

## SAFETY DATA SHEET

### 1-BROMO-3-CHLOROPROPANE

#### SECTION 1: Identification of the substance/mixture and of the company/undertaking Trade name:

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| <b>1.1 Product identifier:</b> |  |
| <b>CAS Number:-</b>            | 109-70-6   |
| <b>EC number:</b>              | 203-697-1  |
| <b>1.2 SYNONYMS:</b>           | <ul style="list-style-type: none"><li>• 3-Chloro-1-bromopropane</li><li>• 3-Chloro-1-bromo-propane</li><li>• 1-Bromo-3-chloro-propene</li><li>• Trimethylene bromochloride</li></ul> |

#### SECTION 2: Hazards identification:

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| <b>2.1 Classification of the substance or mixture:</b> | Classification according to Regulation (EC) No 1272/2008 The substance is classified according to the CLP regulation.   |
| <b>2.2 Label elements:</b>                             | Labelling according to Regulation (EC) No 1272/2008<br>Acute toxicity, oral (Category 4)<br>Acute toxicity, inhalation (Category 3)<br>Germ cell mutagenicity (Category 2)<br>Specific target organ toxicity - single exposure (respiratory system) (Category 3)<br>Long-term (chronic) aquatic hazard (Category 3) |
| <b>Hazard Pictograms:</b>                              |   |
| <b>Signal Word:</b>                                    | Danger  |
| <b>Hazard statements:</b>                              | <b>H302:</b> Harmful if swallowed.<br><b>H331:</b> Toxic if inhaled.<br><b>H335:</b> May cause respiratory irritation.<br><b>H341:</b> Suspected of causing genetic defects.  |
|  | <b>H412:</b> Harmful to aquatic life with long lasting effects.   |
| <b>Precautionary Statements:</b>                       | <b>P202:</b> Do not handle until all safety precautions have been read and understood.  |

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|   | <p><b>P261:</b> Avoid breathing mist or vapors.</p> <p><b>P273:</b> Avoid release to the environment.</p> <p><b>P301 + P312:</b> IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.</p> <p><b>P304 + P340 + P311:</b> IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.</p> <p><b>P308 + P313:</b> IF exposed or concerned: Get medical advice/ attention.</p> <p><b>P405:</b> Store locked up.</p> <p><b>P501:</b> Dispose of contents/ container to an approved waste disposal plant.</p> |
| <p><b>2.3 Other hazards:</b></p>                      |  |
| <p><b>Inhalation:</b></p>                             | <p>can cause respiratory irritation, coughing, and potential damage to the respiratory system with prolonged exposure.</p>   |
| <p><b>Ingestion:</b></p>                              | <p>can lead to nausea, vomiting, abdominal pain, and possible damage to the digestive system.</p>  |
| <p><b>Skin Contact:</b></p>                           | <p>can cause irritation, redness, and potentially dermatitis or chemical burns with prolonged exposure.</p>  |
| <p><b>Eye contact:</b></p>                            | <p>can cause severe irritation, redness, watering, and potential damage to the cornea.</p>   |
| <p><b>Chronic Exposure:</b></p>                       | <p>may lead to respiratory problems, liver or kidney damage, and an increased risk of central nervous system effects, such as headaches or dizziness.</p>  |
| <p><b>Aggravation of pre-existing conditions:</b></p> | <p>Aggravation of pre-existing conditions such as respiratory disorders, skin sensitivities, or liver and kidney diseases may occur with exposure to 1-bromo-3-chloropropane.</p>  |

### SECTION 3: Composition/information on ingredients

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| <b>3.1 Chemical characterisation:</b> | Substances                                    |
| <b>CAS No:</b>                        | Description: 109-70-6 1-BROMO-3-CHLOROPROPANE |
| <b>Identification number(s):</b>      | EC number: 203-697-1                          |

### SECTION 4: First aid measures

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| <b>4.1 Description of first aid measures</b>   |  |
| <b>General information:</b>  |  |
| <b>After inhalation:</b>   | If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.  |
| <b>After skin contact:</b>   | Remove contaminated clothing immediately. Wash with soap and water. Consult a physician.   |
| <b>After eye contact:</b>  | Immediately flush eyes with plenty of water for at least 15 minutes. consult a physician.  |
| <b>After swallowing:</b>   | Rinse mouth with water. Immediately after ingestion. If conscious, make victim drink two glasses at most immediately. Never give anything by mouth to an unconscious person. Do not induce vomiting. Consult a physician.              |
| <b>4.2 Most important symptoms and effects, both acute and delayed:</b>                | The most important symptoms and effects include acute respiratory irritation, skin and eye damage, and gastrointestinal distress, with potential delayed effects such as liver, kidney, or neurological damage from chronic exposure.. |
| <b>4.3 Indication of any immediate medical attention and special treatment needed:</b> | Treat symptomatically.   |

