Material Safety Data Sheet

Acrylic Acid (RXSOL-19-1217-050)

1. Product and Company Identifaction

Product Name	Acrylic Acid
Part Number	RXSOL-19-1578-210

Company Details:

RX MARINE INTERNATIONAL
105, A wing , BSEL , TECH PARK.
VASHI ,NEW BOMBAY 400703 INDIA

Branch : Kandla, Mumbai , Chennai, Vizag, Kolkata, UAE , OMAN , CANADA and KENYA

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Email	mail@rxmarine.com
Website	www.rxmraine.com

2. Composition / informationon ingredients

Chemical Name	Cas No	EC No	Weight	Formula
Acrylic acid	79-10-7	201-177-9	72,06 g/mol	$C_3H_4O_2$

3. Hazards Identification

Signal Word	Danger
Hazard Statements	H226 Flammable liquid and vapor. H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled. H314 Causes severe skin burns and eye damage. H335 May cause respiratory irritation. H410 Very toxic to aquatic life with long lasting effects.
Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Classification of the substance or mixture	No data available
Supplemental Hazard Statements	No data available
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

4. 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. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen
Eye Contact	Rinse out with plenty of water. Remove contact lenses
Swallowed	Make victim drink water (two glasses at most). Consult doctor if feeling unwell.
Skin Contact	In case of skin contact Take off immediately all contaminated clothing. Rinse skin with water/ shower.

Inhalation	No data available
Ingestion	No data available
Most important symptoms and effects, both acute and delaye	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

5. Fire-fighting Measures

Flammability	No data available
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 Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air at elevated temperatures. Development of hazardous combustion gases or vapours possible in the event of fire.
Further information	Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.
Hazardous combustion products	No data available
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
Protective Equipment	No data available
Specific Hazards Arising from the Chemical	No data available

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.
Spillage	No data available
Personal Protection	Avoid dust formation. Avoid breathing vapors, mist or gas. For personal protection see section 8
Enviromental Precaution	Do not let product enter drains. Risk of explosion.
Methods and materials for containment and cleaning	Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area
Reference to other sections	For disposal see section 13

7. Handling and Storage

Advice on protection against fire and explosion	Keep away from open flames, hot surfaces and sources of ignition.Take precautionary measures against static discharge.
Incompatible materials	No data available
Hygiene measures	Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.
Advice on safe handling	Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.
Conditions for safe storage, including any incompatibilities	No data available
Storage conditions	Adhere to recommended storage temperature. Crystallises at approx. +13°C. Do not store below +15°C. Risk of explosion. Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Recommended storage temperature see product label.
Storage class	Storage class (TRGS 510) 3 Flammable liquids
Specific end use(s)	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
Advice on general occupational hygiene	No data available

8. Exposure controls and personal protection

Exposure controls	Personal protective equipment
Engineering Control	No data available
Eye/face protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses
Body Protection	Flame retardant antistatic protective clothing.
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: Viton® Minimum layer thickness: 0,7 mm Break through time: 480 min Material tested:Vitoject® (KCL 890 / Aldrich Z677698, Size M) 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: butyl-rubber Minimum layer thickness: 0,7 mm Break through time: 30 min Material tested:Butoject® (KCL 898)
Respiratory protection	Recommended Filter type Filter A-(P2) The entrepeneur 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.
Other Protection Measure	No data available

9. Physical and chemical properties

Physical state	Liquid
Colour	Colorless
Odour	No data available
Odor Threshold	No data available
pH	No data available
Melting Point	13 °C
Boiling Point	141 °C at 1.013 hPa
Flash Point	48,5 °C - closed cup - DIN 51755 Part 1
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Explosive limits	No data available
Upper/lower flammability or explosive limits	No data available
Autoignition temperature	438 °C at 1.013 hPa
Decomposition temperature	No data available
Vapour pressure	5,29 hPa at 25 °C
Viscosity	Dynamic 1,15 mPa.s at 25 °C
Density	1,05 g/cm3 at 20 °C
Relative Density	1,05 at 20 °C
Specific Gravity	No data available
Partition coefficient	log Pow 0,46 at 25 °C - Bioaccumulation is not expected
Explosive properties	No data available
Solubility	1.000 g/l at 25 °C
Ignition temperature	No data available
Particle characteristics	No data available

10. Stability and reactivity

Reactivity	Vapor/air-mixtures are explosive at intense warming.

