1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name
TRICHLOROETHYLENE STABILISED

Product Code
A1265

Company Name
NUPLEX SPECIALTIES a division of Nuplex Industries (Aust) Pty Ltd (ABN 25 000 045 572)

Address
49 - 61 Stephen Road, BOTANY NSW 2019
New Zealand: NUPLEX SPECIALTIES NZ Limited, Level 3 Millennium Centre, 602C Great South Road Ellerslie, Auckland 1051
NEW ZEALAND

Emergency Tel.
Australia: 1800 022 037 (24H)
New Zealand: 0800 154 666 (24H)

Telephone/Fax Number
Telephone: Australia: +61 (02) 9839 4000(BH); New Zealand: +64 (09) 583 6694(BH) Fax number: Australia: +61 (02) 9674 6225; New Zealand: +64 (09) 571 0542

Email
compliance@nuplex.com.au

Recommended Use
Industrial solvent and metal degreasing agent.

2. HAZARDS IDENTIFICATION

Hazard Classification
Australia:
Classified as Hazardous according to criteria of National Occupational Health & Safety Commission (NOHSC), Australia.

New Zealand:
Classified as Hazardous according to the New Zealand Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001.

HSNO Classification:
6.1D - Substance that is acutely toxic (inhalation).
6.3A - Substance that is irritating to the skin.
6.4A - Substance that is irritating to the eye.
6.6B - Substance that is a suspected human mutagen.
6.7A - Substance that is known or presumed human carcinogen.
6.9B - Substance that is harmful to human target organs or systems (inhalation).
9.1D - Substance that is slightly harmful in the aquatic environment.

Hazard Statement Codes:
H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
H373 May cause damage to organs through prolonged or repeated exposure by inhalation.
H413 May cause long lasting harmful effects to aquatic life.

Precautionary Statement Codes - Prevention:
P102 Keep out of reach of children.- This statement applies only where the substance is
available to the general public.
P103 Read label before use.- This statement applies only where the substance is available
to the general public.
P104 Read Safety Data Sheet before use.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe mist, vapours or spray.
P264 Wash 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.
P280 Wear protective gloves, eye protection and face protection.

Precautionary Statement Codes - Response:
GENERAL:
P101 If medical advice is needed, have product container or label at hand.- This statement
applies only where the substance is available to the general public.
P308+P313 If exposed or concerned: Get medical advice/attention.
INGESTION:
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.
P331 Do NOT induce vomiting.
INHALATION:
P304+P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for
breathing.
P331 Call a POISON CENTER or doctor/physician if you feel unwell.
P332+P313 If skin irritation occurs: Get medical advice/attention.
EYES:
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact
lenses, if present and easy to do. Continue rinsing.
P391 Collect spillage.
SKIN:
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P362 Take off contaminated clothing and wash before re-use.

Precautionary Statement Codes - Storage:
P405 Store locked up.

Precautionary Statement Codes - Disposal:
P501 In the case of a substance that is in compliance with a HSNO approval other than a
Part 6A (Group Standards) approval, a label must provide a description of one or more
appropriate and achievable methods for the disposal of a substance in accordance with the
Hazardous Substances (Disposal) Regulations 2001. This may also include any method of
disposal that must be avoided.
See Section 13 for disposal details.

Risk Phrase(s)
R45 May cause cancer.
R67 Vapours may cause drowsiness and dizziness.
R68 Possible risk of irreversible effects.
R36/38 Irritating to eyes and skin.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic
environment.

Safety Phrase(s)
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Name</th>
<th>CAS</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Trichloroethylene</td>
<td>79-01-6</td>
<td>100%</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

**Inhalation**
If inhaled, remove from contaminated area. Apply artificial respiration if not breathing. Seek medical attention.

**Ingestion**
Do NOT induce vomiting. Wash out mouth with water. Seek immediate medical attention.

**Skin**
If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If symptoms develop seek medical attention.

**Eye**
If in eyes, immediately hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Seek immediate medical attention.

**First Aid Facilities**
Eye wash station and normal washroom facilities.

**Advice to Doctor**
Treat symptomatically.

**Other Information**
For advice, contact a Poisons Information Centre (Phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

5. FIRE FIGHTING MEASURES

**Suitable Extinguishing Media**
Use carbon dioxide, dry chemical, and foam or water mist.

**Hazards from Combustion Products**
Not combustible.

**Hazchem Code**
22

**Precautions in connection with Fire**
Fire-fighters should wear full protective clothing and self contained breathing apparatus (SCBA) operated in positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

**Emergency Procedures**
Wear appropriate personal protective equipment and clothing to prevent exposure. Extinguish or remove all sources of ignition and stop leak if safe to do so. Increase
ventilation. Evacuate all unprotected personnel. If possible contain the spill. Place inert absorbent, non-combustible material onto spillage. Use clean non-sparking tools to collect the material and place into suitable labelled containers for subsequent recycling or disposal. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Use in a well ventilated area. DO NOT store or use in confined spaces. Build up of mists or vapours in the atmosphere must be prevented. Avoid breathing in spray or mists or vapours. When dealing with this product, repeated or prolonged skin exposure without protection should be prevented in order to lessen the possibility of skin disorders. It is essential that all who come into contact with this material maintain high standards of personal hygiene ie. Washing hands prior to eating, drinking, smoking or using toilet facilities.

