# Safety Data Sheet

**Hazardous Chemical, Dangerous Goods**

## 1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

**Product name:** Trichloroethylene

**Synonyms**
Ethinyl trichloride
Ethylene trichloride
R1120
1 1 2-Trichloroethylene

**Product Code**

**Recommended use:** Industrial and metal degreasing agent. Mainly used for vapour degreasing; solvent in textile and electronics industries; for adhesives, lubricants and consumer products (such as spot removers and rug cleaners). Until recently, it was used to make hop extracts for beer, decaffeinated coffee and spice extracts.Silicon-based release agent suitable for releasing elastomers from F.R.P, aluminium, castable urethane, plaster and metal moulds. Can be sprayed wiped or brushed on mould surface.


**Supplier:** Clark Products
**Company No.:**
**Street Address:** 75 Niven Street Onekawa
Napier 4110 New Zealand
**Telephone:** 06 8433163
**Facsimile:** 06 8432958
**Email:** orders@clarkproducts.co.nz


**Emergency Telephone number: 0800 CHEMCALL (0800 243 6225)**

## 2. HAZARDS IDENTIFICATION

**This material is hazardous according to criteria of EPA New Zealand.**

**HSNO Approval Code:** HSR001555

**Signal Word**
Danger

**Hazard Classifications**
6.1D - Substances that are acutely toxic - Inhalation - gases
6.3A - Substances that are irritating to the skin
6.4A - Substances that are irritating to the eye
6.6B - Substances that are suspected human mutagens
6.7A - Substances that are known or presumed human carcinogens
6.9B (Single exposure) - Substances that are harmful to human target organs or systems
9.1D - Substances that are slightly harmful to the aquatic environment or are otherwise designed for biocidal action - Algae (H401)
9.1D - Substances that are slightly harmful to the aquatic environment or are otherwise designed for biocidal action - Crustacean (H401)
9.1D - Substances that are slightly harmful to the aquatic environment or are otherwise designed for biocidal

action - Fish (H401)

**Hazard Statements**

| | |
|---|---|
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H341 | Suspected of causing genetic defects . |
| H350 | May cause cancer . |
| H371 | May cause damage to organs. |
| H401 | Toxic to aquatic life. |

**Prevention Precautionary Statements**

| | |
|---|---|
| P102 | Keep out of reach of children. |
| P103 | Read label before use. |
| P201 | Obtain special instructions before use. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P261 | Avoid breathing dust, fume, gas, mist, vapours or spray.. |
| P264 | Wash hands, face and all exposed skin thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P273 | Avoid release to the environment. |
| P281 | Use personal protective equipment as required. |

**Response Precautionary Statements**

| | |
|---|---|
| P101 | If medical advice is needed, have product container or label at hand. |
| P302+P352 | IF ON SKIN: Wash with plenty of soap and water. |
| P304+P340 | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| 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. |
| P309+P311 | IF exposed or if you feel unwell: Call a POISON CENTRE or doctor/physician. |
| P312 | Call a POISON CENTRE or doctor/physician if you feel unwell. |
| P321 | Specific treatment (see product label). |
| P332+P313 | If skin irritation occurs: Get medical advice/attention. |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |
| P362 | Take off contaminated clothing and wash before reuse. |

**Storage Precautionary Statement**

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|---|---|
| P405 | Store locked up. |

**Disposal Precautionary Statement**

| | |
|---|---|
| P501 | Dispose of contents/container in accordance with local, regional, national and international regulations. |

**DANGEROUS GOOD CLASSIFICATION**

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

**Dangerous Goods Class:** 6.1

## 3. COMPOSITION INFORMATION

| CHEMICAL ENTITY | CAS NO | PROPORTION |
|---|---|---|
| Ethene, trichloro- | 79-01-6 | >99 % (w/w) |

| | |
|---|---|
| Stabilizer | <1 % (w/w) |
| | 100% |

## 4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

**Inhalation:** Remove victim from exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If breathing laboured and patient cyanotic (blue), ensure airways are clear and have a qualified person give oxygen through a facemask. If breathing has stopped apply artificial respiration at once. In the event of cardiac arrest, apply external cardiac massage. Seek immediate medical advice.

**Skin Contact:** If skin or hair contact occurs, immediately remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre or a Doctor; or for 15 minutes and transport to Doctor or Hospital.

**Eye contact:** If in eyes, hold eyelids apart and flush the eyes continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a Doctor; or for at least 15 minutes and transport to Doctor or Hospital.

**Ingestion:** Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water to drink. Never give anything by the mouth to an unconscious patient. If vomiting occurs give further water. Seek medical advice.

**PPE for First Aiders:** Wear rubber boots, overalls, gloves, chemical goggles, respirator. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

**Notes to physician:** Treat symptomatically.

## 5. FIRE FIGHTING MEASURES

**Hazchem Code:** 2Z

**Suitable extinguishing media:** If material is involved in a fire use water fog (or if unavailable fine water spray), alcohol resistant foam, standard foam, dry agent (carbon dioxide, dry chemical powder).

