

Hazard Statements Suspected of causing cancer. Causes skin irritation. May cause an allergic skin reaction. May cause drowsiness or dizziness. Toxic to aquatic life with long lasting effects.

Precautionary Statements Do not handle until all safety precautions have been read and understood. Avoid release to the environment. Wear protective gloves / protective clothing / eye protection / face protection. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF exposed or concerned: Get medical advice/attention.

Section 3. Composition

3.1 Substances

Component	CAS No.	EEC No.	REACH No.	Conc w/w	CLP Classification (1272/2008/CE)
Tetrachloroethylene	127-18-4	204-825-9	01-2119475329-28-XXXX	>99.5%	Skin Irrit. 2, Skin Sens. 1, Carc. 2, STOT SE 3 (D), Aquatic Chronic 2

Section 4. First Aid

4.1 Description of first aid measures

Eyes	Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. OBTAIN MEDICAL ATTENTION.
Skin	Thoroughly wash off skin with soap and water. Remove contaminated clothing immediately and wash before re-use. Unless contact has been slight OBTAIN MEDICAL ATTENTION
Inhalation	Remove from exposure. Keep warm and at rest. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY.
Ingestion	If conscious give plenty of water to drink. Induce vomiting. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY.
Personal protection for first aiders	Wear protective gloves / eye protection.

4.2 Most important symptoms and effects, both acute & delayed.

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed.

No further relevant information available.

Section 5. Fire Fighting

5.1 Extinguishing media

Extinguishing Media	Consider what other flammable materials are present and act accordingly. Use water spray to keep fire exposed containers cool.
Unsuitable Media	Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards	May evolve toxic fumes if involved in a fire.
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5.3 Advice for firefighters

Advice for firefighters	Evacuate area immediately. Keep up wind. Avoid exposure to toxic vapours and fumes. Fire-fighters should wear protective clothing and breathing apparatus.
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Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Protection	Avoid breathing vapour. Use approved personal protective equipment. Evacuate area immediately. Do not allow general use of area until it is safe to do so. Beware : vapour is heavier than air and will tend to accumulate at low spots.
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6.2 Environmental precautions

Environmental Keep material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs.

6.3 Methods and material for containment and cleaning up

Major Spillage Contain and absorb on inert material. Transfer absorbent to salvage container for removal. Wash area down with detergent and copious amounts of water.

Minor Spillage Contain and absorb on inert material. Transfer absorbent to container for removal. Allow solvent to evaporate in remote area, then dispose of absorbent as solid chemical waste. Wash area down with detergent and copious amounts of water.

6.4 Reference to other sections

See section 8.2 for information on protective equipment and section 13 for information on disposal.

Section 7. Storage & Handling

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Do not breath vapours. Do not allow to contaminate clothing.

Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits.

7.2 Conditions for safe storage, including any incompatibilities

Well ventilated, cool, dry storage . Protect from direct sunlight. Protect against moisture to prevent decomposition and corrosion.

7.3 Specific end use(s)

See section 1.2.

Section 8. Workplace Exposure & Personal Protection

8.1 Control parameters

Component	CAS No	Concentration	Workplace Exposure Limits			
			Long Term (8hr TWA)	Short Term 15min period		
Tetrachloroethylene	127-18-4	>99.5%	50.0 ppm	100.0 mg/m-3	345.0 ppm	689.0 mg/m-3

Exposure data source(s) IOELV: Indicative Occupational Exposure Limit Value.

8.2 Exposure controls

Respiratory Protection Use L.E.V. or natural ventilation to maintain vapour concentrations below exposure limits. If not, use a well maintained chemical cartridge organic vapour respirator, or use self contained breathing apparatus.

Hand Protection Use solvent resistant gloves.

Eye Protection Use tightly fitting chemical splash proof glasses or goggles.

Skin Protection Avoid contact with skin. If skin contact or contamination of clothing is likely, protective clothing must be worn.

Special Hazards No special precautions required.

Section 9. Physical & Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance Clear colourless liquid.

Odour Ethereal.

pH Not applicable

Boiling Point 122.2°C

Melting Point -23.3°C

Flash Point Not applicable

Upper Flammable Limit Not applicable

Lower Flammable Limit Not applicable

Auto Ignition Not applicable

Explosive Properties No.

