

Safety Data Sheet (SDS)

Product name: Tree nutrient

This SDS is compliant with GB/T 17519-2013 and the 9th version of GHS.

Revision Date: July 4, 2023

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1. Identification of the substance/preparation and of the company/undertaking

Product name: Tree nutrient

Manufacturer/Supplier: NANJING MIAO RUN SEN INDUSTRIAL CORP. LTD.

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Further information obtainable from:

Information in case of emergency: Emergency phone number in China (24h): +86-025-83209860

Recommended use of the chemical and restrictions on use: It is used for maintaining of plant nutrition. Restrictions on use: Do NOT use it in an application which may contaminate food or do harm to human health.

2. Hazards identification

Emergency overview:

Pale yellow liquid, odorless. The product is not flammable, and has no special danger.

GHS hazard classification per GB 30000. 2-2013 ~ GB 30000. 29-2013:

Physical hazards: Not classified

Health hazards: Not classified

Environmental hazards: Not classified

Label elements

Pictogram: Not applicable.

Signal word: Not applicable.

Hazard Statement:

No relevant GHS classification for this product.

Prevention Precautionary Statements:

No special requirements.

Response Precautionary Statements:

No special requirements.

Storage precautionary statements:

No special requirements.

Disposal precautionary statements:

No special requirements.

Physical and chemical hazards: Pale yellow liquid, odorless. The product is not flammable, and has no special danger.

Health hazards: Not classified.

Environmental hazards: Not classified.

Other hazards: No information available.

3. Composition/information on ingredients

Product description: substance (); mixture (√)

Ingredient (s)	CAS No.	% by weight
Water	7732-18-5	98.785
Poly(L-glutamic acid)	25513-46-6	0.5
Nitrogen	7727-37-9	0.27
Phosphorus oxide	1314-56-3	0.18
Magnesium	7439-95-4	0.105
Potassium oxide	12136-45-7	0.09
Iron	7439-89-6	0.03
Zinc	7440-66-6	0.02
Phosphorus	7723-14-0	0.02

4. First aid measures

Persons using this product should consult a physician or other medical professional if an accident involving this product in injury. Specific first-aid measures are as follows:

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if discomfort occurs.

Skin Contact: Wash with plenty water. If skin irritation occurs: Get medical help. Take off contaminated clothing and wash it before reuse.

Eyes Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical help.

Ingestion: Rinse mouth. Do not induce vomiting without professional instruction. Get medical help if you feel unwell.

Acute effect and delayed effect:

Acute effect: Not found.

Delayed effect: Not found.

Personal protective equipment: Wear protective gloves/protective clothing/eye protection/face protection when necessary.

Indication of any immediate medical attention and special treatment needed: Treat according to symptoms and exposure dose.

5. Fire-fighting measures

Extinguishing Media: This product is not flammable, as for a fire caused by surrounding ignition sources, choose proper extinguishers according to fire types. Seek advice from local fire-fighting authority.

Unsuitable Extinguishing Media: Reinforced liquid (straight stream).

Special hazards arising from the chemical: The product is not flammable, and has no special danger.

Special Fire-Fighting Method:

If there is no danger, remove all sources of ignition.

Extinguish fire from upwind, and the fire extinguishing method should be appropriate to the situation in the surroundings.

Cool surrounding facilities, etc. with water spray.

Remove containers from fire area if it can be done without risk.

Special actions for fire-fighters: Firefighters must wear self-contained breathing apparatus and full protective equipment. Check whether the protective equipment is in good condition before use.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Personal precautions: Use proper personal protective equipment as indicated in Section 8.

Emergency procedures: Due to the nature of this product, there are no special requirement.

Environmental Precautions: Keep collected waste out of municipal sewers and open bodies of water. Comply with local and national laws and regulations.

Measures for Cleaning/Collection:

Due to the nature of this product, there are no special measure for collection.

Collect it into a proper container for disposal.

Rinse away any residue with plenty of water.

7. Handling and storage

Precautions for safe handling:

Wash hands thoroughly after handling.

Storage:

Requirements to be met by storerooms: Keep container tightly sealed in a dry and well-ventilated place.

Incompatible materials: No information available.

Packing material: No information available.

Additional Information: The storeroom should be equipped with proper facilities for accidental leakage and fire.

8. Exposure controls/personal protection

Occupational Exposure Limits:

Ingredients	OELs (mg/m ³) (GBZ 2.1-2019)			ACGIH
	MAC	PC-TWA	PC-STEL	TLV-TWA
Phosphorus oxide (CAS: 1314-56-3)	1 mg/m ³	--	--	--
Phosphorus (CAS: 7723-14-0)	--	0.05 mg/m ³	0.1 mg/m ³	0.1 mg/m ³

Monitoring Method: The hazardous substances should be monitored per GBZ 159 "Sampling code for monitoring of hazardous substances in workplace air ". The well-accepted monitoring methods of other countries are also can be adopted.

