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| Product Name | Dichloro Ethane 1,1 |
| Part Number | RXSOL-19-1109-02 |

Company Details:

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| Chemical Name | CAS | EC number | Weight | Formula |
|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| 1,1-Dichloroethane | 75-34-3 | 200-863-5 | C2H4Cl2 | |
| Signal Word | Danger | Hazard Statements | H225 Highly flammable liquid and vapor. H302 Harmful if swallowed. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H412 Harmful to aquatic life with long lasting effects. | P280 Wear protective gloves.P305 + P351 + P338 |
| | | Precautionary statements | P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 Keep container tightly closed. P240 Ground and bond container and receiving equipment. P273 Avoid release to the environment. P301 + P312 IF SWALLOWED: 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. | |
| Classification of the substance or mixture | Classification according to Regulation (EC) No 1272/2008 | Skin corrosion (Sub-category 1B), H314 Serious eye damage (Category 1), H318 Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335 Short-term (acute) aquatic hazard (Category 1), H400 Long-term (chronic) aquatic hazard (Category 3), H412 For the full text of the H-Statements mentioned in this Section, see Section 16. | Supplemental Hazard Statements | None. |
| | Other hazards | Esta sustancia/mezcla no contiene componentes que se consideren que sean bioacumulativos y tóxicos persistentes (PBT) o muy bioacumulativos y muy persistentes (mPmB) a niveles del 0,1% o superiores. | | |
| General advice | Show this material safety data sheet to the doctor in attendance. | If inhaled | After inhalation: fresh air. | |
| Eye Contact | After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses. | Swallowed | After swallowing: immediately make victim drink water (two glasses at most). Consult a physician. | |
| | Skin Contact | In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. | 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 | | |

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| Flammability | May be combustible at high temperature. | Flash Point | Higher than 93.3°C |
| (200°F). | 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 | In the event of fire, wear |
| self-contained breathing apparatus. | 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. | | | |

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 with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

Advice on safe handling Avoid contact with skin and eyes. Avoid formation of dust and 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 Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance. For precautions see section 2.2.

Storage conditions Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

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.

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.

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 entrepreneur 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.

Thermal hazards No data available

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|--------------------------|---------------------------|----------------------------------------------|---------------------------|--------------------------|---------------------------|----------------|-------------|
| Physical state | Liquid | Colour | No data available | Odour | No data available | Odor Threshold | Not |
| Applicable | pH | No data available | Melting Point | 98,0 °C | Boiling Point | 55,0 - 58,0 °C | Flash Point |
| 10,0 °C - closed cup | Evaporation Rate | Not Applicable | Flammability (solid, gas) | No data available | Explosive | | |
| limits | No Data Available | Upper/lower flammability or explosive limits | No data available | Autoignition temperature | No | | |
| data available | Decomposition temperature | No data available | Vapour pressure | No data available | Viscosity | | |
| /kinematic / dynamic | No data available | Density | 1,17 g/cm3 | 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 | No data available | Ignition temperature | No information available. | | |
| Particle characteristics | No data available | | | | | | |

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|--------------------------------------------------|---------------------------------------------|-------------------|----------------------------------------|
| 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 | Hazardous Polymerization |
| | | | In the event of fire: see section 5 |

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| Acute toxicity | LD50 Oral - Rat - 725,0 mg/kg LC50 Inhalation - Rat - 4 h - 13000 ppm Dermal: No data available | Skin |
| corrosion/irritation | Remarks: No data available | Serious eye damage/eye irritation |
| Respiratory or skin sensitization | Chronic exposure may cause dermatitis. | Toxicity to Animal |
| HEREUNDER ARE ESTIMATED ON THE | Acute oral toxicity (LD50): 689 mg/kg [Rat]. | Toxic Effects on Human |
| to the following organs: upper respiratory tract. | Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant, sensitizer), of ingestion, of inhalation (lung irritant, lung sensitizer). | May cause damage |
| Carcinogenicity | This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification. | |
| Germ cell mutagenicity | Test Type: Hamster Test system: ovary Metabolic activation: with and without metabolic activation Result: negative Species: Rat Application Route: Oral Method: Mutagenicity (micronucleus test) Result: negative | |
| Reproductive toxicity | No data available | Specific target organ toxicity - single exposure |
| May cause respiratory irritation. | Special Remarks on other Toxi 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. |
| 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. RTECS: KI0175000 Liver injury may occur., Kidney injury may occur., narcosis, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Central nervous system - . | |

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|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| Persistence and degradability | No data available | Toxicity to fish | Flow-through test LC50 - Pimephales promelas (fathead minnow) - 0,068 mg/l - 96 h Remarks: (ECHA) The value is given in analogy to the following substances: ammonium sulphate | Toxicity to daphnia and other aquatic invertebrates |
| Toxicity to algae | Growth inhibition EC50 - Selenastrum capricornutum (green algae) - 27,54 mg/l - 72 h (OECD Test Guideline 201) | | | |
| Toxicity to bacteria | Respiration inhibition EC50 - Sludge Treatment - > 300 mg/l - 3 h | 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 |
| | | | | No data available |

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 Dispose of as unused product. Waste treatment Method No data available

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| UN number | ADR/RID: 2362 | IMDG: 2362 | IATA: 2362 | UN proper shipping name | |
| ADR/RID:1,1-Dichloroethane | IMDG:1,1-Dichloroethane | IATA:1,1-Dichloroethane | | Transport hazard class(es) | ADR/RID: 3 |
| IMDG: 3 | IATA: 3 | Packaging group | ADR/RID: II | IMDG: II | IATA: II |
| ADR/RID: No | IMDG: No | IATA: No | Special precautions for user | Tunnel restriction code : (C/E) | Environmental hazards |
| Not classified as dangerous in the meaning of transport regulations. | | | Transport in bulk according to IMO instruments | | Further information |
| | | | | | No data available |

Inventory status Components are on the following inventories: Polymaleic acid: - US TSCA, Canadian DSL, EU EINECS, Australian AICS, Korean, Philippine PICCS and Chinese Xi irritant R 36/38 Irritant to eyes & skin R 41 Risk of serious damage to eyes S24/25 Avoid contact with skin and eyes S26/28 In case of contact eyes & skin, rinse with plenty water and seek medical advice Section 312/313: Not listed. Not listed under California proposition 65.

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.

Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : ammonium chloride 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. : FLAMMABLE LIQUIDS 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

Authorisations and/or restrictions on use REACH -

Other Information

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