## SECTION 5: Firefighting measures

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| <b>5.1 Extinguishing media:</b>                                   | Carbon dioxide. Water spray.<br>Alcohol-resistant foam.   |
| <b>5.2 Special hazards arising from the substance or mixture:</b> | Carbon oxides, hydrogen chloride gas, hydrogen bromide gas.   |
| <b>5.3 Advice for firefighters:</b>                               | Wear fully protective suit, safety glasses and respiratory device. Cool tanks/drums with water spray/remove them into safety. |
| <b>5.4 further information:</b>                                   | no data available   |

## SECTION 6: Accidental release measures

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| <b>6.1 Personal precautions, protective equipment and emergency procedures:</b> | 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. Avoid dust accumulation. Seek medical attention.       |
| <b>6.2 Environmental precautions:</b>   | Do not enter this chemical into drains.  |
| <b>6.3 Methods and material for containment and cleaning up:</b>                | Take up spill into absorbent material, e.g.: sand, earth, vermiculite, powdered limestone. Scoop absorbed substance into closing containers. Spill must not return in its original container. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling. |

## SECTION 7: Handling and storage

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| <b>7.1 Precautions for safe handling:</b> | For use in are with adequate ventilation.<br>Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material<br>Do not use in confined spaces.<br>Electrostatic discharge protection. |
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|  | Minimize dust generation and accumulation. Avoid ingestion and inhalation.   |
| <b>7.2 Conditions for safe storage, including any incompatibilities:</b> | Store in original containers.<br>Keep containers securely sealed<br>Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Store in a dry and dark area. Do not handle in flammable atmospheres. |
| <b>Requirements to be met by storerooms and receptacles:</b>             | 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.  |
| <b>7.3 Specific end uses:</b>  | no data available  |

## SECTION 8: Exposure controls/personal protection

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| <b>8.1 Control parameters</b>                                       |  |
| <b>Additional information about design of technical facilities:</b> | A system of local and general exhaust is recommended.  |
| <b>8.2 Exposure controls</b>  |  |
| <b>Appropriate engineering controls</b>                             | Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. |
| <b>Personal protective equipment:</b>                               | Dust respirator, protective masks, wearing anti chemical gloves, rubber gloves, etc.                                       |
| <b>General protective and hygienic measures:</b>                    | Eyes, body and hand protection, maintain indoor air unobstructed. Wear protective equipment.                               |
|   | <b>Respiratory protection:</b> Required.   |

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| <b>Protection of hands:</b> | 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. Wash and dry hands. |
|                             | <b>Eye protection:</b> Required  |
| <b>Protection of Body:</b>  | Complete suit protecting against chemicals, Flame retardant antistatic protective clothing.  |

## SECTION 9: Physical and chemical properties

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| <b>9.1 Information on basic physical and chemical properties</b> |                            |
| <b>General Information</b>                                       |                            |
| <b>Appearance: Form:</b>   | Liquid                     |
| <b>Colour:</b>   | Colourless to light yellow |
| <b>Odour:</b>  | Mild halogenated odor      |
| <b>pH-value:</b>   | No data available          |
| <b>Melting point/Melting range:</b>                              | -61°C                      |
| <b>Boiling point/Boiling range:</b>                              | 156°C                      |
| <b>Flammability (solid, gaseous):</b>                            | Flammable                  |
| <b>Ignition temperature:</b>                                     | 295°C                      |
| <b>Decomposition temperature:</b>                                | Not determined             |
| <b>Self-igniting:</b>  | None                       |
| <b>Flash point:</b>  | 52°C                       |
| <b>Danger of explosion:</b>                                      | None                       |
| <b>Explosion limits: Lower:</b>                                  | 3.5%                       |
| <b>Explosion limits: Upper:</b>                                  | 11.5%                      |
| <b>Vapour pressure:</b>  | 1.9 mmHg at 20°C           |
| <b>Density at 20 °C:</b>   | 1.41 g/cm <sup>3</sup>     |
| <b>Relative density:</b>   | Not determined             |
| <b>Vapour density:</b>   | 4.9                        |
| <b>Evaporation rate:</b>   | No data available          |
| <b>Solubility in / Miscibility with-<br/>water at 20 °C:</b>     | slightly Soluble           |
| <b>Partition coefficient:(n-<br/>octanol/water)</b>              | 2.18                       |
| <b>Viscosity:</b>  | Not determined             |