Biological limit: Not data available.

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

Install washer eyes and safety showers near to the handling and storage area.

Personal Protective Equipment (For workers):

Protection of Hands: Recommend wearing protective gloves for industrial hygienic purpose (e.g. rubber gloves).



Protection of Eyes: Wear safety glasses when liquid may splash.



Respiratory Protection: Use an approved respirator if exposure limits are exceeded or if irritation or other symptoms occur.



Protection of Body: Recommend wearing general working clothing.



General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

9. Physical and chemical properties

General Information	
Form	Liquid
Color	Pale yellow
Odor	Odorless
pH	6.5-6.8
Boiling Range	No data available
Melting point/Melting range	No data available
Flash point	No data available
Flammable/Explosive Limits-Lower Vol %	No data available
Flammable/Explosive Limits-Upper Vol %	No data available
Density	1.03
Relative Vapor density	No data available
Vapor pressure	No data available
Solubility in/Miscibility with Water	Soluble in water
n-octanol/Water Partition Coefficient	No data available
Ignition temperature	No data available
Self-igniting Temperature	No data available

Decomposition Temperature	No data available
Odor Threshold Value	No data available
Evaporation Rate	No data available
Viscosity	No data available
Particle characteristics	Not applicable
Flammability (solid, gas, etc.)	Non-flammable

10. Stability and reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Possibility of hazardous reactions: No hazardous reactions if stored and handled as prescribed/indicated.

Conditions to Avoid: No information available.

Incompatible materials: No information available.

Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Product Toxicity Data:

Ingredient (s)/Product	CAS No.	LD ₅₀ /LC ₅₀ (median lethal dose)
Water	7732-18-5	No data available
Poly(L-glutamic acid)	25513-46-6	No data available
Nitrogen	7727-37-9	No data available
Phosphorus oxide	1314-56-3	No data available
Magnesium	7439-95-4	Acute toxicity (Oral) LD ₅₀ > 2,000 mg/kg (rat) Data source: ECHA
Potassium oxide	12136-45-7	Acute toxicity (Oral) LD ₅₀ > 2,000 mg/kg (rat) Data source: ECHA Acute toxicity (Dermal) LD ₅₀ > 5,000 mg/kg (rat) Data source: ECHA
Iron	7439-89-6	Acute toxicity (Oral) LD ₅₀ : 98,600 mg/kg (rat) Data source: ECHA
Zinc	7440-66-6	Acute toxicity (Oral) LD ₅₀ > 2,000 mg/kg (rat) Data source: ECHA
Phosphorus	7723-14-0	Acute toxicity (Oral) LD ₅₀ > 2,000 mg/kg (rat) Data source: ECHA
Classification of the whole product:		Not classified

Skin corrosion/irritation: No classification for this product.

Serious eye damage/eye irritation: No classification for this product.

Sensitisation, skin: No classification for this product.

Sensitisation, respiratory: No classification for this product.

Germ cell mutagenicity: No classification for this product.

Carcinogenicity: No classification for this product.

Reproductive toxicity: No classification for this product.

Specific target organ toxicity, single exposure: No classification for this product.

Specific target organ toxicity, repeated exposure:	No classification for this product.
Aspiration hazard:	No classification for this product.
Effects on or via lactation:	No classification for this product.
Toxicokinetics, metabolism and distribution of information:	No relevant information.
Other health hazards:	No relevant information.

12. Ecological information

Ecotoxicity:

Magnesium (CAS: 7439-95-4):

48h-LC₅₀: 2,800 mg/L, fish (Menidia beryllina) (ECHA)

Potassium oxide (CAS: 12136-45-7):

96h-LC₅₀: 917.6 mg/L, fish (Labeo rohita) (ECHA)

Iron (CAS: 7439-89-6):

96h-LC₀>100,000 mg/L, fish (Danio rerio) (ECHA)

Zinc (CAS: 7440-66-6):

96h-LC₅₀: 0.315 mg/L, fish (Thymallus arcticus) (ECHA)

22mo-NOEC: 0.13 mg/L, fish (Oncorhynchus mykiss) (ECHA)

Phosphorus (CAS: 7723-14-0):

96h-LC₅₀>100 mg/L, fish (Oncorhynchus mykiss) (ECHA)

Classification of the whole product: Not classified

Persistence and Degradability: No data available.

Bioaccumulative Potential: No data available.

Mobility in Soil: No data available.

13. Disposal considerations

Disposal methods:

Residual waste: Transport to specialized waste disposal sites for disposal. The waste should be transported to an authorized waste disposal company, and must be disposed of according to “Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste”.

Contaminated packaging: Generally this product will not contaminate the packaging, so the packaging can be disposed of as non-hazardous waste.

Cautions for disposal:

Do not allow product to reach sewage system.

