

# TRI CHLORO ETHYLENE

Part No. RXSOL-19-1456-210 — Generated 29 Sep 2026

## 1. Product and Company Identification

Product Name Tri Chloro Ethylene

Product Type RXSOL-19-1456-210

### Company Details:

RX MARINE INTERNATIONAL

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## 2. Composition / information on ingredients

### Substance:

|            |              |               |
|------------|--------------|---------------|
| Formula    | Cl2CCHCl     | C2HCl3 (Hill) |
| Index-No.  | 602-027-00-9 |               |
| EC-No.     | 201-167-4    |               |
| Molar mass | 131.39 g/mol |               |

### Hazardous components (REGULATION (EC) No 1272/2008):

| Chemical Name<br>(Concentration) | CAS-<br>No. | Registration<br>number | Classification                                                                                                                                                                                                                                                              |
|----------------------------------|-------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| trichloroethylene (= 100 % )     | 79-01-6     | 01-2119490731-36-XXXX  | Skin irritation, Category 2, H315<br>Eye irritation, Category 2, H319<br>Germ cell mutagenicity, Category 2, H341<br>Carcinogenicity, Category 1B, H350<br>Specific target organ toxicity - single exposure, Category 3, H336<br>Chronic aquatic toxicity, Category 3, H412 |

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

### Hazardous components (1999/45/EC) :

| Chemical Name (Concentration) | CAS-No. | Classification                                                             |
|-------------------------------|---------|----------------------------------------------------------------------------|
| trichloroethylene (= 100 % )  | 79-01-6 | Carc.Cat.2; R45<br>Mut.Cat.3; R68<br>Xi, Irritant; R36/38<br>R67<br>R52-53 |

For the full text of the R-phrases mentioned in this Section, see Section 16:

### Mixture:

not applicable

### 3. Hazards Identification

Classification of the substance or mixture:

Classification (REGULATION (EC) No 1272/2008):

Carcinogenicity, Category 1B, H350

Germ cell mutagenicity, Category 2, H341

Specific target organ toxicity - single exposure, Category 3, Central nervous system, H336 Skin irritation, Category 2, H315

Eye irritation, Category 2, H319

Chronic aquatic toxicity, Category 3, H412

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

Classification (67/548/EEC or 1999/45/EC):

|            |                         |        |
|------------|-------------------------|--------|
| Carc.Cat.2 | Carcinogenic Category 2 | R45    |
| Mut.Cat.3  | Mutagenic Category 3    | R68    |
| Xi         | Irritant                | R36/38 |
|            |                         | R67    |
|            |                         | R52/53 |

For the full text of the R-phrases mentioned in this Section, see Section 16:

Label elements:

Labelling (REGULATION (EC) No 1272/2008):

Hazard pictograms:

Signal word:

Danger

Hazard statements:

H350 May cause cancer.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H341 Suspected of causing genetic defects.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

Prevention:

P201 Obtain special instructions before use.

P273 Avoid release to the environment.

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and 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.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Restricted to professional users.

Reduced labelling ( $\leq 125$  ml):

Hazard pictograms

Signal word

Danger

Hazard statements:

H350 May cause cancer.

H341 Suspected of causing genetic defects.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P201 Obtain special instructions before use.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Restricted to professional users.

Other hazards:

None known.

## 4. First Aid Measures

|                                                                             |                                                                                                                                                                                                                                                         |
|-----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description of first aid measures:                                          | After inhalation: fresh air. Consult a physician.                                                                                                                                                                                                       |
| After skin contact:                                                         | wash off with plenty of water. Remove contaminated clothing. Consult a physician.                                                                                                                                                                       |
| After eye contact:                                                          | rinse out with plenty of water. Call in ophthalmologist.                                                                                                                                                                                                |
| After swallowing:                                                           | caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible after aspiration of vomit. Call a physician immediately. Laxative: Sodium sulfate (1 tablespoon/1/4 l water). activated charcoal (20 - 40 g in 10% slurry). |
| Most important symptoms and effects, both acute and delayed:                | irritant effects, Cough, Shortness of breath, Drowsiness, Dizziness, narcosis, agitation, spasms, inebriation, Nausea, Vomiting, Headache, drowsiness                                                                                                   |
| Indication of any immediate medical attention and special treatment needed: | No information available.                                                                                                                                                                                                                               |

## 5. Fire-fighting Measures

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

Not combustible.

Ambient fire may liberate hazardous vapours.

