



Material Safety Data Sheet

MSDS has been prepared in accordance with EC Directive 93/112/EEC

Section 1 Chemical Product and Company Identification

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| Name: Tetrachloroethylene | | |
| Synonyms: Perchloroethylene Perklone | Product type: Liquid density certified reference material | Date revised: Oct 2002 Previous: Jul 2000 |
| Manufacturer: H & D Fitzgerald Ltd. Cefn Du, Tremeirchion, St Asaph, Clwyd, LL17 0US UK | | |
| Prepared by: Denis Fitzgerald | | |
| Chemical family: fully halogenated alkene | | |
| Poison schedule number: | | |
| Chemical Formula: CCl ₂ CCl ₂ | | |

Section 2 Composition / Information on ingredients

| Substance name | C.A.S. No. | EINECS No. | % weight | HSCN (Tariff#) |
|---------------------|------------|------------|----------|----------------|
| Tetrachloroethylene | 127-18-4 | 2048259 | 100% | 29032300 |

Section 3 Hazards identification

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| Emergency overview Colourless liquid with distinctive smell. Supplied sealed in a 10ml glass ampoule. Caution: Avoid breathing vapour. Potential environmental effects: None in the quantity supplied in an ampoule. |
| Potential health effects Eyes: Causes irritation Skin: Harmful if absorbed through the skin Ingestion: Harmful if ingested Chronic: Suspect cancer agent (risk of cancer depends upon level & duration of exposure) |

Section 4 First Aid measures

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| Eyes: Wash eyes with water or normal saline. If symptoms develop, seek medical attention. |
| Skin: Wash with soap & water. Air contaminated clothing before reuse. |
| Ingestion: Do not induce vomiting. Seek medical attention without delay. |

Section 5 Fire fighting measures

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| Extinguishing media: Use extinguishing media appropriate for surrounding fire | | |
| Unsuitable media: None | | |
| Lower explosive limit: Not applicable | Upper explosive limit: Not applicable | Flash point: Not applicable |
| Flammability classification: Not flammable | Flame propagation: Not applicable | Ignition in air: Not applicable |
| Combustion hazards: Not combustible | | |
| Protective equipment: If large quantities of tetrachloroethylene are involved wear protective clothing and breathing apparatus. | | |
| Unusual fire hazards: Will generate heavy toxic vapour if strongly heated, with possible degradation to give phosgene (highly toxic) and hydrogen chloride (corrosive). | | |
| Static charge effects: Not applicable | | |

Section 6 Spillage measures

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| Spill cleanup: Ventilate area. Mop up liquid and place in chemical waste container. |
| Environmental precautions: None needed for the quantity supplied in an ampoule. |

Section 7 Handling and storage

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| Handling precautions: None in quantity supplied |
| Storage precautions: Store ampoule in package until ready to use. Store in a cool place if possible (less than 25°C) |

Section 8 Exposure controls and personal protection

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| Exposure guidelines: TLV 25ppm (TWA) / 300ppm for 5 minutes total exposure in a 3 hour period |
| Personal protective equipment |
| Eye/Face protection: Safety glasses are recommended to minimise eye contact. |
| Hands: Wash hands with soap before eating or drinking. |

Section 9 Physical and chemical properties

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| Physical state: Liquid | Colour: Colourless | Odour: strong & characteristic |
| pH: | Freezing point: -22°C | Boiling point: 121°C |
| Miscibility with water: immiscible with water | Density of liquid: ≈1620 kgm ⁻³ | |
| Vapour pressure: 17 mbar at 20°C | Molecular weight: 165.8 | |

Section 10 Stability and reactivity

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| Conditions to avoid: Avoid contact with strong acids. |
| Incompatible materials: Can react with strong acids, strong oxidisers and strong alkalis especially NaOH and KOH. Slowly corrodes aluminium, zinc, and iron. |
| Reactivity: Decomposes slowly when exposed to water to give trichloroacetic and hydrochloric acids. |
| Hazardous decomposition: Will give phosgene (highly toxic) and hydrogen chloride (corrosive) if exposed to very high temperatures. |
| Hazardous polymerisation: None known. |

Section 11 Toxicological information

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| Acute effects | |
| Acute inhalation: | LC ₅₀ (rat) 34.2 g/m ³ /8 hr Can have a narcotic effect. General anaesthetic |
| Acute ingestion: | LD ₅₀ (rat): 2630 mg/kg. Irritates mucus membranes |
| Acute skin: | Rabbit 500 mg / 24 hr Mild |
| Eye irritation: | Rabbit 500 mg / 24 hr Mild |
| Skin irritation: | Causes skin irritation |
| Chronic effects | |
| Chronic inhalation: | Might cause CNS effects. Animal studies suggest that may cause liver & kidney damage or leukaemia. |
| Chronic eye: | Causes irritation, blurred vision and pain. |
| Chronic skin: | As for inhalation |
| Mutagenic effects: | Possible |
| Reproductive effects: | Might be fetotoxic. |
| Sensitisation | Individuals with pre-existing diseases of the eye, skin, respiratory tract, liver, kidneys or CNS may have increased susceptibility. |

Section 12 Ecological information

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| Persistence / degradability: | Not expected to bio accumulate. Quick to evaporate, but may leach into groundwater. Biodegrades to a moderate extent. |
| Ecotoxicity: | Expected to be toxic to aquatic life. LC ₅₀ /96 hr (fish) between 10 & 100 mg/l Unlikely to present any ecological risk in the quantity supplied in an ampoule. |

Section 13 Disposal

For small quantities: Mop up with paper and dispose of as chlorinated waste.
Observe all national and local environmental regulations.

Section 14 Transport information

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| UN Number 1897 | UN shipping name tetrachloroethylene | UN class 6.1 |
| RID / ADR 1897 | IMDG shipping name tetrachloroethylene | ICAO / IATA: class 6.1 packing group III |

Section 15 Regulatory information

European classification:
Label symbols: Harmful & Dangerous to the environment

Section 16 Other information

Reason for revision: changed to 93/112/EEC format

Disclaimer: H&D Fitzgerald believes that data given here is accurate. It is derived from published information about tetrachloroethylene. No warranty, expressed or implied, is intended. The data is provided for your information and consideration when using tetrachloroethylene as a certified reference material for the calibration of density meters. H&D Fitzgerald assumes no legal responsibility for its use.