Product Name	Hydroxylammonium chlo
Part Number	RXSOL-19-3212-050

Company Details:....

RX MARINE INTERNATIONAL
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Substances

Synonyms Hydroxylammonium chloride Formula H2NOH.HCl Molecular weight 69,49 g/mol CAS-No. 5470-11-1 EC-No. 226-798-2 Index-No. 612-123-00-2

Component Classification Concentration Hydroxylammonium chloride

CAS-No. 5470-11-1 EC-No 226-798-2 Index-No. 612-123-00-2 Met. Corr. 1; Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2; Skin Sens. 1; Carc. 2; STOT RE 2; Aquatic Acute 1; Aquatic Chronic 2; H290, H302, H312, H315, H319, H317, H351, H373, H400, H411 M-Factor - Aquatic Acute:1

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification of the substance or mixture

Corrosive to Metals, (Category 1) H290: May be corrosive to metals Acute toxicity, (Category 4) H302: Harmful if swallowed. Acute toxicity, (Category 4) H312: Harmful in contact with skin. Skin irritation, (Category 2) H315: Causes skin irritation. Eye irritation, (Category 2) H319: Causes serious eye irritation. Skin sensitization, (Category 1) H317: May cause an allergic skin reaction. Carcinogenicity, (Category 2) H351: Suspected of causing cancer. Specific target organ toxicity - repeated exposure, (Category 2), spleen H373: May cause damage to organs through prolonged or repeated exposure if swallowed. Short-term (acute) aquatic hazard, (Category 1) H400: Very toxic to aquatic life. Long-term (chronic) aquatic hazard, (Category 2) H411: Toxic to aquatic life with long lasting effects.

Label elements

Signal Word Warning

Hazard Statements

H290 May be corrosive to metals. H302 + H312 Harmful if swallowed or in contact with skin. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H351 Suspected of causing cancer. H373 May cause damage to organs (spleen) through prolonged or repeated exposure if swallowed. H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements

P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301 + P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. P302 + P352 + P312 IF ON SKIN: Wash with plenty of water.Call a POISON CENTER/ doctor if you feel unwell. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P313 IF exposed or concerned: Get medical advice/ attention. Supplemental Hazard Statements None Reduced Labeling (Signal Word Warning Hazard statement(s) H317 May cause an allergic skin reaction. H351 Suspected of causing cancer. Precautionary statement(s) P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P308 + P313 IF exposed or concerned: Get medical advice/ attention. Supplemental Hazard Statements None Other hazards 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. Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Description of first aid measures

General advice 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. Consult a physician. In case of eye contact After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses. If swallowed After swallowing: immediately make victim drink water (two glasses at most). Consult a physician. Most important symptoms and effects, both acute and delayed The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11 Indication of any immediate medical attention and special treatment needed No data available

Extinguishing media

Suitable extinguishing media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Unsuitable extinguishing media For this substance/mixture no limitations of extinguishing agents are given. Special hazards arising from the substance or mixture Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or

if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Nitrogen oxides (NOx) Hydrogen chloride gas Ambient fire may liberate hazardous vapours. Container explosion may occur under fire conditions. Not combustible. Risk of dust explosion. In the event of decomposition: danger of explosion! Avoid shock and friction. 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 May explode when heated.Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system. spray to keep fire-exposed containers cool.Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

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. For personal protection see section 8. 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 dry. Dispose of properly. Clean up affected area. Avoid generation of dusts. Reference to other sections For disposal see section 13.

Precautions for safe handling

Advice on safe handling Work under hood. Do not inhale substance/mixture. Hygiene measures Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities Storage conditions No metal containers. Tightly closed and away from sources of ignition and heat. Observe national regulations. Air and moisture sensitive. Storage class Storage class (TRGS 510): 4.1A: Other explosive hazardous materials Specific end use(s) Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

Control parameters

Ingredients with workplace control parameters

Exposure controls

Personal protective equipment

Eye/face protection Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles Skin protection This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Full contact Material: Chloroprene Minimum layer thickness: 0,65 mm Break through time: 480 min Material tested:KCL 720 Camapren® This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Splash contact Material: Latex gloves Minimum layer thickness: 0,6 mm Break through time: 60 min

Material tested:Lapren® (KCL 706 / Aldrich Z677558, Size M).

Body Protection Protective clothing Respiratory protection Required when dusts are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system. Recommended Filter type: Filter type P3 The entre peneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented. Control of environmental exposure Do not let product enter drains.

