Richest Group
No. 999, Jiangyue Rd, Minhang, Shanghai 201114, China
Tel: 0086 21 5017 5386
E-mail: inquiry@richest-group.com
Web: www.richest-group.com

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Product: Tetrasodium Pyrophosphate (TSPP)	**Revision date:** 2026-10-29	**Version:** 1.0	**Brand:** Richest

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

Product name	Tetrasodium Pyrophosphate (TSPP)
Synonyms	Sodium pyrophosphate tetrabasic; Sodium diphosphate tetrabasic; E450(iii)
CAS No.	7722-88-5
EC No.	231-767-1
Molecular formula	Na4P2O7
Molecular weight	265.90 g/mol
Relevant identified uses	Food additive (emulsifier, buffer, sequestrant); industrial raw material
Uses advised against	None
Company	Richest Group Ltd.
Address	No. 999, Jiangyue Rd, Minhang, Shanghai 201114, China
Telephone	+86 21 5017 5386
WhatsApp	+86 13472638548
E-mail	inquiry@richest-group.com
Website	www.richest-group.com
Emergency telephone number	+86 13472638548

SECTION 2: Hazards identification

GHS Classification	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3
Pictogram(s)	GHS07 (Exclamation mark)
Signal word	Warning
Hazard statement(s)	H315 Causes skin irritation H319 Causes serious eye irritation H335 May cause respiratory irritation
Precautionary statement(s)	P261 Avoid breathing dust/fume/gas/mist/vapours/spray P264 Wash skin thoroughly after handling

Other hazards	None known.

SECTION 3: Composition/information on ingredients

Component	Tetrasodium pyrophosphate
CAS No.	7722-88-5
EC No.	231-767-1
Classification	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H315, H319, H335
Concentration (%)	≤100 %

SECTION 4: First aid measures

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.
Most important symptoms and effects	Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. Effects due to ingestion may include: nausea, vomiting.
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	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	None
Special hazards arising from the chemical	Not combustible. Hazardous decomposition products formed under fire conditions - Oxides of phosphorus, Sodium oxides.
Advice for firefighters	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency	Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to

procedures	safe areas. Avoid breathing dust.
Environmental precautions	Do not let product enter drains.
Methods and materials for containment and cleaning up	Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

Precautions for safe handling	Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. Provide appropriate exhaust ventilation at places where dust is formed.
Conditions for safe storage, including any incompatibilities	Keep container tightly closed in a dry and well-ventilated place. Hygroscopic.

SECTION 8: Exposure controls/personal protection

Occupational exposure limit values	TWA 5 mg/m3 (USA. ACGIH TLV; USA. NIOSH REL; California PEL)
Biological limit values	No biological exposure index (BEI) established.
Appropriate engineering controls	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Eye/face protection	Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).
Skin protection	Handle with gloves (nitrile rubber, minimum layer thickness 0.11 mm, break through time 480 min). Gloves must be inspected prior to use. Wash and dry hands after use.
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 N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls.
Thermal hazards	No specific thermal hazards under normal conditions of use.

SECTION 9: Physical and chemical properties

Physical state	Solid (powder)
Colour	White

Odour	Odourless
Melting point / freezing point	ca. 985 °C (anhydrous)
Boiling point or initial boiling point and boiling range	Not applicable (inorganic salt)
Flammability	Not combustible
Lower and upper explosion limit / flammability limit	Not applicable (non-combustible)
Flash point	Not applicable
Auto-ignition temperature	Not applicable (non-combustible)
Decomposition temperature	Hydrolyzes slowly in aqueous solution to orthophosphate
pH	10.3 (1 % solution)
Kinematic viscosity	Not applicable (solid)
Solubility	Soluble in water; insoluble in ethanol
Partition coefficient n-octanol/water	Not applicable (inorganic salt)
Vapour pressure	Negligible (inorganic solid)
Density and/or relative density	2.53 g/cm3 at 25 °C
Relative vapour density	Not applicable (solid)
Particle characteristics	White powder

SECTION 10: Stability and reactivity

Reactivity	No dangerous reactions known under normal conditions of use.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No hazardous reactions known.
Conditions to avoid	Exposure to moisture (hygroscopic).
Incompatible materials	Strong oxidizing agents, strong acids
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions - Oxides of phosphorus, Sodium oxides

SECTION 11: Toxicological information

Acute toxicity - Oral / Inhalation / Dermal	LD50 Oral - Rat - > 300 - < 2,000 mg/kg LD50 Dermal - Rabbit - 7,940 mg/kg

Skin corrosion/irritation	Skin - Rabbit - Causes skin irritation
Serious eye damage/irritation	Eyes - Rabbit - Causes serious eye irritation
Respiratory or skin sensitization	Not a skin sensitizer; no sensitization effects known
Germ cell mutagenicity	Ames test negative; not mutagenic in available in vitro tests
Carcinogenicity	No component of this product present at levels greater than or equal to 0.1 % is identified as a carcinogen by IARC, NTP or OSHA.
Reproductive toxicity	Not classified based on available data
STOT - single exposure	May cause respiratory irritation (dust)
STOT - repeated exposure	Not classified
Aspiration hazard	Not applicable (solid)

SECTION 12: Ecological information

Toxicity to fish / daphnia / algae	Toxicity to fish: LC50 - other fish - 1,380 mg/l - 96 h Toxicity to daphnia: EC50 - Daphnia magna (Water flea) - 391 mg/l - 48 h
Persistence and degradability	Inorganic substance; hydrolyzes in water to orthophosphate (biodegradation testing not applicable)
Bioaccumulative potential	Not expected to bioaccumulate (inorganic, highly water soluble)
Mobility in soil	Highly water soluble; phosphate is adsorbed onto soil particles and sediments
Other adverse effects	May contribute to eutrophication of surface waters (phosphate)

SECTION 13: Disposal considerations

Product disposal methods	Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Contaminated packaging	Dispose of as unused product.

SECTION 14: Transport information

UN Number (ADR/RID, IMDG, IATA)	Not regulated as dangerous goods
UN Proper Shipping Name	Not regulated as dangerous goods
Transport hazard class(es)	Not regulated as dangerous goods

Packing group	Not regulated as dangerous goods
Environmental hazards (Marine pollutant)	No
Special precautions for user	No special precautions required during transport.

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product	EINECS: Listed (231-767-1) / TSCA: Listed / IECSC: Listed

SECTION 16: Other information

Full text of H-Statements	H315 Causes skin irritation H319 Causes serious eye irritation H335 May cause respiratory irritation
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.