**Specific hazards:** Non-combustible material.

**Fire fighting further advice:** Not applicable.

## 6. ACCIDENTAL RELEASE MEASURES

**SMALL SPILLS**
Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of vapours or dust. Wipe up with absorbent (clean rag or paper towels). Collect and seal in properly labelled containers or drums for disposal.

**LARGE SPILLS**
Clear area of all unprotected personnel. Slippery when spilt. Avoid accidents, clean up immediately. Wear

protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.

**Dangerous Goods - Initial Emergency Response Guide No:** 37

## 7. HANDLING AND STORAGE

**Handling:** Avoid eye contact and skin contact. Avoid inhalation of vapour, mist or aerosols.

**Storage:** Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Store away from sources of heat and/or ignition. Store locked up. Keep container standing upright. Keep containers closed when not in use - check regularly for leaks.

This material is classified as a Division 6.1 Toxic Substance as per the criteria of the "New Zealand NZS5433: Transport of Dangerous Goods on Land" and/or the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and must be stored in accordance with the relevant regulations.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**National occupational exposure limits:**

| | TWA | | STEL | | NOTICES |
|---|---|---|---|---|---|
| | ppm | mg/m3 | ppm | mg/m3 | |
| Trichloroethylene | 50 | 269 | 200 | 1,070 | |

As published by WorkSafe New Zealand.

WES-TWA (Workplace Exposure Standard - Time-weighted average). The average airborne concentration of a substance calculated over an eight-hour working day.

WES-Ceiling (Workplace Exposure Standard - Ceiling). A concentration that should not be exceeded at any time during any part of the working day.

WES-STEL (Workplace Exposure Standard - Short-term exposure limit). The 15-minute time weighted average exposure standard. Applies to any 15-minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Exposures at concentrations between the WES-TWA and the WES-STEL should be less than 15 minutes, should occur no more than four times per day, and there should be at least 60 minutes between successive exposures in this range.

These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept too as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

If the directions for use on the product label are followed, exposure of individuals using the product should not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.

**Biological Limit Values:** As per the WorkSafe New Zealand the following ingredients in this material requires Health Surveillance:

Trichloroethylene

For detailed information see WorkSafe New Zealand.

**Engineering Measures:** Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Use only in well ventilated areas. Use with local exhaust ventilation or while wearing appropriate respirator.

**Personal Protection Equipment:** RUBBER BOOTS, OVERALLS, GLOVES, CHEMICAL GOGGLES, RESPIRATOR.

Personal protective equipment (PPE) must be suitable for the nature of the work and any hazard associated with the work as identified by the risk assessment conducted.

Wear rubber boots, overalls, gloves, chemical goggles, respirator. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

**Hygiene measures:** Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Wash hands prior to eating, drinking or smoking. Avoid contact with clothing. Avoid eye contact and skin contact. Avoid inhalation of vapour, mist or aerosols. Ensure that eyewash stations and safety showers are close to the workstation location.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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|---|---|
| **Form:** | Liquid |
| **Colour:** | Colourless |
| **Odour:** | Sweetish, chloroform-like odour |

| | |
|---|---|
| **Solubility:** | Does not mix with water (solubility 0.11%), miscible with most organic solvents. |
| **Specific Gravity:** | N Av |
| **Density:** | 1.47 |
| **Relative Vapour Density (air=1):** | 4.54 |
| **Vapour Pressure (20 °C):** | 7.87 @ 20C |
| **Flash Point (°C):** | N App |
| **Flammability Limits (%):** | 90 cont. ign. - 12.5 cont.ign. |
| **Autoignition Temperature (°C):** | 410 |
| **Melting Point/Range (°C):** | -87 -73 |
| **Boiling Point/Range (°C):** | 86-88 |
| **pH:** | N App |
| **Viscosity:** | N Av |
| **Total VOC (g/Litre):** | N Av |
| **% Volatile by Volume:** | 100 |
| **Molecular Weight:** | 131.38 |

(Typical values only - consult specification sheet)
N Av = Not available, N App = Not applicable

## 10. STABILITY AND REACTIVITY

**Chemical stability:** This material is thermally stable when stored and used as directed.

**Conditions to avoid:** Elevated temperatures and sources of ignition.

**Incompatible materials:** Oxidising agents.

**Hazardous decomposition products:** Oxides of carbon and nitrogen, smoke and other toxic fumes.

**Hazardous reactions:** No known hazardous reactions.

## 11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

**Acute Effects**

**Inhalation:** Harmful if inhaled. Material may be an irritant to mucous membranes and respiratory tract.

**Skin contact:** Contact with skin will result in irritation.

**Ingestion:** Swallowing can result in nausea, vomiting and irritation of the gastrointestinal tract.

**Eye contact:** An eye irritant.

**Acute toxicity**

**Inhalation:** This material has been classified as a 6.1D - Substances that are acutely toxic. Acute toxicity estimate (based on ingredients): 10.0 < LC50 ≤ 20.0 mg/L for vapours or 1.0 < LC50 ≤ 5.0 mg/L for dust and mist

**Skin contact:** This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >5,000 mg/Kg bw

**Ingestion:** This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >5,000 mg/Kg bw

**Corrosion/Irritancy:** Eye: this material has been classified as a 6.4A - Substances that are irritating to the eye. Skin: this material has been classified as a 6.3A - Substances that are irritating to the skin.

