Material Safety Data Sheet

Vinylidene Chloride (RXSOL-19-1482-025)

1. Product and Company Identifaction

Product Name	Vinylidene Chloride
Part Number	RXSOL-19-1482-025

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

Chemical Name	CAS	EC number	Weight	Formula
1,1-Dichloroethylene	75-35-4	200-864-0	96,94 g/mol	$C_2H_2Cl_2$

3. Hazards Identification

Signal Word	Danger
Hazard Statements	H224 Extremely flammable liquid and vapor. H302 + H332 Harmful if swallowed or if inhaled. H319 Causes serious eye irritation. H351 Suspected of causing cancer. H372 Causes damage to organs (Nose) through prolonged or repeated exposure if inhaled. H373 May cause damage to organs (Liver) through prolonged or repeated exposure if swallowed. H412 Harmful 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. P233 Keep container tightly closed. P273 Avoid release to the environment. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell. P308 + P313 IF exposed or concerned Get medical advice/ attention. P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
Classification of the substance or mixture	Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.
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	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. 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. Consult a physician.
Inhalation	Remove patient to fresh air, keep warm and at rest and get medical assistance in necessary.
Ingestion	Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.
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	May be combustible at high temperature.
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 Hydrogen chloride gas Combustible. 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	Fire may cause the evolution of Sulphur oxides, nitrogen oxides.
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	Use personal protective equipment.
Specific Hazards Arising from the Chemical	Has a fire-promoting effect due to the release of oxygen. Ambient fire may liberate hazardous vapours.

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	Oxidizing material. Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas dike if needed. Eliminate all ignition sources. Call for assistance on disposal.
Personal Protection	Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders Protective equipment 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 carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

7. Handling and Storage

Advice on safe handling	Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.
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	Keep away from alkalis, strong oxidizing agents and metals. Provide containment walls of adequate capacity to hold any accidental spills.

Hygiene measures	Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.
Precautions for safe handling	For precautions see section 2.2.
Conditions for safe storage, including any incompatibilities	Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.
Storage conditions	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.
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	Advice on safe handling Observe label precautions. Change contaminated clothing. Wash hands after working with substance.
Requirements for storage	Keep in cool and store under shade.

8. Exposure controls and personal protection

Exposure controls	No specific additional engineering controls are required. Provide good natural or artificial ventilation.
Engineering Control	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
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: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L 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 pleasecontact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Splash contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L
Respiratory protection	Required when vapours/aerosols 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 AX 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	Handle in accordance with good industrial hygiene and safety practice.
Control of environmental exposure	Do not let product enter drains. Risk of explosion.

9. Physical and chemical properties

Physical state	Liquid
Colour	Colorless
Odour	No data available
Odor Threshold	Not Applicable
pH	No data available
Melting Point	122 °C - lit.
Boiling Point	30 - 32 °C - lit.
Flash Point	19 °C
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Explosive limits	No Data Available
Upper/lower flammability or explosive limits	15,5 %(V) / 6,5 %(V)
Autoignition temperature	520,0 °C 580,0 °C
Decomposition temperature	No data available

Viscosity,kinematic	No data available
Vapour pressure	667,3 hPa at 20,0 °C 2.137,4 hPa at 55,0 °C
Density	1,213 g/cm3 at 20 °C - lit.
Relative Vapour Density	No data available
Freezing point	No data available
Specific Gravity	No data available
Partition coefficient	No data available
Explosive properties	No data available
Solubility	0,2 g/l at 20 °C
Ignition temperature	No data available
Particle characteristics	No data available

10. Stability and reactivity

Reactivity	Vapors may form explosive mixture with air.
Stability	The product is chemically stable under standard ambient conditions (room temperature) .
Possibility of hazardous reactions	No data available
Conditions to avoid	Warming.
Incompatible materials	Oxidizing agents, Copper, Aluminum, and its alloys, Peroxides, Strong bases, Oxygen
Hazardous Polymerization	In the event of fire: see section 5

