hand protection | Wear appropriate protective gloves and clothing to prevent skin exposure. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact.                            |
| Respiratory protection | Use a EN149 (EU Standard) approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.                                                                                                              |

## Section 9: Physical and chemical properties

|                                        |                                                                            |
|----------------------------------------|----------------------------------------------------------------------------|
| State:                                 | Liquid                                                                     |
| Colour:                                | light brown                                                                |
| Melting point:                         | -112                                                                       |
| Boiling point:                         | 100-104                                                                    |
| Relative density: (g/cm <sup>3</sup> ) | 1.276                                                                      |
| Chemical formula:                      | CH <sub>3</sub> . CH <sub>2</sub> . CH <sub>2</sub> . CH <sub>2</sub> . BR |
| Molecular weight: (g/mol)              | 137.0200                                                                   |

## Section 10: Stability & Reactivity

|                                         |                                |
|-----------------------------------------|--------------------------------|
| 10.1 Reactivity                         | No data available              |
| 10.2 Chemical stability                 | Stable under normal conditions |
| 10.3 Possibility of hazardous reactions | No data available              |

|                                       |                   |
|---------------------------------------|-------------------|
| 10.4 Conditions to avoid              | No data available |
| 10.5 Incompatible materials           | No data available |
| 10.6 Hazardous decomposition products | No data available |

## Section 11: Toxicological information

|                                                   |                             |
|---------------------------------------------------|-----------------------------|
| <b>11.1 Information on toxicological effects:</b> |                             |
| Acute toxicity                                    | No data available           |
| Germ cell mutagenicity                            | No data available           |
| Carcinogenicity                                   | No data available           |
| Reproductive toxicity                             | No data available           |
| <b>11.4 Toxicological information</b>             |                             |
| 1-Bromobutane                                     | Oral Rat LD50 (mg/kg): 2761 |

## Section 12: Ecological information

|                                                                         |                                                                  |
|-------------------------------------------------------------------------|------------------------------------------------------------------|
| <b>12.1 Toxicity:</b> Toxicity to daphnia and other aquatic vertebrates |                                                                  |
| 1-Bromobutane                                                           | EC50 Daphnia magna (Water flea) (mg/l - 48hr): No data available |

## Section 13: Disposal considerations

|                     |                                                                                                                                      |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| General information | Dispose of in compliance with all local and national regulations.                                                                    |
| Disposal methods    | Contact a licensed waste disposal company. Dispose of this material and its container to hazardous or special waste collection point |

## Section 14: Transport information

|                                  |                           |            |
|----------------------------------|---------------------------|------------|
| 14.1 UN Number                   |                           |            |
| ADR/RID: 1126                    | IMDG: 1126                | IATA: 1126 |
| 14.2 UN Proper shipping name:    | 1-Bromobutane             |            |
| 14.3 Transport hazard class(es): | 3                         |            |
| 14.4 Packing group:              | II                        |            |
|                                  |                           |            |
| 14.5 Environmental Hazards       |                           |            |
| ADR/RID: Yes                     | IMDG Marine Pollutant: No | IATA: Yes  |

## Section 15: Regulatory information

|                                                                                                            |                                                      |
|------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| <b>15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture</b> |                                                      |
| Regulations                                                                                                | Labelling according to Regulation (EC) No 1272/2008. |

## Section 16: Other information

| 16.1 Other information: Text of hazard statements in Section 3 |  |
|----------------------------------------------------------------|--|
|                                                                |  |
|                                                                |  |
|                                                                |  |
|                                                                |  |
|                                                                |  |
|                                                                |  |

If above table is empty - no components need to be disclosed according to the applicable regulations

| 16.2 Further information |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Further information      | <p>The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials. Breckland Scientific Supplies Limited will not be held liable for any damage or injury caused by this product and does not obviate the requirement for end users to carry out their own workplace and specific use risk assessment.</p> |