


SAFETY DATA SHEET

GUANIDINE HYDROCHLORIDE

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

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| 1.1 Product identifier: | |
| CAS Number: | 50-01-1 |
| EC number: | 200-047-8 |
| 1.2 SYNONYMS: | <ul style="list-style-type: none"> Guanidinium chloride 1-amino-1-guanidinoformamide hydrochloride 1-(aminomethyl)guanidine hydrochloride GdnHCl |

SECTION 2: Hazards identification:

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| 2.1 Classification of the substance or mixture: | Classification according to Regulation (EC) No 1272/2008 The substance is classified according to the CLP regulation. |
| 2.2 Label elements: | Labelling according to Regulation (EC) No 1272/2008 Acute toxicity, inhalation (Category 4) Acute toxicity, oral (Category 4) Skin irritation (Category 2) Eye irritation (Category 2) |
| Hazard Pictograms: |  |
| Signal Word: | Warning |
| Hazard statements: | H302 + H332: Harmful if swallowed or if inhaled H315: Causes skin irritation. H319: Causes serious eye irritation. |
| Precautionary Statements: | P261: Avoid breathing dust. P264: Wash skin thoroughly after handling. |

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| | <p>P301 + P312: IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.</p> <p>P302 + P352: IF ON SKIN: Wash with plenty of water.</p> <p>P304 + P340 + P312: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.</p> <p>P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P405: Store locked up.</p> <p>P501: Dispose of contents/ container to an approved waste disposal plant.</p> |
| 2.3 Other hazards: | |
| Inhalation: | can cause respiratory irritation, coughing, and difficulty breathing, and may lead to more severe health effects with prolonged exposure. |
| Ingestion: | can cause nausea, vomiting, abdominal pain, and may lead to more serious effects such as gastrointestinal irritation or damage. |
| Skin Contact: | may cause irritation, redness, and dermatitis, and prolonged exposure could lead to more severe skin damage. |
| Eye contact: | can cause irritation, redness, pain, and potential damage to the eye tissue. |
| Chronic Exposure: | may lead to respiratory issues, skin sensitization, and potential damage to internal organs, particularly with prolonged or repeated contact.. |

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| Aggravation of pre-existing conditions: | may aggravate pre-existing conditions such as respiratory disorders, skin conditions, or gastrointestinal issues, potentially worsening symptoms in individuals with sensitivities or underlying health problems. |
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SECTION 3: Composition/information on ingredients

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| 3.1 Chemical characterisation: | Substances |
| CAS No: | Description: 50-01-1 GUANIDINE HYDROCHLORIDE |
| Identification number(s): | EC number: 200-047-8 |

SECTION 4: First aid measures

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| 4.1 Description of first aid measures | |
| General information: | |
| After inhalation: | If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician. |
| After skin contact: | Remove contaminated clothing. Wash with soap and water. Consult a physician. |
| After eye contact: | Immediately flush eyes with plenty of water for at least 15 minutes. consult a physician. |
| After swallowing: | 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. |

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| 4.2 Most important symptoms and effects, both acute and delayed: | Acute symptoms include respiratory irritation, skin and eye irritation, nausea, and vomiting, while delayed effects may involve prolonged skin damage, respiratory issues, and potential organ toxicity with chronic exposure. |
| 4.3 Indication of any immediate medical attention and special treatment needed: | Treat symptomatically. |

SECTION 5: Firefighting measures

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

SECTION 6: Accidental release measures

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| 6.1 Personal precautions, protective equipment and emergency procedures: | 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. |
| 6.2 Environmental precautions: | Do not enter this chemical into drains. |

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| 6.3 Methods and material for containment and cleaning up: | 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. |
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SECTION 7: Handling and storage

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| 7.1 Precautions for safe handling: | For use in are with adequate ventilation. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material Do not use in confined spaces. Electrostatic discharge protection. Minimize dust generation and accumulation. Avoid ingestion and inhalation. |
| 7.2 Conditions for safe storage, including any incompatibilities: | Store in original containers. Keep containers securely sealed 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. |
| Requirements to be met by storerooms and receptacles: | 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 |