Physical state Crystalline powderChunks Colour White Odor Slight chlorine Melting point/freezing point Melting point/ range: 155 - 157 °C - dec. Initial boiling point and boiling range No data available Flammability (solid, gas) The product is not flammable. - Flammability (solids) Upper/lower flammability or explosive limits No data available Flash point Not applicable Autoignition temperature No data available Decomposition temperature > 150 °C Heating may cause an explosion. pH 2,5 - 3,5 at 50 g/l at 20 °C Viscosity Viscosity, kinematic: No data available Viscosity, dynamic: No data available Water solubility ca.470 g/l at 20 °C - OECD Test Guideline 105 Partition coefficient: n-octanol/water - Not applicable for inorganic substances Vapor pressure 0,001 hPa at 50 °C - OECD Test Guideline 104 Density 1,67 g/cm3 at 25 °C - lit. Relative density No data available Relative vapor density No data available Particle characteristics No data available Explosive properties No data available Oxidizing properties None Other safety information Surface tension ca.71,8 m N/m at 1,025g/l at 20 °C

Reactivity Sensitive to shock Risk of dust explosion. Chemical stability The product is chemically stable under standard ambient conditions (room temperature) Possibility of hazardous reactions Violent reactions possible with: Alkaline substances Possible formation of: Hydroxylamine Risk of explosion with: Fire-promoting substances Oxidizing agents Conditions to avoid Air Exposure to moisture. May be unstable at temperatures above: 75° C Heating (decomposition). No information available Incompatible materials No data available Hazardous decomposition products In the event of fire: see section 5

Information on toxicological effects

Acute toxicity LD50 Oral - Rat - male and female - 642 mg/kg (OECD Test Guideline 401) Acute toxicity estimate Oral - 642 mg/kg (ATE value derived from LD50/LC50 value) Inhalation: No data available Acute toxicity estimate Dermal - 1.100,1 mg/kg (Expert judgment) Remarks: (Regulation (EC) No 1272/2008, Annex VI) Skin corrosion/irritation Skin - In vitro study Result: Irritating to skin. - 42 min (OECD Test Guideline 439) Serious eye damage/eye irritation Eyes - In vitro study Result: Eye irritation - 6 h Remarks: (ECHA) Respiratory or skin sensitization Maximization Test - Guinea pig Result: positive (OECD Test Guideline 406) Germ cell mutagenicity Test Type: Ames test Test system: S. typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative

Test Type: In vitro mammalian cell gene mutation test Test system: mouse lymphoma cells Metabolic activation: with and without metabolic activation Result: negative Remarks: (ECHA) Test Type: Rat Test system: Embryo Remarks: Morphological transformation. Test Type: Hamster Test system: Lungs Remarks: Sister chromatid exchange Test Type: Mutagenicity (mammal cell test): micronucleus. Species: Mouse Cell type: Red blood cells (erythrocytes) Application Route: Oral Method: OECD Test Guideline 474 Result: negative Carcinogenicity Suspected of causing cancer. Reproductive toxicity No data available Specific target organ toxicity - single exposure No data available Specific target organ toxicity - repeated exposure Ingestion - May cause damage to organs through prolonged or repeated exposure. - spleen Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) Aspiration hazard No data available Additional Information Endocrine disrupting properties Product Assessment The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. RTECS: NC3675000 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Toxicity Toxicity to fish Semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - 1,78 mg/l - 96 h (OECD Test Guideline 203) Toxicity to daphnia and other aquatic invertebrates Semi-static test EC50 - Daphnia magna (Water flea) - 1,1 mg/l - 48 h (OECD Test Guideline 202) Toxicity to algae Static test ErC50 - Pseudokirchneriella subcapitata - 0,21 mg/l - 72 h (OECD Test Guideline 201) Static test EC10 - Raphidocelis subcapitata (freshwater green alga) - 0,075 mg/l - 72 h (OECD Test Guideline 201) Persistence and degradability The methods for determining biodegradability 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. Endocrine disrupting properties Assessment The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. Other adverse effects No data available .

Waste treatment Method No data available

UN number ADR/RID:3260 IMDG:3260 IATA: 3260 UN proper shipping name ADR/RID: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Hydroxylammonium chloride) IMDG: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Hydroxylammonium chloride) IATA: Corrosive solid, acidic, inorganic, n.o.s. (Hydroxylammonium chloride) Transport hazard class(es) ADR/RID: 8 IMDG: 8 IATA:8 Packaging group ADR/RID: III IMDG: III IATA:III Environmental hazards ADR/RID: no IMDG Marine pollutant: no IATA: no Special precautions for user Tunnel restriction code (E) Further information No data available

Safety, health and environmental regulations/legislation specific for the substance or mixture This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006. Authorisations and/or restrictions on use National legislation Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. E1 ENVIRONMENTAL HAZARDS Other regulations Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable. Take note of Dir 94/33/EC on the protection of young people at work. Chemical Safety Assessment For this product a chemical safety assessment was not carried out

Other Information

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