**Sensitisation:** Inhalation: this material has been classified as not a respiratory sensitiser. Skin: this material has been classified as not a skin sensitiser.

**Aspiration hazard:** This material has been classified as non-hazardous.

**Specific target organ toxicity (single exposure):** This material has been classified as a 6.9B - Substances that are harmful to human target organs or systems.

**Chronic Toxicity**

**Mutagenicity:** This material has been classified as a 6.6B - Substances that are suspected human mutagens.

**Carcinogenicity:** This material has been classified as a 6.7A - Substances that are known or presumed human carcinogens.

**Reproductive toxicity (including via lactation):**

This material has been classified as non-hazardous.

**Specific target organ toxicity (repeat exposure):** This material has been classified as non-hazardous.

## 12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

**Acute aquatic hazard:** 9.1D - Substances that are slightly harmful to the aquatic environment or are otherwise designed for biocidal action. Acute toxicity estimate (based on ingredients): 1 - 10 mg/L

**Long-term aquatic hazard:** This material has been classified as non-hazardous. Non-rapidly or rapidly degradable substance for which there are adequate chronic toxicity data available OR in the absence of chronic toxicity data, Acute toxicity estimate (based on ingredients): >100 mg/L, where the substance is not rapidly degradable and/or BCF < 500 and/or log $K_{ow}$ < 4.

**Ecotoxicity in the soil environment:** This material has been classified as non-hazardous.

**Ecotoxicity to terrestrial vertebrates:** This material has been classified as non-hazardous.

**Ecotoxicity to terrestrial invertebrates:** This material has been classified as non-hazardous.

**Ecotoxicity:** No information available.

**Persistence and degradability:** No information available.

**Bioaccumulative potential:** No information available.

**Mobility:** No information available.

## 13. DISPOSAL CONSIDERATIONS

Persons conducting disposal, recycling or reclamation activities should ensure that appropriate personal protection equipment is used, see "Section 8. Exposure Controls and Personal Protection" of this SDS.

If possible material and its container should be recycled. If material or container cannot be recycled, dispose in accordance with local, regional, national and international Regulations.

## 14. TRANSPORT INFORMATION

**ROAD AND RAIL TRANSPORT**
Classified as Dangerous Goods by the criteria of the “Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

| | |
|---|---|
| **UN No:** | 1710 |
| **Dangerous Goods Class:** | 6.1 |
| **Packing Group:** | III |
| **Hazchem Code:** | 2Z |
| **Emergency Response Guide No:** | 37 |
| **Proper Shipping Name:** | TRICHLOROETHYLENE |

**Segregation Dangerous Goods:** Not to be loaded with explosives (Class 1), nitromethane, food and food packaging in any quantity. Note 1: Dangerous Goods of Class 6 which are fire risk substances are incompatible

with dangerous goods of Class 1, Class 5.1 and Class 5.2. Note 2: Dangerous Goods of Class 6 which are cyanides are incompatible with acids. Exemptions may apply.

**MARINE TRANSPORT**
Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

| | |
|---|---|
| **UN No:** | 1710 |
| **Dangerous Goods Class:** | 6.1 |
| **Packing Group:** | III |
| **Proper Shipping Name:** | TRICHLOROETHYLENE |

**AIR TRANSPORT**
Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

| | |
|---|---|
| **UN No:** | 1710 |
| **Dangerous Goods Class:** | 6.1 |
| **Packing Group:** | III |
| **Proper Shipping Name:** | TRICHLOROETHYLENE |

## 15. REGULATORY INFORMATION

**This material is not subject to the following international agreements:**
Montreal Protocol (Ozone depleting substances)
The Stockholm Convention (Persistent Organic Pollutants)
The Rotterdam Convention (Prior Informed Consent)
International Convention for the Prevention of Pollution from Ships (MARPOL)

**This material is subject to the following international agreements:**
Basel Convention (Hazardous Waste)

- Halogenated organic solvents

- All components of this product are listed on or exempt from the New Zealand Inventory of Chemical (NZIoC).

**HSNO Approval Code:** HSR001555

| | |
|---|---|
| Approved handler | Yes |
| Location test certificate | Yes |
| Fire extinguishers | No |
| Signage | No |
| Emergency response | No |

Hazardous atmosphere zone No

## 16. OTHER INFORMATION

Reason for issue: Minor Text Changes

This information was prepared in good faith from the best information available at the time of issue. It is based on the present level of research and to this extent we believe it is accurate. However, no guarantee of accuracy is made or implied and since conditions of use are beyond our control, all information relevant to usage is offered without warranty. The manufacturer will not be held responsible for any unauthorised use of this information or for any modified or altered versions.

If you are an employer it is your duty to tell your employees, and any others that may be affected, of any hazards described in this sheet and of any precautions that should be taken.

Safety Data Sheets are updated frequently. Please ensure you have a current copy.