## SECTION 10: Stability and reactivity

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| <b>10.1 Reactivity</b>                         | Reactive with strong bases, acids and nucleophiles.   |
| <b>10.2 Chemical stability</b>                 | This chemical is stable under storage conditions.   |
| <b>10.3 Possibility of hazardous reactions</b> | Hazardous reactions may occur when react with strong reducing agents                        |
| <b>10.4 Conditions to avoid</b>                | High temperatures, Heat, flames and sparks, strong reducing agents, acids and strong bases. |
| <b>10.5 Incompatible materials</b>             | Strong oxidizing agents, strong acids and bases,  |
| <b>10.6 Hazardous decomposition products</b>   | Hydrogen chloride, hydrogen bromide, carbon monoxide.                                       |

## SECTION 11: Toxicological information

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| <b>11.1 Information on toxicological effects</b>           |   |
| <b>Acute Toxicity:</b>                                     | <b>LD50</b> (Oral, Rat): 1.100 mg/kg<br><b>LD50</b> (Dermal, Rabbit): 2.000 mg/kg<br><b>LC50</b> (Inhalation Rat): 6.5 mg/l (4hr) |
| <b>Skin corrosion/Irritation:</b>                          | No data available   |
| <b>Serious eye damage/irritation:</b>                      | No data available   |
| <b>Respiratory damage/irritation:</b>                      | No data available   |
| <b>Ingestion:</b>  | No data available   |
| <b>Germ cell mutagenicity:</b>                             | Suspected of causing genetic defects.   |
| <b>Carcinogenicity:</b>                                    | No data available   |
| <b>Reproductive toxicity:</b>                              | No data available   |
| <b>Specific target organ toxicity - single exposure:</b>   | May cause respiratory irritation  |
| <b>Specific target organ toxicity - repeated exposure:</b> | No data available   |
| <b>Aspiration hazard:</b>                                  | No data available   |
| <b>Signs and Symptoms of Exposure:</b>                     | Refer section 2.3   |
| <b>11.2 Additional toxicological information</b>           |   |
| <b>Biodegradability:</b>                                   | Low Biodegradable   |

## SECTION 12: Ecological information

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| <b>12.1 Toxicity<br/>Aquatic toxicity:</b>     | LC50(fish): no data available<br>EC50(daphnia): 55.9 mg/l (48 hr)<br>ErC50(algae): 847 mg/l (72hr) |
| <b>12.2 Persistence and<br/>degradability:</b> | Low Biodegradable  |
| <b>12.3 Bioaccumulative potential:</b>         | Moderate bioaccumulative   |
| <b>12.4 Mobility in soil:</b>                  | Moderate mobility  |
| <b>12.5 Other adverse effects:</b>             | No data available  |

## SECTION 13: Disposal considerations

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| <b>13.1 Waste treatment methods</b>            |  |
| <b>Uncleaned packaging<br/>Recommendation:</b> | dispose of in accordance with local<br>hazardous waste regulations |
| <b>Recommended cleansing agents:</b>           | Soap and water, sand, isopropyl<br>alcohol, neutralizing agents.   |

## SECTION 14: Transport information

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| <b>14.1 UN-Number · ADR, ADN,<br/>IMDG, IATA:</b>                   | 2688                    |
| <b>14.2 UN proper shipping name ·<br/>ADR, ADN, IMDG, IATA:</b>     | 1-BROMO-3-CHLOROPROPANE |
| <b>14.3 Transport hazard class(es) ·<br/>ADR, ADN, IMDG, IATA :</b> | 6.1                     |
| <b>14.4 Packing group · ADR, IMDG,<br/>IATA:</b>                    | 3                       |
| <b>14.5 Environmental hazards:</b>                                  | None                    |
| <b>14.6 Special precautions for user:</b>                           | Handle responsibly.     |

## SECTION 15: Regulatory information

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| <b>15.1 Safety, health and<br/>environmental<br/>regulations/legislation specific<br/>for the substance or mixture<br/>Directive 2012/18/EU</b> | Directive 2012/18/EU, under that<br>this substance is classified in listed<br>substance as toxic liquid. |
| <b>Named dangerous substances:</b>  | This substance is not listed in the<br>annex 1 to the directive.   |
| <b>15.2 Chemical safety assessment:</b>   | Chemical assessment has not<br>been carried out.   |

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## **SECTION 16: Other information**

The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

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