Material Safety Data Sheet

Acrylonitrile (RXSOL-19-1218-160)

1. Product and Company Identifaction

Porduct Name	Acrylonitrile
Part Number	RXSOL-19-1218-160

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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2. Composition / informationon ingredients

Product name	Cas No	EC No	Weight	Formula
Acrylonitrile	107-13-1	203-466-5	53,06 g/mol	C_3H_3N

3. Hazards Identification

Signal Word	Danger
Hazard Statements	H225 Highly flammable liquid and vapor. H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H335 May cause respiratory irritation. H350 May cause cancer. H411 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. P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. 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.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.

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	After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.
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

Skin Contact	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.
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	Carbon dioxide (CO2) Foam 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) Combustible. Fire may cause evolution of: nitrogen oxides, Hydrogen cyanide (hydrocyanic acid) Pay attention to flashback. Vapors are heavier than air and may spread along floors. Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures.
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	No data available
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 carefully 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	Protected from light.Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons. 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 EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Full contact Material: butyl-rubber Minimum layer thickness: 0,7 mm Break through time: 480 min Material tested:Butoject® (KCL 898) 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 EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Splash contact Material: Chloroprene Minimum layer thickness: 0,65 mm Break through time: 30 min Material tested:KCL 720 Camapren®
Respiratory protection	Recommended Filter type: Filter A-(P3) 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	Pungent
Odor Threshold	No data available
pH	No data available
Melting Point	-83,5 °C at ca.1.013 hPa
Boiling Point	77,3 °C at ca.1.013 hPa
Flash Point	-5 °C - closed cup
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Explosive limits	No data Available
Upper/lower flammability or explosive limits	Upper explosion limit: 28 %(V) Lower explosion limit: 2 %(V)
Autoignition temperature	481 °C at 1.013 hPa
Decomposition temperature	No data available
Vapour pressure	133,3 hPa at 23,6 °C
Viscosity	dynamic: 0,34 mPa.s at 25 °C
Density	0,806 g/cm3
Relative Density	No data available
Specific Gravity	No data available
Partition coefficient	log Pow: 0,016 at 21 °C - Bioaccumulation is not expected.
Explosive properties	No data available
Solubility	353 g/l at 24 °C at 1.013 hPa
Ignition temperature	No data available
Particle characteristics	No data available

10. Stability and reactivity

Reactivity	Vapors may form explosive mixture with air.
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature) . Contains the following stabilizer(s): hydroquinone monomethyl ether (0,004 %)
Possibilityof hazardous reactions	Risk of explosion with: Bromine Sodium hydroxide Esters Chlorine Nitric acid Violent polymerization may be caused by: alkali hydroxides Strong bases Oxidizing agents Copper Copper alloys sulfuric acid silver salt polymerisation initiators Peroxides sodium amide with Sodium hydroxide Exothermic reaction with: chlorosulfonic acid Strong acids
Conditions to avoid	Heat. May polymerize on exposure to light. Warming.
Incompatible materials	No data available
Hazardous decomposition products	In the event of fire: see section 5

11. Toxicological information

Acute toxicity	Acute toxicity estimate Oral - 96,06 mg/kg (Calculation method) LD50 Oral - Rat - female - 95,1 mg/kg (acrylonitrile) Remarks: (ECHA) Acute toxicity estimate Inhalation - 4 h - 2,07 mg/l - vapor(Calculation method) LC50 Inhalation - Rat - female - 4 h - 2,05 mg/l - vapor (acrylonitrile) (OECD Test Guideline 403) Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract Acute toxicity estimate Dermal - 252,53 mg/kg (Calculation method) LD50 Dermal - Rabbit - 250 mg/kg (acrylonitrile) Remarks: (IUCLID)
Skin corrosion/irritation	Skin - Rabbit (acrylonitrile) Result: Skin irritation - 24 h (OECD Test Guideline 404) Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)
Serious eye damage/irritation	Eyes - Rabbit (acrylonitrile) Result: Risk of serious damage to eyes. (OECD Test Guideline 405) Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)
Respiratory or skin sensitization	Maximization Test - Guinea pig (acrylonitrile) Result: positive (OECD Test Guideline 406)
Carcinogenicity	Presumed to have carcinogenic potential for humans (acrylonitrile)
Germ cell mutagenicity	Test Type: Ames test (acrylonitrile) Test system: S. typhimurium Metabolic activation: Metabolic activation Method: OECD Test Guideline 471 Result: positive Test Type: Mutagenicity (mammal cell test): chromosome aberration. (acrylonitrile) Test system: Chinese hamster lung cells Metabolic activation: with and without metabolic activation Result: positive Remarks: (ECHA) Test Type: In vitro mammalian cell gene mutation test (acrylonitrile) Test system: mouse lymphoma cellsMetabolic activation: without metabolic activation Method: OECD Test Guideline 476 Result: positive
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	May cause respiratory irritation. (acrylonitrile) Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)
Additional 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. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea (acrylonitrile) To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. (acrylonitrile) After absorption: (acrylonitrile) Headache Nausea Vomiting Dizziness agitation Convulsions respiratory arrest Unconsciousness (acrylonitrile) The following applies to cyanogen compounds/ nitriles in general: utmost caution! Release of hydrocyanic acid is possible - blockade of cellular respiration. Cardiovascular disorders, dyspnoea, unconsciousness. (acrylonitrile) Other dangerous properties can not be excluded. (acrylonitrile) This substance should be handled with particular care. (acrylonitrile)

12. Ecological information

Persistence and degradability	Biodegradability aerobic - Exposure time 14 d (acrylonitrile) Result: 100 % - Inherently biodegradable. (OECD Test Guideline 302C) Ratio BOD/ThBOD 70 % (acrylonitrile) (Lit.)
Toxicity to fish	semi-static test LC50 - Oryzias latipes - 5,1 mg/l - 96 h (acrylonitrile) (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 2,5 mg/l - 48 h (acrylonitrile) (OECD Test Guideline 202)
Toxicity	No data available
Toxicity to bacteria	EC5 - Pseudomonas putida - 53 mg/l - 16 h (acrylonitrile) (Lit.) (maximum permissible toxic concentration)
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata - 10 mg/l - 72 h (acrylonitrile) (OECD Test Guideline 201)

Bioaccumulation potential	Bioaccumulation Lepomis macrochirus - 14 d - 9,94 µg/l(acrylonitrile) Bioconcentration factor (BCF): 48
Mobility in soil	No data availalble
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	The substance/mixture does not contain components considered to have endocrine disrupting propertiesaccording 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	Forms toxic mixtures in water, dilution measures notwithstanding. Discharge into the environment must be avoided

13. Disposal considerations

Product	No data available
Contaminated packaging	No data available
Waste treatment Method	No data available

14. Transport information

UN number	ADR/RID:1093	IMDG:1093	IATA:1093
UN proper shipping name	ADR/RID:ACRYLONITRILE, STABILIZED	IMDG:ACRYLONITRILE, STABILIZED	IATA:ACRYLONITRILE, STABILIZED
Transport hazard class(es)	ADR/RID:3 (6.1)	IMDG:3 (6.1)	IATA:3 (6.1)
Packaging group	ADR/RID:I	IMDG:I	IATA:I
Environmental hazards	ADR/RID:Yes	IMDG:Yes	IATA:No
Special precautions for user	Tunnel restriction code (C/E)		
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	A Chemical Safety Assessment was not carried out for this substance.

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.

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