Oxidising Properties No.

Vapour Pressure 10mmHg @ 20°C

Relative Density	1.5960
Water Solubility	0.01%

9.2 Other information

No data available.

Section 10. Stability & Reactivity

10.1 Reactivity	No data available.
10.2 Chemical Stability	Stable under normal conditions
10.3 Possibility of hazardous reactions	No data available.
10.4 Conditions to Avoid	Hot surfaces and naked flames.
10.5 Incompatible Materials	Strong oxidising agents, strong bases
10.6 Hazardous Decomposition Products	No data available.

Section 11. Toxicological Information

11.1 Information on toxicological effects

Eyes	Both the vapour and liquid are, irritating to the eyes but unlikely to cause serious injury.
Skin	It is an irritant to the skin producing dermatitis. Skin absorption may be an important exposure route producing toxic effects similar to inhalation.
LD50 Skin	10000mg/kg Rabbit
Ingestion	Ingestion may cause nausea, vomiting, gastric pain and diarrhoea.
LD50 Oral	3000mg/kg Rat
Inhalation	Exposure to vapour concentrations above the occupational exposure limits will produce irritation of the eyes, nose, throat and respiratory tract. High concentrations of vapour will result in headaches, dizziness, exhaustion mental instability, drowsiness and paralysis. Fatal cases of inhalation exposure have occurred.
LD50 Inhalation	3786ppmV(gas) Rat (4 hours)
TCLo	Not available
Carcinogenicity	There is limited evidence to suggest that tetrachloroethylene is carcinogenic in animals. Carcinogen - category 2.
Mutagenicity	Not considered to be a mutagen.
Reproductive Effects	It is considerably embryotoxic, but only weakly teratogenic with a low incidence of malformations.
Other Information	Usually there is a latent period of several hours before the onset of symptoms.

Section 12. Ecological

12.1 Toxicity	Toxic to aquatic organisms and may cause long term adverse effects in the aquatic environment.
LC50 Algal	Not available
LC50 Crustacea	7.5mg/l Daphnia magna (48 hours)
LC50 Fish	4.9mg/l Rainbow Trout (96 hours)
12.2 Persistence and degradability	No data available.
12.3 Bioaccumulative potential	No data available.
12.4 Mobility in soil	No data available.
12.5 Results of PBT & vPvB assessment	Assessment not required.
12.6 Other adverse effects	None known at present.

Section 13. Disposal Considerations

13.1 Waste treatment methods

Disposal Methods	Dispose of in a licensed incinerator for organic solvents. Do not dispose of as domestic waste. Never dispose of into water courses or sewerage systems.
Contaminated Packaging	Use a licensed waste disposer.

Section 14. Transport Information

14.1 UN Number	1897
14.2 Proper Shipping Name	Tetrachloroethylene
14.3 Transport classes	
UN classification	6.1
Subsidiary hazard(s)	None
Transport category	2
ADR Hazard ID	60
Tunnel Restriction Code	E
14.4 Packing Group	III
14.5 Environment hazards	Marine pollutant.
14.6 Special precautions for user	No special precautions required.
14.7 Transport in bulk	Not transported in bulk.



Section 15. Regulatory Information

15.1 Safety, health and environment regulations specific for substance/mixture.

Classification, Labeling & Packaging of Substances & Mixtures Regulations (1272/2008/CE)

Classification Skin corrosion/irritation, category 2; Skin sensitization, category 1; Carcinogenicity, category 2; Spec target organ tox - single, category 3; Hazard to aquatic environment, category 2

Signal word Warning

Hazard Pictograms



Hazard Statements H351, H315, H317, H336, H411

Suspected of causing cancer. Causes skin irritation. May cause an allergic skin reaction. May cause drowsiness or dizziness. Toxic to aquatic life with long lasting effects.

Precautionary Statements P202, P273, P280, P303+P361+P353, P304+P340, P308+P313

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15.2 Chemical safety assessment

Assessment not required.

Section 16. Other Information

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. See sections 11 for toxicological information and section 12 for ecological information.

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