



Safety Data Sheet

Date of Issue: 20.07.2020

Date of Expiry: 20.07.2025

1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name: ECP Limited
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Product	Tetrachloroethylene		Code	52101, 52109, 301D, A97028
CAS#	HSNO#	UN #	DG Class/es	Packing group #
127-18-4	HSR001551	1897	6.1	III

Recommended use: Laboratory Investigations

2: Hazards identification

New Zealand hazards classification: 6.1E (All), 6.1E (O), 6.1E (I), 6.3A, 6.4A, 6.7A, 6.9B (All), 6.9B (O), 6.9B (I), 9.1A (All), 9.1A (A), 9.1B (F), 9.1B (C), 9.2C, 9.3B.

2.1 GHS Classification

Acute toxicity, Oral (Category E)
Eye irritation (Category A)
Carcinogenicity (Category B)
Aquatic toxicity (Acute or Chronic) (Category D)

2.2 GHS Label elements, including precautionary statements

Hazard Pictogram



Signal word

Warning

Hazard statement(s)

H303 May be harmful if swallowed.
H320 Causes eye irritation.
H351 Suspected of causing cancer.
H401 Toxic to aquatic life.

Precautionary statement(s)

Prevention

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P264 Wash skin thoroughly after handling.
P273 Avoid release to the environment.
P281 Use personal protective equipment as required.

Response

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.
P337 + P313 If eye irritation persists: Get medical advice/attention.

Storage

P405 Store locked up.

Disposal

P501 Dispose of contents/container to an approved waste disposal plant.

3: Composition/information on ingredients

Substance/mixture: substance

3.1 Substances

Hazardous components

Component	Classification	Concentration
Tetrachloroethylene	6.1 E; 6.4 A; 6.7 B; 9.1 D; H303, H320, H351, H401 Concentration limits: $\geq 20\%$: STOT SE 3, H336	$\leq 100\%$

4: First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

Narcosis. Liver injury may occur. Kidney injury may occur.

5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits Table

Component	CAS No.	Value	Control parameters	Basis
Tetrachloroethylene	127-18-4	WES- STEL	150 ppm 1005 mg/m ³	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
	Remarks	Known carcinogen		
		WES- TWA	50 ppm 335 mg/m ³	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
		Known carcinogen		

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type or respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards.

9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	
Form	: liquid, clear
Colour	: colourless
b) Melting point/freezing point	
Melting point/range	: -22 °C - lit.
c) Initial boiling point and boiling range	: 121 °C - lit.
d) Vapour pressure	: 25.3 hPa at 25.0 °C
	: 17.3 hPa at 20.0 °C
e) Relative density	: 1.623 g/cm ³ at 25 °C
f) Water solubility	: 0.15 g/l at 25 °C
g) Partition coefficient: n-octanol/water	
log Pow	: 2.53 at 23 °C

10: Stability and reactivity

10.1 Incompatible materials

Strong oxidizing agents, strong bases.

10.2 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions:
Carbon oxides, hydrogen chloride gas.

11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - female - 3,385 mg/kg

Skin corrosion/irritation

Skin - Rabbit - Skin irritation - 4 h - OECD Test Guideline 404

Serious eye damage/eye irritation

Eyes - Rabbit - Mild eye irritation - 24 h

Respiratory or skin sensitisation

Mouse - May cause sensitisation by skin contact. - OECD Test Guideline 429

Germ cell mutagenicity

Genotoxicity in vitro - Hamster - ovary - with and without metabolic activation - negative

Genotoxicity in vivo - Mouse - male - Intraperitoneal - negative

Carcinogenicity

Limited evidence of carcinogenicity in animal studies

IARC: 2A - Group 2A: Probably carcinogenic to humans

Potential health effects

Inhalation

May be harmful if inhaled. Causes respiratory tract irritation. Vapours may cause drowsiness and dizziness.

Ingestion

May be harmful if swallowed.

Skin

May be harmful if absorbed through skin. Causes skin irritation.

Eyes

Causes serious eye irritation.

Signs and Symptoms of Exposure

Narcosis. Liver injury may occur. Kidney injury may occur.

Additional Information

Repeated dose toxicity - Mouse - female - Oral - Lowest observed adverse effect level - 390 mg/kg
RTECS: KX3850000

12: Ecological information

12.1 Toxicity

Toxicity to fish flow-through test

LC50 - *Oncorhynchus mykiss* (rainbow trout) - 5 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates

EC50 - *Daphnia magna* (Water flea) - 7.50 mg/l - 48 h

Toxicity to algae static test

EC50 - *Skeletonema costatum* - > 16 mg/l - 7 h

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d

Result: 11 % - Not readily biodegradable.

Method: OECD Test Guideline 301C

12.3 Bioaccumulative potential

Bioaccumulation

Lepomis macrochirus (Bluegill) - 21 d - 0.00343 mg/l

Bioconcentration factor (BCF): 49

12.4 Other adverse effects

Toxic to aquatic life with long lasting effects.

13: Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product

14: Transport Information Table

		ADR/RID – European packaging certification	IMDG International Maritime Dangerous Goods Code	IATA – DGR International Air Travel Association – Dangerous Goods Regulations
14.1	UN Number	1897	1897	1897
14.2	UN Proper Shipping name	TETRACHLOROETHYLENE	TETRACHLOROETHYLENE	Tetrachloroethylene
14.3	Transport Hazard Class	6.1	6.1	6.1
14.4	Packaging group	III	III	III
14.5	Environmental Hazards	Yes	Yes	Yes
14.6	Special precautions for user	None		

15: Regulatory information

15.1 Safety, health, and environmental regulations/legislation specific for the substance or mixture

National regulatory information

HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits Group Standard 2006

Tracking Required: not required

Approved Handler Cert.: not required

16: Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company 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 the company has been advised of the possibility of such damages.

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