11. Toxicological information

Acute toxicity	Acute toxicity estimate Oral - 200 mg/kg (Calculation method) LD50 Oral - Rat - 1.500 mg/kg Acute toxicity estimate Oral - 1.500 mg/kg (Calculation method) Acute toxicity estimate Inhalation - 4 h - 11 mg/l - vapor(Calculation method) Acute toxicity estimate Inhalation - 4 h - 11,1 mg/l - vapor (Expert judgment) Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)
Skin corrosion/irritation	Skin - reconstructed human epidermis (RhE) Result: No skin irritation - 3 - 60 min (Regulation (EC) No. 440/2008, Annex, B.40)
Serious eye damage/eye irritation	Eyes - Bovine cornea Result: Causes serious eye irritation. - 10 min (OECD Test Guideline 437)
Respiratory or skin sensitization	Eyes - Bovine cornea Result: Causes serious eye irritation. - 10 min (OECD Test Guideline 437)
Carcinogenicity	Suspected of causing cancer.
Germ cell mutagenicity	Based on available data the classification criteria are not met. Test Type: comet assay Species Rat Cell type: Bone marrow Application Route: inhalation (vapor) Method OECD Test Guideline 489 Result: positive Test Type: Micronucleus test Species: Mouse Cell type: Bone marrow Application Route: Inhalation Method OECD Test Guideline 474 Result: negative Test Type Micronucleus test Species: Mouse Cell type: Bone marrow Application Route: Oral Method OECD Test Guideline 474 Result negative Test Type Mutagenicity (mammal cell test) chromosome aberration. Species Rat Cell type: Implant Application Route: Inhalation Method: OECD Test Guideline 478 Result: negative
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available
Special Remarks on other Toxic Effects on Humans	Acute Potential Health Effects: Skin: Causes skin irritation. May cause skin sensitization, an allergic reation, which becomes evident upon re-exposure to this material. Eyes: Causes eye irritation. Ingestion: Causes gastrointestinal (digestive) tract irritation with nausea, vomiting, and diarrhea. May be harmful if swallowed. Inhalation: Causes respiratory tract irritation. May cause chemical pneumonitis and pulmonary edema, inflammation, edema of bronchi and larynx. Chronic Potential Health Effects: Repeated or prolonged skin exposure may cause allergic reactions in sensitive individuals. Repeated or prolonged exposure by inhalation may affect respiration and metabolism.
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. Repeated dose toxicity - Rat - female - Oral - 90 Days - NOAEL (No observed adverse effect level) - 9 mg/kg - LOAEL (Lowest observed adverse effect level) - 14 mg/kg Remarks: (ECHA) RTECS: KV9275000 Nausea, Headache, Vomiting, Dizziness, Drowsiness, Confusion., Incoordination., Central nervous system depression To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. After absorption: Headache somnolence Unconsciousness Coma After absorption of large quantities: Damage to Liver Kidney Lungs Central nervous system This substance should be handled with particular care.

12. Ecological information

Persistence and degradability	Biodegradability Result: 0 % - Not readily biodegradable. (OECD Test Guideline 301D) .
Bioaccumulative potential	Bioaccumulation Cyprinus carpio (Carp) - 6 Weeks at 25 °C - 0,5 mg/l(1,1-Dichloroethene) Bioconcentration factor (BCF) 2,5 - 6,4 (OECD Test Guideline 305C)
Toxicity to fish	Flow-through test LC50 - Pimephales promelas (fathead minnow) - 108 mg/l - 96 h (ECHA)
Toxicity to daphnia and other aquatic invertebrates	Static test EC50 - Daphnia magna (Water flea) - 37 mg/l - 48 h (OECD Test Guideline 202) (ECHA)
Toxicity to algae	Static test EC50 - Chlamydomonas reinhardtii (green algae) - 9,12 mg/l - 72 h Remarks: (ECHA) (ECHA)
Toxicity to bacteria	EC50 - Pseudomonas putida - > 2.000 mg/l - 17 h (IUCLID)
Mobility in soil	No Information 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	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	Discharge into the environment must be avoided.

13. Disposal considerations

Disposal methods	The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.
Contaminated packaging	Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.
Waste treatment Method	See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

14. Transport information

UN number	ADR/RID:1303	IMDG:1303	IATA:1303
UN proper shipping name	ADR/RID: Vinylidene chloride, stabilized IMDG: Vinylidene chloride, stabilized IATA:Vinylidene chloride, stabilized		
Transport hazard class(es)	ADR/RID: 3	IMDG: 3	IATA: 3
Packaging group	ADR/RID: I	IMDG: I	IATA:I
Environmental hazards	ADR/RID: No	IMDG: No	IATA: No
Special precautions for user	Tunnel restriction code (C/E)		
Further information	Not classified as dangerous in the meaning of transport regulations.		

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.
Authorisations and/or restrictions on use	REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) 1,1-Dichloroethene
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.