L-LYSINE MONOHYDROCHLORIDE

SECTION 1: CHEMICAL PRODUCT IDENTIFICATION

Product Name: L-Lysine monohydrochloride
Product Code: CM 23,511
CAS#: 657-27-2
Synonym: Not available
Chemical Name: Not available
Chemical Formula: $C_6H_{14}N_2O_2.HCl$
Formula weight : 182.65

SECTION 2: COMPOSITION ANDINFORMATION ON INGREDIENTS

Composition:
Name: L-Lysine monohydrochloride
Toxicological Data on Ingredients:
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
This substance is not classified as dangerous according to Directive 67/548/EEC.

SECTION 3: HAZARDS IDENTIFICATION

Classification of the substance or mixture
Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.
Potential Acute Health Effects: Not available.
Potential Chronic Health Effects: Not available.
Carcinogenic Effects: Not available.
Mutagenic Effects: Not available.
Teratogenic Effects: Not available.
Developmental Toxicity: Not Available

SECTION 4: FIRSTAID MEASURES

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: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Most important symptoms and effects, both acute and delay: No data available
Indication of any immediate medical attention and special treatment needed: No data available

SECTION 5: FIRE AND EXPLOSION DATA

Extinguishing media
Suitable extinguishing media Water Foam Carbon dioxide (CO2) Dry powder.
Special hazards arising from the substance or mixture
Carbon oxides, Nitrogen oxides (NOx), Hydrogen chloride gas, Combustible.
Development of hazardous combustion gases or vapours possible in the event of fire.
Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Avoid breathing dust.
Environmental precautions Do not let product enter drains.
Methods and materials for containment and cleaning up Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.
Conditions for safe storage, including any incompatibilities
Tightly closed. Dry.
Storage Class:
Storage class (TRGS 510): 11: Combustible Solids.
Specific end use(s) A part from the uses:
No other specific uses are stipulated

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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 Safety glasses with side-shields conforming to EN166 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.
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 For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator.For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure Do not let product enter drains.

SECTION 9: PHYSICAL ANDCHEMICAL PROPERTIES

Appearance Form	:Powder
Colour	:White
Odour	:Not available
Odour Threshold	:Not available
pH	:Not available
Melting point/freezingpoint	:263°C
Initial boiling pointandboilingrange	:Not available
Flash point	:Not available
Evapouration rate	:Not available
Flammability (solid,gas)	:Not available
Upper/lower flammabilityorexplosivelimits	:Not available

Vapour pressure	:Not available
Vapour density	:Not available
Relative density	:Not available
Water solubility	:Not available
Partition coefficient	:Not available
Auto-ignition temperature	:Not available

SECTION 10: STABILITY AND REACTIVITY DATA

Reactivity no data available
Chemical stability
The product is chemically stable under standard ambient conditions (room temperature).
Possibility of hazardous reactions
Violent reactions possible with:
high-oxygen materials
Strong oxidizing agents
Conditions to avoid :
no data available
Incompatible materials
Strong oxidizing agents, Metals
Hazardous decomposition products Other decomposition products - In the event of fire

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects
LD50 Oral - Rat - male and female - 10.600 mg/kg
LC50 Inhalation - Rat - male and female - 4 h - > 5,51 mg/l
Skin corrosion/irritation no data available
Serious eye damage/eye irritation no data available
Respiratory or skin sensitization 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.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity:

Toxicity to fish	semi-static test LC50 - Oryzias latipes - > 103 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	semi-static test EC50 - Daphnia magna (Water flea) - > 106 mg/l -48 h
Toxicity to algae	ErC50 - Pseudokirchneriella subcapitata (green algae) - > 100 mg/l- 72 h
Toxicity to bacteria	static test EC50 - activated sludge - > 100 mg/l - 3 h

Persistence and degradability:
Biodegradability aerobic - Exposure time 28 d
Result: 83 % - Readily biodegradable.
Bioaccumulative potential no data available
Mobility in soil no data available
Results of PBT and vPvB assessment PBT/vPvB assessment not available
Other adverse affects no data available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods Product Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated packaging Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

UN number:
ADR/RID: IMDG: IATA:
UN proper shipping name
ADR/RID: Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods
Transport hazard class(es):
ADR/RID: IMDG: IATA:
Packaging group:
ADR/RID: IMDG: IATA:
Environmental hazards:
ADR/RID: No IMDG Marinepollutant: No IATA: No

SECTION 15: OTHER REGULATORY INFORMATION

Regulatory information This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

SECTION 16: OTHER INFORMATION

References: Full text of H AND R-Statements.
Not Applicable
Other Special Considerations: Not available

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