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SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Product: Tetrachloroethylene (PCE)	**Revision date:** 2026-10-29	**Version:** 1.0	**Brand:** Richest

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product name	Tetrachloroethylene (PCE)
Synonyms	Perchloroethylene; Perchloroethene; PCE
CAS No.	127-18-4
EC No.	204-825-9
Molecular formula	C2Cl4
Molecular weight	165.83 g/mol
Relevant identified uses	Dry cleaning agent; metal cleaning and degreasing solvent; raw material for refrigerant synthesis and organic synthesis
Uses advised against	None
Company	Richest Group Ltd.
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SECTION 2: Hazards identification

GHS Classification	Acute Tox. 5 (Oral); Skin Irrit. 2; Eye Irrit. 2A; Skin Sens. 1; Carc. 1B; STOT SE 3; Aquatic Acute 2; Aquatic Chronic 2
Pictogram(s)	GHS07 (Exclamation mark); GHS08 (Health hazard); GHS09 (Environment)
Signal word	Danger
Hazard statement(s)	H303 May be harmful if swallowed H315 Causes skin irritation H317 May cause an allergic skin reaction

Precautionary statement(s)	P201 Obtain special instructions before use P202 Do not handle until all safety precautions have been read and understood P261 Avoid breathing mist or vapors P264 Wash skin thoroughly after handling P271 Use only outdoors or in a well-ventilated area P272 Contaminated work clothing should not be allowed out of the workplace P273 Avoid release to the environment P280 Wear protective gloves/protective clothing/eye protection/face protection P302+P352 IF ON SKIN: Wash with plenty of water P304+P340+P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell
Other hazards	Decomposes on contact with hot surfaces or open flames, forming toxic gases (hydrogen chloride, phosgene).

SECTION 3: Composition/information on ingredients

Component	Tetrachloroethylene
CAS No.	127-18-4
EC No.	204-825-9
Classification	Acute Tox. 5; Skin Irrit. 2; Eye Irrit. 2A; Skin Sens. 1; Carc. 1B; STOT SE 3; Aquatic Acute 2; Aquatic Chronic 2; H303, H315, H319, H317, H350, H336, H401, H411
Concentration (%)	≥99.9 %

SECTION 4: First aid measures

If inhaled	Remove to fresh air. If not breathing, give artificial respiration. Call a physician.
In case of skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Consult a physician.
In case of eye contact	Rinse cautiously with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Call an ophthalmologist.
If swallowed	Immediately make victim drink water (two glasses at most). Do not induce vomiting. Consult a physician.
Most important symptoms and effects	Skin irritation; eye irritation; allergic skin reaction; drowsiness or dizziness; narcosis. May cause cancer.
Indication of any immediate medical attention	Treat symptomatically. Show this safety data sheet to the doctor in attendance.

SECTION 5: Firefighting measures

Suitable extinguishing media	Water, carbon dioxide (CO2), dry chemical

Unsuitable extinguishing media	None
Special hazards arising from the chemical	Not combustible. Ambient fire may liberate hazardous vapours. Hazardous decomposition products: hydrogen chloride gas, phosgene.
Advice for firefighters	Wear self-contained breathing apparatus and full protective clothing for firefighting. Cool closed containers exposed to fire with water spray.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental precautions	Do not allow material to contaminate ground water system. Do not let product enter drains.
Methods and materials for containment and cleaning up	Soak up with inert absorbent material (e.g. sand, vermiculite). Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

Precautions for safe handling	Use only with adequate exhaust ventilation. Wear personal protective equipment. Avoid contact with skin and eyes. Keep away from open flames, hot surfaces and sources of ignition.
Conditions for safe storage, including any incompatibilities	Keep in a cool, dry, well-ventilated place. Keep container tightly closed. Keep away from strong alkalis, alkaline earth metals, light metals, strong oxidizing agents and strong acids.

SECTION 8: Exposure controls/personal protection

Occupational exposure limit values	ACGIH TLV: TWA 25 ppm, STEL 100 ppm; China PC-TWA: 200 mg/m3
Biological limit values	None established.
Appropriate engineering controls	Ensure adequate ventilation. Provide eyewash stations and safety showers close to the workstation.
Eye/face protection	Wear tightly fitting safety goggles/faceshield.
Skin protection	Wear suitable protective gloves (e.g. butyl rubber, nitrile rubber).
Body protection	Wear appropriate protective clothing to prevent skin contact.
Respiratory protection	Where ventilation is inadequate, wear a suitable respirator with organic vapor filter.
Thermal hazards	None known.