Fire may cause evolution of:

Hydrogen chloride gas

Advice for firefighters:

Special protective equipment 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:

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:

|                                                                      |                                                                                                                                                                                                                                                                             |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Personal precautions, protective equipment and emergency procedures: | Advice for non-emergency personnel: Avoid substance contact. Do not breathe vapours, aerosols. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: Protective equipment see section 8. |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                        |                                                                                                                                                                                                                                                  |
|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental precautions:                             | Do not empty into 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 with liquid-absorbent material (e.g. Chemizorb® ). Dispose of properly. Clean up affected area. Do not inhale vapours. |
| Reference to other sections:                           | Indications about waste treatment see section 13.                                                                                                                                                                                                |

## 7. Handling and Storage

|                                |                                                                                                                                                                                                                     |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Precautions for safe handling: | Advice on safe handling:<br>Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.                                                                                                 |
| Observe label precautions.:    | Hygiene measures:<br>Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.<br>Conditions for safe storage, including any incompatibilities: |
| Storage conditions:            | Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorised persons. Recommended storage temperature see product label.                                |
| Specific end use(s):           | See exposure scenario in the Annex to this MSDS.                                                                                                                                                                    |

## 8. Exposure controls and personal protection

Control parameters:

Components with workplace control parameters

| Components | Basis | Value | Threshold limits | Remarks |
|------------|-------|-------|------------------|---------|
|------------|-------|-------|------------------|---------|

| BASIS                        | Value                             | Threshold limits     | Remarks                          |
|------------------------------|-----------------------------------|----------------------|----------------------------------|
| trichloroethylene (79-01-6): |                                   |                      |                                  |
| EH40 WEL                     | Short Term Exposure Limit (STEL): | 150 ppm<br>820 mg/m³ | Can be absorbed through the skin |
|                              | Skin designation:                 |                      |                                  |
|                              | Time Weighted Average (TWA):      | 100 ppm<br>550 mg/m³ |                                  |

Derived No Effect Level (DNEL) Worker DNEL:acute Systemic effects inhalation 164.1

|                       |                  |            |                       |
|-----------------------|------------------|------------|-----------------------|
| Worker DNEL, acute    | Systemic effects | inhalation | 164.1 mg/m³           |
| Worker DNEL, acute    | Local effects    | dermal     | 164.1 mg/m³           |
| Worker DNEL, longterm | Systemic effects | inhalation | 7.8 mg/kg Body weight |
| Worker DNEL, longterm | Systemic effects | inhalation | 54.7 mg/m³            |

Recommended monitoring procedures

Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

Predicted No Effect Concentration (PNEC):

|                                   |             |
|-----------------------------------|-------------|
| PNEC Fresh water                  | 0.115 mg/l  |
| PNEC Marine water                 | 0.0115 mg/l |
| PNEC Aquatic intermittent release | 0.208 mg/l  |
| PNEC Sewage treatment plant       | 2.6 mg/l    |

|                           |             |
|---------------------------|-------------|
| PNEC Fresh water sediment | 2.04 mg/kg  |
| PNEC Marine sediment      | 0.204 mg/kg |
| PNEC Soil                 | 0.344 mg/kg |
| PNEC oral                 | 13.8 mg/kg  |

Exposure controls:

Engineering measures:

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Individual protection measures:

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection:

Safety glasses

Hand protection:

|                 |                     |                |
|-----------------|---------------------|----------------|
| full contact:   | Glove material:     | Viton(R)       |
|                 | Glove thickness:    | 0.70 mm        |
|                 | Break through time: | >480mm         |
| splash contact: | Glove material:     | Nitrile Rubber |
|                 | Glove thickness:    | 0.40 mm        |
|                 | Break through time: | >10 mm         |

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 890 Vitoject® (full contact), KCL 730 Camatril® -Velours (splash contact).The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.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

Other protective equipment:

protective clothing

Respiratory protection:

required when vapours/aerosols are generated.Empfohlener Filtertyp: Filter A (acc. to DIN 3181) for vapours of organic compounds 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.

Environmental exposure controls:

Do not empty into drains.