Chemical stability	Prolonged storage of the product can cause the stabilizer to lose its effectiveness. The product is chemically stable under standard ambient conditions (room temperature) . Contains the following stabilizer(s): hydroquinone monomethyl ether (0,02 %)
Possibilityof hazardous reactions	Risk of explosion with Oxidizing agents polymerisation initiators Peroxides Oxygen Violent polymerization may be caused by alkali hydroxides Amines Ammonia sulfuric acid mercaptans azides Ether Ketones Aldehydes nitrates nitrites increased reactivity with: anhydrides
Conditions to avoid	Avoid temperatures below recommended storage temperature. Heating.
Incompatible materials	Copper, Nickel, Mild steel, Zinc
Hazardous product dicomposition	No data available

11. Toxicological information

Acute toxicity	Acute toxicity estimate Oral - 500,1 mg/kg (Calculation method) LD50 Oral - Rat - male - 1.000 - 2.000 mg/kg (OECD Test Guideline 423) Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) 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 Inhalation - 4 h - 11 mg/l - vapor(Calculation method) LC50 Inhalation - Rat - 4 h - 3,6 mg/l - vapor (Lit.) (Regulation (EC) No 1272/2008, Annex VI) Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract Acute toxicity estimate Dermal - 1.101 mg/kg (Calculation method) LD50 Dermal - Rabbit - male - 1.000 mg/kg (Regulation (EC) No 1272/2008, Annex VI)
Skin corrosion/irritation	Skin - Rabbit Result Causes severe burns. (OECD Test Guideline 404) (Regulation (EC) No 1272/2008, Annex VI)
Serious eye damage/irritation	Eyes - Rabbit Result: Causes burns. (IUCLID) Causes serious eye damage.
Respiratory or skin sensitization	Sensitisation test - Guinea pig Result negative (Lit.)
Carcinogenicity	No data available
Germ cell mutagenicity	Test Type Ames test Test system: Salmonella typhimurium Result: negative (National Toxicology Program) Test Type: In vitro mammalian cell gene mutation test Test system: Chinese hamster ovary cells Metabolic activation with and without metabolic activation Method OECD Test Guideline 476 Result negative Test Type unscheduled DNA synthesis assay Millipore- 8.00181 Page 9 of 12 The life science business of Merck operates as MilliporeSigma in the US and Canada Test system: rat hepatocytes Metabolic activation without metabolic activation Method OECD Test Guideline 482 Result negative Test Type Mutagenicity (mammal cell test) chromosome aberration. Species Rat Cell type: Bone marrow Application Route Oral Method OECD Test Guideline 475 Result negative Test Type dominant lethal test Species: Mouse Cell type Intrauterine Application Route Oral Result negative (ECHA)
Reproductive toxicity	No data available
Specific target organ toxicity-single exposure	No data available
Additional Information	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. Repeated dose toxicity - Rat - male - Oral - NOAEL (No observed adverse effect level) - 40 mg/kg - LOAEL (Lowest observed adverse effect level) - 100 mg/kg burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice. Millipore- 8.00181 Page 10 of 12 The life science business of Merck operates as MilliporeSigma in the US and Canada Liver - Irregularities - Based on Human Evidence

12. Ecological information

Persistence and degradability	Biodegradability Result 100 % - Readily eliminated from water (OECD Test Guideline 302B) Result 81 % - Readily biodegradable. (OECD Test Guideline 301D)
Toxicity to fish	Flow-through test LC50 - Oncorhynchus mykiss (rainbow trout) - 27 mg/l - 96 h (US-EPA)
Toxicity to daphnia and other aquatic invertebrates	Flow-through test EC50 - Daphnia magna (Water flea) - 95 mg/l - 48 h (US-EPA)
Toxicity	No data available
Toxicity to bacteria	No data available

Toxicity to algae	IC50 - Desmodesmus subspicatus (green algae) - 0,13 mg/l - 72 h (Regulation (EC) No. 440/2008, Annex, C.3) (IUCLID) EC10 - Desmodesmus subspicatus (green algae) - 0,03 mg/l - 72 h (Regulation (EC) No. 440/2008, Annex, C.3) (ECHA)
Mobility in soil	No data available
Results of PBT av PvB 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	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	Biological effects Neutralise before sewage disposal. Discharge into the environment must be avoided.

13. Disposal considerations

Product	See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.
Contaminated packaging	No data available
Waste treatment Method	No data available

14. Transport information

UN number	ADR/RID:2218	IMDG:2218	IATA:2218
UN proper shipping name	ADR/RID:ACRYLIC ACID, STABILIZED	IMDG:ACRYLIC ACID,STABILIZED	IATA:ACRYLIC ACID, STABILIZED
Transport hazard classess	ADR/RID:8 (3)	IMDG:8 (3)	IATA:8 (3)
Packaging group	ADR/RID:II	IMDG:II	IATA:II
Environmental hazards	ADR/RID:Yes	IMDG Marine pollutant: Yes	IATA: No
Special precautions for user	No data available		
Further information	No data available		

15. Regulatory information

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
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

16. Other information

Other Information	The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and weassume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Rx Marine International has been advised of the possibility of such damages.