Do not throw it into any open bodies of water.

It is recommended to use landfill method to dispose of waste.

14. Transport Information

DOT/ Air-Transportation- IATA/ICAO/Sea-Transportation-IMO/IMDG:

Proper Shipping Name: Not applicable

UN Code: Not applicable

Hazard Class: Not applicable

Packing Group: Not applicable

Packing Group Symbol: Not applicable

Marine Pollutant (Yes/No): No

EMS NO.: Not applicable

Note:

Transportation vehicles should be equipped with the appropriate variety and quantity of fire-fighting equipment and leakage emergency treatment equipment. During transportation, ensure that there is no leaking, collapsing and damage of containers. During transportation, it should be protected from exposure, rain and high temperature. Keep away from fire and heat sources when you stop. Transport vehicles and boats must be dry and have good rain protection. The vehicle should be cleaned after the vehicle has been transported.

15. Regulatory information

Laws and Regulations of China:

General rule for classification and hazard communication of chemicals (GB 13690-2009):

Physical hazards: Not classified

Health hazards: Not classified

Environmental hazards: Not classified

The Principle of Classification of Transport Packaging Groups of Dangerous Goods (GB/T 15098-2008): Not applicable.

Dangerous Chemicals List (GB 12268-2012): Not applicable.

Dangerous chemicals directory (2015):

Is it listed in Hazardous Chemicals List (2015 Edition) (Yes/No): No.

Is it compliant with the principle of Hazardous Chemicals List (2015 Edition) (Yes/No): No.

Production Safety Law of the People's Republic of China: As for safe production and management, emergency handling and legal liability, comply with relevant provisions of this law.

Occupation Disease Prevention Law the People's Republic of China: As for precautions, prevention, management and occupational disease diagnosis, comply with relevant provisions of this law.

The Environment Protection Law of the People's Republic of China: As for the prevention of environment pollution and environment protection, comply with relevant provisions of this law.

International Laws and Regulations:

TSCA (Toxic Substance Control Act):

Ingredient (s)	CAS No.	TSCA Inventory
Water	7732-18-5	Listed
Poly(L-glutamic acid)	25513-46-6	Not listed
Nitrogen	7727-37-9	Listed
Phosphorus oxide	1314-56-3	Listed
Magnesium	7439-95-4	Listed
Potassium oxide	12136-45-7	Listed
Iron	7439-89-6	Listed
Zinc	7440-66-6	Listed
Phosphorus	7723-14-0	Listed

(EC) 1272/2008 Annex VI Table 3.1:

Ingredient(s)	EC No. 1272/2008 Classification	
	CLASS. CODE	HAZARD CODE
Phosphorus oxide (CAS: 1314-56-3)	Skin Corr. 1A	H314
Magnesium (CAS: 7439-95-4)	Pyr. Sol. 1	H250
	Water-react. 1	H260
Zinc (CAS: 7440-66-6)	Aquatic Acute 1	H400
	Aquatic Chronic 1	H410
Phosphorus (CAS: 7723-14-0)	Flam. Sol. 1	H228
	Aquatic Chronic 3	H412

Clean Water Act:

Chemical Name	Reportable Quantities	Hazardous Substances	Priority Pollutants	Toxic Pollutants
Zinc (CAS: 7440-66-6)	454 kg	Listed	Listed	Listed
Phosphorus (CAS: 7723-14-0)	0.454 kg	Listed	Not listed	Not listed

Carcinogenicity categories: Not applicable.

16. Other information

DISCLAIMER:

All the information of this SDS is true and effective, and only for reference. Our company will not control the way how people use it, neither will we be responsible for any consequence. The users shall decide how to properly use the product or adopt certain production way for some special purpose. The above-mentioned precautionary measures are helpful to avoid damage to the property or life safety during the operation or use of this product.

References: Globally Harmonized System of Classification and Labelling of Chemicals (GHS Rev. 9, 2021), GB/T 16483-2008, GB 13690-2009, GB/T 15098-2008, GB 12268-2012, GB/T 17519-2013, GB 30000.2-2013 ~ 30000.29-2013, Dangerous chemicals directory (2015), etc.

Full description of some acronyms:

GHS-Globally Harmonized System of Classification and Labelling of Chemicals

CAS-Chemical Abstracts Service

EINECS-European Inventory of Existing Commercial Chemical Substances

ACGIH- American Conference of Governmental Industrial Hygienists

OSHA-Occupational Safety and Health Administration

IARC- International Agency for Research on Cancer

IMO-International Maritime Organization

IMDG-International Maritime Dangerous Goods

IATA-International Air Transport Association

ICAO-International Civil Aviation Organization

TSCA-Toxic Substances Control Act

ECHA- European Chemicals Agency

NITE-CHRIP- Japan National Institute of Technology and Evaluation-Chemical Risk Information Platform

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