SECTION 8: Exposure controls/personal protection

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| 8.1 Control parameters | |
| Additional information about design of technical facilities: | A system of local and general exhaust is recommended. |
| 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: | Dust respirator, protective masks, wearing anti chemical gloves, rubber gloves, etc. |
| General protective and hygienic measures: | Eyes, body and hand protection, maintain indoor air unobstructed. Wear protective equipment. |
| | Respiratory protection: Required. |
| Protection of hands: | 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. |
| | Eye protection: Required |
| Protection of Body: | Complete suit protecting against chemicals, Flame retardant antistatic protective clothing. |

SECTION 9: Physical and chemical properties

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| 9.1 Information on basic physical and chemical properties General Information | |
| Appearance: Form: | Crystalline solid |
| Colour: | White |
| Odour: | Odourless |
| pH-value: | 5 |

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| Melting point/Melting range: | 180°C |
| Boiling point/Boiling range: | Not determined |
| Flammability (solid, gaseous): | Non- flammable |
| Ignition temperature: | No data available |
| Decomposition temperature: | No data available |
| Self-igniting: | None |
| Flash point: | Not applicable |
| Danger of explosion: | None |
| Explosion limits: Lower: | Not applicable |
| Explosion limits: Upper: | Not applicable |
| Vapour pressure: | No data available |
| Density at 20 °C: | 1.36 g/cm ³ |
| Relative density: | 1.36 |
| Vapour density: | No data available |
| Evaporation rate: | Not applicable |
| Solubility in / Miscibility with- water at 20 °C: | Completely Soluble |
| Partition coefficient:(n- octanol/water) | No data available |
| Viscosity: | No data available |

SECTION 10: Stability and reactivity

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| 10.1 Reactivity | Stable at room temperature. |
| 10.2 Chemical stability | This chemical is stable under storage conditions. |
| 10.3 Possibility of hazardous reactions | No hazardous reaction known |
| 10.4 Conditions to avoid | High temperatures, open flames. |
| 10.5 Incompatible materials | Strong oxidizing agents, strong acids and bases. |
| 10.6 Hazardous decomposition products | Nitrogen oxides |

SECTION 11: Toxicological information

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| 11.1 Information on toxicological effects | |
| Acute Toxicity: | LD50 (Oral, Rat): 773.6 mg/kg LD50 (Dermal, Rabbit): 2000 mg/kg LC50 (Inhalation Rat): 3.181 mg/l (4hr) |
| Skin corrosion/Irritation: | Causes skin irritation |
| Serious eye damage/irritation: | Causes serious eye irritation. |
| Respiratory damage/irritation: | No data available |
| Ingestion: | No data available |
| Germ cell mutagenicity: | No data available |
| Carcinogenicity: | No data available |
| 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 |
| Signs and Symptoms of Exposure: | Refer section 2.3 |
| 11.2 Additional toxicological information | |
| Biodegradability: | Low Biodegradable |

SECTION 12: Ecological information

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| 12.1 Toxicity Aquatic toxicity: | LC50(fish): no data available EC50(daphnia): 70.2 mg/l (48 hr) ErC50(algae): 33.5 mg/l (96 hr) |
| 12.2 Persistence and degradability: | Low Biodegradable |
| 12.3 Bioaccumulative potential: | Not bioaccumulative |
| 12.4 Mobility in soil: | High mobility |
| 12.5 Other adverse effects: | No data available |

SECTION 13: Disposal considerations

| 13.1 Waste treatment methods | |
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| Uncleaned packaging Recommendation: | dispose of in accordance with local hazardous waste regulations |
| Recommended cleansing agents: | Water, dilute acetic acid, Sodium bicarbonate |

SECTION 14: Transport information

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| 14.1 UN-Number · ADR, ADN, IMDG, IATA: | 2811 |
| 14.2 UN proper shipping name · ADR, ADN, IMDG, IATA: | Toxic solid, n.o.s |
| 14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA : | 6.1 |
| 14.4 Packing group · ADR, IMDG, IATA: | 3 |
| 14.5 Environmental hazards: | None |
| 14.6 Special precautions for user: | Handle responsibly. |

SECTION 15: Regulatory information

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

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

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