Conditions for Safe Storage
Store in a cool, dry well-ventilated area away from oxidising agents, foodstuffs, and clothing and out of direct sunlight. Keep containers closed when not in use and securely sealed and protected against physical damage. Inspect regularly for deficiencies such as damage or leaks. Do NOT pressurise, cut, heat or weld containers as they may contain hazardous residues. For information on the design of the storeroom, reference should be made to Australian Standard AS/NZS 4452: The storage and handling of toxic substances. Reference should also be made to all State and Federal regulations.

8. EXPOSURE CONTROLS/PERSOAL PROTECTION

National Exposure Standards
National Occupational Health And Safety Commission (NOHSC), Australia Exposure Standards: Substance TWA STEL Notices
ppm mg/m³ ppm mg/m³
Trichloroethylene 10 54 40 216 Sk
New Zealand Occupational Safety and Health Service (OSH) Workplace Exposure Standards:
Substance TWA STEL Notices
ppm mg/m³ ppm mg/m³
Trichloroethylene 50 269 200 1070

TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.
STEL (Short Term Exposure Limit): The average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.
'Sk' Notice: Absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur.

Biological Limit Values
No biological limit allocated.

Engineering Controls
Provide sufficient ventilation to keep airborne levels below the exposure limits. Where vapours or mists are generated, particularly in enclosed areas, and natural ventilation is inadequate, an local exhaust ventilation system is required.

Respiratory Protection
If engineering controls are not effective in controlling airborne exposure then respiratory protective equipment should be used suitable for protecting against airborne contaminants. Final choice of appropriate breathing protection is dependant upon actual airborne concentrations and the type of breathing protection required will vary according to individual circumstances. Expert advice may be required to make this decision. Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices.

Eye Protection
Safety glasses with side shields, goggles or full-face shield as appropriate recommended. Final choice of appropriate eye/face protection will vary according to individual circumstances i.e. methods of handling or engineering controls and according to risk assessments undertaken. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.

**Hand Protection**
Wear gloves of impervious material. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

**Body Protection**
Wear gloves of impervious material. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**
Colourless, volatile liquid.

**Odour**
Chloroform-like.

**Melting Point**
Not applicable.

**Boiling Point**
86-88°C.

**Solubility in Water**
Slight.

**Specific Gravity**
1.47 (H₂O = 1)

**pH Value**
Not available.

**Vapour Pressure**
7.87 kPa (20°C)

**Vapour Density (Air=1)**
4.54 (Air = 1)

**Flash Point**
Not applicable

**Flammability**
Practically non-flammable. Can burn in the presence of a continuous ignition source.

**Auto-Ignition Temperature**
Not applicable.

**Flammable Limits - Lower**
Not applicable.

**Flammable Limits - Upper**
Not applicable.
10. STABILITY AND REACTIVITY

Chemical Stability
Stable under normal use conditions.

Incompatible Materials
None known.

Hazardous Decomposition Products
Can decompose to dichloroethylene, phosgene, carbon monoxide and chloroacetylenes on contact with strong alkalis. Photoreactive.

Hazardous Reactions
Hazardous polymerisation will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicology Information
Oral LD50 (mouse): 2402 mg/kg
Oral Lowest Lethal Dose (human): 7000 mg/kg
Inhalation Lowest Toxic Concentration (human): 160 ppm/83 min - hallucinations, distorted perceptions
Inhalation Lowest Lethal Concentration (man): 2900 ppm
SKIN (rabbit): 2 mg/24 hr - severe
EYES (rabbit): 20 mg/24 hr - moderate
Animal studies of chronic exposure at high oral doses have shown kidney, liver and central nervous system effects.
Non-mutagenic or only weakly mutagenic in a variety of test system.

Inhalation
Inhalation of product vapours may cause irritation of the nose, throat and respiratory system.

Ingestion
Ingestion of this product may irritate the gastric tract causing nausea and vomiting.

Skin
Irritating to skin resulting in redness and itching.

Eye
Irritating to eyes. On eye contact this product will cause tearing, stinging, blurred vision, and redness.

Chronic Effects
Prolonged or repeated skin contact may cause defatting leading to dermatitis. Vapour is harmful to health on prolonged exposure.

Mutagenicity
Classified as a Category 3 Mutagen according to National Occupational Health and Safety Commission (NOHSC), Australia.
Classified as a 6.6B - Substance that is a suspected human mutagen by ERMA, New Zealand.