## 9. Physical and chemical properties

Information on basic physical and chemical properties:

|        |            |
|--------|------------|
| Form   | Liquid     |
| Colour | Colourless |

|                                        |                                                                                              |
|----------------------------------------|----------------------------------------------------------------------------------------------|
| Odour                                  | No odour warning                                                                             |
| Odour Threshold                        | 28 - 2160 ppm                                                                                |
| pH                                     | No information available                                                                     |
| Melting point                          | -86 °C                                                                                       |
| Boiling point/boiling range            | 87 °C at 1,013 hPa                                                                           |
| Flash point                            | Not determinable                                                                             |
| Evaporation rate                       | No information available.                                                                    |
| Flammability (solid, gas)              | No information available.                                                                    |
| Lower explosion limit                  | 7.9 %(V)                                                                                     |
| Upper explosion limit                  | >99 %(V)(Saturation-at high volume fractions, explosion turns into a decomposition reaction) |
| Vapour pressure                        | 77 hPa at 20 °C                                                                              |
| Relative vapour density                | 4.53                                                                                         |
| Density                                | 1.21 - 1.26 g/cm <sup>3</sup> at 20 °C                                                       |
| Relative density                       | 1.46 g/cm <sup>3</sup> at 20 °C                                                              |
| Water solubility                       | 1.28 g/l at 25 °C                                                                            |
| Partition coefficient: n-octanol/water | log Pow: 2.29 (experimental) (IUCLID) Bioaccumulation is not expected.                       |
| Auto-ignition temperature              | No information available.                                                                    |
| Decomposition temperature              | > 110 °C.                                                                                    |
| Viscosity, dynamic                     | 0.55 mPa.s at 25 °C                                                                          |
| Explosive properties                   | Not classified as explosive.                                                                 |
| Oxidizing properties                   | None                                                                                         |

Other data:  
Ignition temperature  
410 °C

## 10. Stability and reactivity

|                                     |                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reactivity:                         | See section 10                                                                                                                                                                                                                                                                                                                   |
| Chemical stability:                 | Heat-sensitive                                                                                                                                                                                                                                                                                                                   |
| Possibility of hazardous reactions: | Violent reactions possible with:<br>Oxygen, (as liquefied gas)<br>Alkaline earth metals, alkali amides, semimetallic hydrogen compounds, perchloric acid, Light metals, aluminium chloride, Strong oxidizing agents, POTASSIUM NITRATE                                                                                           |
| Risk of explosion with:             | Alkali metals, Aluminium, Barium, alkali hydroxides, Lithium, magnesium, Powdered metals, sodium amide, nitrogen dioxide, Boranes Strong oxidizing agents, Oxygen, with, alkali hydroxides Oxygen, with, Pressure Risk of ignition or formation of inflammable gases or vapours with:<br>Titanium, Beryllium, Epoxy constituents |
| Conditions to avoid :               | Strong heating (decomposition)., Distillation (Risk of explosion).                                                                                                                                                                                                                                                               |
| Incompatible materials:             | Various plastics                                                                                                                                                                                                                                                                                                                 |
| Hazardous decomposition products:   | In the event of fire: See section 5.                                                                                                                                                                                                                                                                                             |

## 11. Toxicological information

Information on toxicological effects :

Acute oral toxicity:

LD50 rat: 4,920 mg/kg (IUCLID)

LDLO human: 7,000 mg/kg (RTECS)

absorption:

Symptoms: Nausea, Vomiting, Risk of aspiration upon vomiting., Aspiration may cause pulmonary oedema and pneumonitis.

Acute inhalation toxicity:

LC50 rat: 43.84 mg/l; 4 h (IUCLID)

Symptoms: Possible damages:, mucosal irritations, After a latency period:, Lung oedema

Acute dermal toxicity:

LD50 rabbit: > 29,000 mg/kg (IUCLID)

absorption

Skin irritation

rabbit

Result: Severe irritations

(IUCLID)

Drying-out effect resulting in rough and chapped skin.

Causes skin irritation.

Eye irritation

rabbit

Result: Eye irritation

(IUCLID)

Causes serious eye irritation.

Sensitisation

This information is not available.

Germ cell mutagenicity

Genotoxicity in vitro

Ames test

Result: negative  
(IUCLID)

Carcinogenicity:  
This information is not available.

Reproductive toxicity:  
This information is not available.

Teratogenicity  
This information is not available.

CMR effects

Carcinogenicity:  
May cause cancer.

Mutagenicity:  
Suspected of causing genetic defects.  
Specific target organ toxicity - single exposure

Target Organs: Central nervous system  
May cause drowsiness or dizziness.  
Specific target organ toxicity - repeated exposure  
This information is not available.

Aspiration hazard:  
This information is not available.

Further information:  
After absorption:  
Headache, Dizziness, Cardiac irregularities, Nausea, agitation, spasms, inebriation, narcosis  
Absorption can result in damage to:  
Liver, Kidney  
After long-term exposure to the chemical:

Toxic effect on:  
Central nervous system

Further data:  
Handle in accordance with good industrial hygiene and safety practice.

