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SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Product: Trisodium Citrate Dihydrate	**Revision date:** 2026-10-29	**Version:** 1.0	**Brand:** Richest

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

Product name	Trisodium Citrate Dihydrate
Synonyms	Citric acid trisodium salt; Sodium citrate; E331
CAS No.	68-04-2
EC No.	200-675-3
Molecular formula	C6H5Na3O7·2H2O
Molecular weight	294.10 g/mol
Relevant identified uses	Food additive (buffer, emulsifier, sequestrant); industrial raw material
Uses advised against	None
Company	Richest Group Ltd.
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SECTION 2: Hazards identification

GHS Classification	Not classified as hazardous according to Regulation (EC) No 1272/2008
Pictogram(s)	None
Signal word	None
Hazard statement(s)	None
Precautionary statement(s)	None
Other hazards	None known.

SECTION 3: Composition/information on ingredients	
Component	Trisodium citrate dihydrate
CAS No.	68-04-2
EC No.	200-675-3
Classification	Not classified
Concentration (%)	≤100 %

SECTION 4: First aid measures	
If inhaled	If breathed in, move person into fresh air. If not breathing, give artificial respiration.
In case of skin contact	Wash off with soap and plenty of water.
In case of eye contact	Flush eyes with water as a precaution.
If swallowed	Never give anything by mouth to an unconscious person. Rinse mouth with water.
Most important symptoms and effects	May cause respiratory tract, skin or eye irritation. May be harmful if swallowed.
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 flammable or combustible. Hazardous decomposition products formed under fire conditions - Carbon oxides, 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 procedures	Avoid dust formation. Avoid breathing vapours, mist or gas. Use personal protective equipment. Ensure adequate ventilation.
Environmental precautions	Do not let product enter drains.

Methods and materials for containment and cleaning up	Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

Precautions for safe handling	Provide appropriate exhaust ventilation at places where dust is formed. Avoid contact with skin and eyes.
Conditions for safe storage, including any incompatibilities	Keep container tightly closed in a dry and well-ventilated place.

SECTION 8: Exposure controls/personal protection

Occupational exposure limit values	None established (no occupational exposure limit values known)
Biological limit values	No biological exposure index (BEI) established.
Appropriate engineering controls	Use mechanical exhaust or laboratory fume hood to avoid exposure. General industrial hygiene practice.
Eye/face protection	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). Gloves must be inspected prior to use. Wash and dry hands after use.
Body protection	Choose body protection in relation to its type, to the concentration and amount of the product at the specific workplace.
Respiratory protection	Respiratory protection is not required. Where protection from nuisance levels of dusts is desired, use type N95 (US) or type P1 (EN 143) dust masks.
Thermal hazards	No specific thermal hazards under normal conditions of use.

SECTION 9: Physical and chemical properties

Physical state	Crystalline powder or granular crystals
Colour	White
Odour	Odourless
Melting point / freezing point	ca. 150 °C (loses crystal water; decomposes on further heating)
Boiling point or initial boiling point and boiling range	Not applicable (decomposes before boiling)
Flammability	Not combustible
Lower and upper explosion limit /	Not applicable (non-combustible)

flammability limit	
Flash point	Not applicable
Auto-ignition temperature	Not applicable (non-combustible)
Decomposition temperature	Decomposes on heating above ca. 150 °C (loss of crystal water)
pH	7.5 - 9.0 (5 % w/v solution)
Kinematic viscosity	Not applicable (solid)
Solubility	Water solubility 434 g/l at 20 °C - freely soluble; insoluble in ethanol
Partition coefficient n-octanol/water	log Pow: -1.72 (estimated for citric acid; not relevant for the salt)
Vapour pressure	Negligible (inorganic salt)
Density and/or relative density	Bulk density: ca. 0.8-1.1 g/cm3 (grade dependent)
Relative vapour density	Not applicable (solid)
Particle characteristics	White crystalline powder or granules

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	Heat and moisture.
Incompatible materials	Strong oxidizing agents, strong bases, reducing agents
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions - Carbon oxides, Sodium oxides

SECTION 11: Toxicological information

Acute toxicity - Oral / Inhalation / Dermal	LD50 Intraperitoneal - Rat - 1,548 mg/kg (RTECS). Oral toxicity is expected to be very low (citrate is a physiological metabolite; food additive E331).
Skin corrosion/irritation	Skin - Rabbit - No skin irritation - 4 h (OECD Test Guideline 404)
Serious eye damage/irritation	Eyes - Rabbit - No eye irritation - 72 h (OECD Test Guideline 405)
Respiratory or skin sensitization	Maximisation Test - Guinea pig - Does not cause skin sensitisation (OECD Test Guideline 406)
Germ cell mutagenicity	Genotoxicity in vitro - Ames test - S. typhimurium - with and without metabolic activation - negative

Carcinogenicity	No component of this product present at levels greater than or equal to 0.1 % is identified as a carcinogen by IARC or ACGIH.
Reproductive toxicity	Not classified; citrate is a physiological metabolite
STOT - single exposure	Not classified
STOT - repeated exposure	Not classified
Aspiration hazard	Not applicable (solid)

SECTION 12: Ecological information

Toxicity to fish / daphnia / algae	Toxicity to fish: semi-static test LC50 - Oncorhynchus kisutch - > 10 mg/l - 24 h Toxicity to daphnia: static test EC50 - Dreissena polymorpha (zebra mussel) - > 50 mg/l - 48 h
Persistence and degradability	Readily biodegradable (citrate is readily mineralized in the environment)
Bioaccumulative potential	Not expected to bioaccumulate (log Pow < 0)
Mobility in soil	Highly mobile in soil (very soluble in water)
Other adverse effects	None known

SECTION 13: Disposal considerations

Product disposal methods	Offer surplus and non-recyclable solutions to a licensed disposal company. Dispose of in accordance with local and national regulations.
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 (200-675-3) / TSCA: Listed / IECSC: Listed

SECTION 16: Other information

Full text of H-Statements	None (not classified as hazardous)
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.