Carcinogenicity
Classified as a Category 2 Carcinogen according to National Occupational Health And Safety Commission (NOHSC), Australia.
Classified as a 6.7A - Substance that is known or presumed human carcinogen by ERMA, New Zealand.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Persistence / Degradability
No data is available for this material.

Mobility
No data is available for this material.

Environmental Protection
Do not allow product to enter drains, waterways or sewers.

13. DISPOSAL CONSIDERATIONS

Disposal Considerations
Product Disposal:
Product wastes are controlled wastes and should be disposed of in accordance with all applicable local and national regulations. This product can be disposed through a licensed commercial waste collection service. It can be sent to an approved high temperature incineration plant for disposal. Large volumes may be re-distilled by solvent recovery contractors.

Personal protective clothing and equipment as specified in Section 8 of this SDS must be worn during handling and disposal of this product. The ventilation requirements as specified in the same section must also be followed, and the precautions given in Section 7 of this SDS regarding handling must also be followed.

Do not dispose into the sewerage system. Do not discharge into drains or watercourses or dispose where ground or surface waters may be affected.

In New Zealand, the disposal agency or contractor must comply with the New Zealand Hazardous Substances (Disposal) Regulations 2001. Further details regarding disposal can be obtained on the ERMA New Zealand website under specific group standards.

Container Disposal:
The container or packaging must be cleaned and rendered incapable of holding any substance. It can then be disposed of in a manner consistent with that of the substance it contained. In this instance the packaging can be disposed through a commercial waste collection service.

Alternatively, the container or packaging can be recycled if the hazardous residues have been thoroughly cleaned or rendered non-hazardous.

In New Zealand, the packaging (that may or may not hold any residual substance) that is lawfully disposed of by householders or other consumers through a public or commercial waste collection service is a means of compliance with regulations.

14. TRANSPORT INFORMATION

Transport Information
Australia:
This material is classified as a Division 6.1 (Toxic Substance) Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (7th Edition).

Class 6 Dangerous Goods are incompatible in a placard load with any of the following:
- Class 1, Explosives
- Class 3, Flammable Liquids, if the Class 3 dangerous goods are nitromethane
- Class 5, Oxidizing Substances and Organic Peroxides, if the Class 6 material is a fire risk substance
- Class 8, Corrosive Substances, if the Class 6 dangerous goods are cyanides and the Class 8 dangerous goods are acids

And are incompatible with food and food packaging in any quantity.

New Zealand:
This material is classified as a Class 6.1 – Toxic substance according to NZS 5433:2007 Transport of Dangerous Goods on Land.

Must not be loaded in the same freight container or on the same vehicle with:
- Class 1, Explosives

And are incompatible with food and food packaging in any quantity.

Note 1: Cyanides (Class 6.1) must not be loaded in the same freight container or on the same vehicle with acids (Class 8).

Must not be loaded with in the same freight container; and on the same vehicle must be
separated horizontally by at least 3 metres unless all but one are packed in separate
freight containers with:
- Class 5.1, Oxidizing substances
- Class 5.2, Organic peroxides
Goods of packing group II or III may be loaded in the same freight container or on the
same vehicle if transported in segregation devices with:
- Class 5.1, Oxidizing substances
- Class 5.2, Organic peroxides
And are incompatible with food and food packaging in any quantity.

U.N. Number
1710

Proper Shipping Name
TRICHLOROETHYLENE

DG Class
6.1

Packing Group
III

Hazchem Code
22

Packaging Method
3.8.6.1RT8

IERG Number
37

15. REGULATORY INFORMATION

Regulatory Information
Australia:
Classified as Hazardous according to criteria of National Occupational Health & Safety
Commission (NOHSC), Australia.
Classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of
Medicines and Poisons (SUSMP).

Poisons Schedule
S6

National and or International Regulatory Information
New Zealand:
Classified as Hazardous according to the New Zealand Hazardous Substances (Minimum Degrees
All components of this product are listed on the New Zealand Inventory of Chemicals
(NZIoC) or exempted.
HSNO CCID Name: Ethene, trichloro-

HSNO Approval Number
HSR001555

Hazard Category
Irritant, Carcinogenic (Category 2), Mutagen (Category 3), Dangerous for the environment

Australia (AICS)
All components of this product are listed on the Australian Inventory of Chemical
Substances (AICS) or exempted.

16. OTHER INFORMATION
Date of preparation or last revision of MSDS
MSDS Reviewed: February 2011
Supersedes: March 2006

Contact Person/Point
For specialist advice in emergencies: Australia 1800 022 037; New Zealand 0800 154 666.

IMPORTANT ADVICE: This MSDS summarizes our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including its use in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact Nuplex Industries (Aust) Pty Ltd. Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

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End of MSDS

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