## 12. Ecological information

Toxicity:  
Toxicity to fish:  
LC50 Pimephales promelas (fathead minnow): 41 mg/l; 96 h (ECOTOX Database)  
Toxicity to daphnia and other aquatic invertebrates  
EC50 Daphnia magna (Water flea): 18 mg/l; 48 h (IUCLID)  
Toxicity to algae:  
IC50 Pseudokirchneriella subcapitata (green algae): 175 mg/l; 96 h (IUCLID)  
Toxicity to bacteria:  
EC50 Photobacterium phosphoreum: 975 mg/l; 5 min (IUCLID)

Persistence and degradability:  
Biodegradability:  
19 %; 28 d  
OECD Test Guideline 301D  
Not readily biodegradable.  
4 %; 28 d  
Zahn-Wellens Test:  
Not readily eliminated from water.

Bioaccumulative Potential:

Partition coefficient: n-octanol/water  
log Pow: 2.29  
(experimental)  
(IUCLID) Bioaccumulation is not expected.

Mobility in soil:  
Distribution among environmental compartments  
Adsorption/Soil  
log Koc: 1.97  
(experimental)  
Mobile in soils

Results of PBT and vPvB assessment:  
Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

Other adverse effects:  
Henry constant  
998 Pa\*m<sup>3</sup>/mol  
(Lit.) Distribution preferentially in air.  
Additional ecological information  
Discharge into the environment must be avoided.

## 13. Disposal considerations

Waste treatment methods:  
Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

## 14. Transport information

Land transport (ADR/RID):

|                              |                   |
|------------------------------|-------------------|
| UN number                    | UN 1710           |
| Proper shipping name         | TRICHLOROETHYLENE |
| Class                        | 6.1               |
| Packing group                | III               |
| Environmentally hazardous    | --                |
| Special precautions for user | Yes               |
| Tunnel restriction code      | E                 |

Inland waterway transport (ADN): Not relevant

Air transport (IATA):

|                              |                   |
|------------------------------|-------------------|
| UN number                    | UN 1710           |
| Proper shipping name         | TRICHLOROETHYLENE |
| Class                        | 6.1               |
| Packing group                | III               |
| Environmentally hazardous    | --                |
| Special precautions for user | no                |
| Tunnel restriction code      | E                 |

#### Sea transport (IMDG):

|                              |                   |
|------------------------------|-------------------|
| UN number                    | UN 1710           |
| Proper shipping name         | TRICHLOROETHYLENE |
| Class                        | 6.1               |
| Packing group                | III               |
| Environmentally hazardous    | --                |
| Special precautions for user | Yes               |
| Tunnel restriction code      | E                 |
| EmS                          | EmS               |

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:  
Not relevant

## 15. Regulatory information

#### EU regulations:

|                                                                                                                                                               |                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Major Accident Hazard                                                                                                                                         | 96/82/EC                                                                                                                                                                                         |
| Legislation                                                                                                                                                   | Directive 96/82/EC does not apply                                                                                                                                                                |
| Occupational restrictions                                                                                                                                     | Take note of Dir 94/33/EC on the protection of young people at work.<br>Take note of Dir 92/85/EEC on the safety and health at work of pregnant workers.                                         |
| Regulation (EC) No 1005/2009 on substances that deplete the ozone layer                                                                                       | Not regulated                                                                                                                                                                                    |
| Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC | Not regulated                                                                                                                                                                                    |
| Regulation (EC) No 689/2008 concerning the export and import of dangerous chemicals                                                                           | Not regulated                                                                                                                                                                                    |
| Substances of very high concern (SVHC)                                                                                                                        | This product does contain substances of very high concern above the respective regulatory limit (> 0.1 % (w/w), Regulation (EC) No 1907/2006 (REACH), Article 57).<br>Contains:trichloroethylene |

#### Chemical Safety Assessment:

For this product a chemical safety assessment was not carried out.

## 16. Other information

The information provided about the product on this Safety Data Sheet has been compiled from knowledge of the individual constituents. The data given here is based on current knowledge and experience. This Safety Data Sheet describes the product in terms of safety requirements and does not signify any warranty with regard to the product's properties. The data given here only applies when product used for proper application(s). The product is not sold as suitable for other applications; usage in such may cause risks not mentioned in this sheet. Do not use for other application(s) without seeking advice from manufacturer.

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