BENZETHONIUM CHLORIDE (HYAMINE 1622)

SECTION 1: PRODUCT IDENTIFICATION

Product Name: BENZETHONIUM CHLORIDE (HYAMINE 1622)
Product Code: 4031
CAS#: 121-54-0
Chemical Formula: $C_{27}H_{42}ClNO_2$
Molecular Formula: 448.08

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Composition:
Name: BENZETHONIUM CHLORIDE (HYAMINE 1622)
Chemical Formula: $C_{27}H_{42}ClNO_2$
Molecular Formula: 448.08

SECTION 3: HAZARDS IDENTIFICATION

Classification of the substance or mixture: Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
Acute toxicity, (Category 3) H301: Toxic if swallowed.
Skin corrosion, (Sub-category 1B) H314: Causes severe skin burns and eye damage.
Serious eye damage, (Category 1) H318: Causes serious eye damage.
Short-term (acute) aquatic hazard, (Category 1) H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, (Category 1) H410: Very toxic to aquatic life with long lasting effects
Other hazards – none

SECTION 4: FIRST AID MEASURES

Description of first-aid measures
General advice First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.
If inhaled After inhalation: fresh air. Call in physician
In case of skin contact In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.
In case of eye contact After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.
If swallowed If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralise.

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing media
Suitable extinguishing media Water Foam Carbon dioxide (CO2) Dry powder
Unsuitable extinguishing media For this substance/mixture no limitations of extinguishing agents are given.
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 Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
Environmental precautions Do not let product enter drains.
Methods and materials for containment and cleaning up Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts

SECTION 7: HANDLING AND STORAGE

Precautions: Do not ingest. Do not breathe dust. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, acids.
Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Hygroscopic**.**

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 protective clothing
Respiratory protection Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state and appearance Form	: White coloured powder.
Odour	: Not available
Taste	: Not available
Molecular Weight	: Not available
Colour	: Not available
pH	: Not available
Boiling Point	: Not available
Melting Point	: Not available
Critical Temperature	: Not available
Specific Density	: Not Available
Volatility	: Not Available
Odor Threshold	: Not Available
Water/Oil Dist. Coeff.	: Not Available
Ionicity (in Water)	: Not Available

Dispersion Properties : Not Available
Solubility : Not available

SECTION 10: STABILITY AND REACTIVITY DATA

Reactivity The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.
Chemical stability The product is chemically stable under standard ambient conditions (room temperature)
Possibility of hazardous reactions Violent reactions possible with: Strong oxidizing agents 10.4
Conditions to avoid no information available
Incompatible materials No data available

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity
LD50 Oral - Rat - male and female - 295 mg/kg (US-EPA) Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. Acute toxicity estimate Oral - 295 mg/kg (Calculation method) Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract Inhalation: Irritating to respiratory system. Dermal: No data available
Skin corrosion/irritation Skin - Rabbit Result: Causes burns. - 4 h
Serious eye damage/eye irritation Eyes - Eyes - Rabbit Result: Causes serious eye damage. - 24 h (OECD Test Guideline 405) Remarks: Causes serious eye damage.
Respiratory or skin sensitization Maximization Test - Guinea pig Result: negative (OECD Test Guideline 406)
Carcinogenicity No data available
Reproductive toxicity No data available
Specific target organ toxicity - single exposure Inhalation - May cause respiratory irritation.
Specific target organ toxicity - repeated exposure No data available
Aspiration hazard No data available

SECTION 12: ECOLOGICAL INFORMATION

Toxicity
Toxicity to fish semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - 1,15 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - 0,22 mg/l - 48 h (OECD Test Guideline 202) Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 0,3 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria EC50 - activated sludge - 35,7 mg/l - 3 h (OECD Test Guideline 209)
Persistence and degradability The methods for determining the biological degradability are not applicable to inorganic substances.
Bioaccumulative potential No data available
Mobility in soil No data available
Results of PBT and vPvB assessment This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal: Waste must be disposed of in accordance with federal, state and local environmental control regulations.

SECTION 14: TRANSPORT INFORMATION

UN number:
ADR/RID: 2923 **IMDG:** 2923 **IATA:** 2923
UN proper shipping name
ADR/RID: Corrosive solid, toxic, n.o.s. (benzethonium chloride)
IMDG: Corrosive solid, toxic, n.o.s. (benzethonium chloride)
IATA: Corrosive solid, toxic, n.o.s. (benzethonium chloride)
Transport hazard class(es):
ADR/RID: 8 (6.1) **IMDG:** 8 (6.1) **IATA:** 8 (6.1)
Packaging group:
ADR/RID: II **IMDG:** II **IATA:** II
Environmental hazards:
ADR/RID: yes **IMDG Marine pollutant:** yes **IATA:** No

SECTION 15: OTHER REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture: Not available
Chemical Safety Assessment: Not available.

SECTION 16: OTHER INFORMATION

References:
H301 Toxic if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
Other Special Considerations: Not available

The information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. The information is offered solely for user's obligation to investigate and determine the suitability of the information for their particular purpose.