SECTION 9: Physical and chemical properties

Physical state	Liquid, clear
Colour	Colorless
Odour	Ether-like (chloroform-like)
Melting point / freezing point	-22.2 °C
Boiling point or initial boiling point and boiling range	121 °C
Flammability	Not flammable
Lower and upper explosion limit / flammability limit	Not applicable (non-flammable)
Flash point	Not applicable (non-flammable)
Auto-ignition temperature	Not applicable (non-flammable)
Decomposition temperature	Decomposes on contact with hot surfaces or open flames (forms hydrogen chloride and phosgene)
pH	5.0-8.0
Kinematic viscosity	ca. 0.52 mm2/s at 25 °C (dynamic: 0.844 mPa.s at 25 °C)
Solubility	Water: 0.15 g/l at 25 °C; soluble in ethanol, ether and most organic solvents
Partition coefficient n-octanol/water	log Pow: 2.53 at 23 °C
Vapour pressure	17.3 hPa at 20 °C
Density and/or relative density	1.62 g/cm3 at 20 °C
Relative vapour density	5.7 (Air = 1.0)
Particle characteristics	Not applicable (liquid)

SECTION 10: Stability and reactivity

Reactivity	Risk of explosion with alkali metals, aluminum, barium and strong oxidizing agents
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Exothermic reaction with strong alkalis, alkaline earth metals, light metals, powdered metals, oxidizing agents, strong acids and strong bases
Conditions to avoid	Heat, hot surfaces, open flames and other ignition sources
Incompatible materials	Strong oxidizing agents, strong acids, strong bases, alkali metals, aluminum, various plastics

Hazardous decomposition products	Hydrogen chloride gas, phosgene (in the event of fire)

SECTION 11: Toxicological information

Acute toxicity - Oral / Inhalation / Dermal	LD50 Oral - Rat: 3,420 mg/kg (OECD Test Guideline 401) LC50 Inhalation - Rat - 8 h - 34.2 mg/l (34,200 mg/m3) (RTECS) LD50 Dermal - Rabbit - > 3,226 mg/kg (RTECS)
Skin corrosion/irritation	Skin - Rabbit: Skin irritation - 4 h (OECD Test Guideline 404)
Serious eye damage/irritation	Eyes - Rabbit: Mild eye irritation (Draize Test)
Respiratory or skin sensitization	LLNA - Mouse: May cause sensitization by skin contact (OECD 429)
Germ cell mutagenicity	In vitro and in vivo tests: negative (ECHA)
Carcinogenicity	May cause cancer (Carc. 1B)
Reproductive toxicity	No clear evidence of reproductive toxicity in animal studies (ECHA); not classified.
STOT - single exposure	May cause drowsiness or dizziness
STOT - repeated exposure	Liver and kidney effects observed in repeated-dose animal studies (ECHA).
Aspiration hazard	Not classified.

SECTION 12: Ecological information

Toxicity to fish / daphnia / algae	Toxicity to fish: flow-through test LC50 - Oncorhynchus mykiss (rainbow trout) - 5 mg/l - 96 h (ECHA)
Persistence and degradability	Not readily biodegradable; in air degraded by reaction with OH radicals (half-life ca. 96 days); may persist in groundwater.
Bioaccumulative potential	BCF (fish) 25.8-77.1; log Pow 2.53; low bioaccumulation potential.
Mobility in soil	Koc ca. 200-700; low to moderate mobility in soil; volatilizes from water surfaces.
Other adverse effects	Toxic to aquatic life with long lasting effects (H411).

SECTION 13: Disposal considerations

Product disposal methods	Offer surplus and non-recyclable product to a licensed disposal company. Dispose of in accordance with local and national regulations.
Contaminated packaging	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

UN Number (ADR/RID, IMDG, IATA)	UN1897
UN Proper Shipping Name	TETRACHLOROETHYLENE
Transport hazard class(es)	6.1
Packing group	III
Environmental hazards (Marine pollutant)	Yes (ADR/IMDG)
Special precautions for user	None known.

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product	EINECS: Listed (204-825-9) / TSCA: Listed / IECSC: Listed / China Catalog of Hazardous Chemicals 2015: Listed

SECTION 16: Other information

Full text of H-Statements	H303 May be harmful if swallowed H315 Causes skin irritation H317 May cause an allergic skin reaction H319 Causes serious eye irritation H336 May cause drowsiness or dizziness H350 May cause cancer H401 Toxic to aquatic life H411 Toxic to aquatic life with long lasting effects
Revision date	2026-10-29
Version	1.0

Abbreviations and acronyms: CAS: Chemical Abstracts Service; EC: European Commission; EINECS: European Inventory of Existing Commercial Chemical Substances; ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road; RID: Regulation concerning the International Carriage of Dangerous Goods by Rail; IMDG: International Maritime Dangerous Goods; IATA: International Air Transport Association; TWA: Time Weighted Average; STEL: Short Term Exposure Limit; LD50: Lethal Dose 50%; LC50: Lethal Concentration 50%; EC50: Effective Concentration 50%; PBT: Persistent, Bioaccumulative and Toxic; vPvB: very Persistent and very Bioaccumulative; SDS: Safety Data Sheet.

References: ECHA - European Chemicals Agency, https://echa.europa.eu/; IPCS - International Chemical Safety Cards (ICSC), http://www.ilo.org/; HSDB - Hazardous Substances Data Bank; eChemPortal - OECD Global Portal to Information on Chemical Substances; ERG - Emergency Response Guidebook by U.S. DOT.

Disclaimer: The information in this SDS is only applicable to the specified product and is provided in good faith. It is based on the knowledge available to Richest Group Ltd. at the date of issue and is intended to describe the product for the purposes of health, safety and environmental requirements only. It does not constitute any guarantee of the properties of the product. Richest Group Ltd. shall not be held liable for any damage resulting from handling or from contact with the above product.