

MATERIAL SAFETY DATA SHEET (MSDS)

Plant Immune Elicitor (T27)

Product Code: T27

Revision Date: 2026-03-12

Revision Number: 1.0

Prepared in Accordance with: GB/T 16483, GB/T 17519

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

Item	Details
Product Name	Plant Immune Elicitor
Product Code	T27
Company Name	Shaanxi Agrinorm Import And Export Co., Ltd.
Address	Room 1801, Unit 4, Building 1, Shangfu North District, Yicui Garden, No. 31, Zhangba 2nd Road, Xi'an High-Tech Zone, Xi'an, Shaanxi, China
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Emergency Phone	+86-29-81131922
Email	info@agrinorm.com.cn
WhatsApp	+86 17396658583
Official Websites	https://agrinorm.en.alibaba.com
Recommended Use	Amino Acid + Chitosan + Alginate Oligosaccharide Bio Liquid Fertilizer;
Restrictions on Use	Not for human/animal consumption; use only as an agricultural input or raw material as applicable.

SECTION 2: Hazards identification

Emergency Overview

- Black liquid, non-flammable under available data.
- May cause mild eye irritation, skin irritation with frequent/prolonged contact, and gastrointestinal irritation if ingested.

GHS Classification & Label Elements

Category	Details
GHS Classification	Not classified as hazardous under GHS criteria.
Signal Word	None
Hazard Statements	No GHS hazard statements applicable.
Precautionary Statements	- P264: Wash hands thoroughly after handling. - P280: Wear protective gloves, eye protection. - P305+P351+P338: If in eyes: Rinse cautiously with water for several minutes. - Remove contact lenses if present and easy to do. Continue rinsing. - P312: Call a poison center or doctor/physician if you feel unwell.

Specific Hazards

- Physical/Chemical Hazards: No known significant hazards.
- Health Hazards: Mild eye irritation; skin irritation (frequent/prolonged contact); gastrointestinal irritation (if ingested); inhalation exposure is unlikely.
- Environmental Hazards: No known significant environmental hazards.

SECTION 3: Composition/information on ingredients

Item	Details
Product Form	Mixture; black liquid fertilizer product
Component Disclosure	Mixture / agricultural fertilizer product. Main nutrient composition / COA: Free Amino Acids: 120 g/L; Proteins and Peptides: 150 g/L; Total Nitrogen (N): 100 g/L; Chitosan: 3000 mg/L; Alginate Oligosaccharide: 50 g/L. No substances requiring mandatory hazardous ingredient listing are identified based on available data.
Harmful Impurities	None identified based on available data.

SECTION 4: First aid measures

Exposure Route	First-Aid Actions
Inhalation	Move the victim to fresh air and maintain a comfortable, well-ventilated resting position. Administer oxygen if breathing is difficult. Perform artificial respiration if breathing is irregular or stops. Seek medical attention if symptoms persist.
Skin Contact	Wash the affected area thoroughly with plenty of soap and water. Consult a doctor if skin irritation occurs.
Eye Contact	Immediately rinse eyes with a large amount of clean water for at least 15 minutes. Remove contact lenses if present and easily removable; continue rinsing. Protect the unaffected eye. Seek medical attention if irritation develops.
Ingestion	Rinse the mouth with water (only if the victim is conscious). Do not induce vomiting. Immediately call a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Key Symptoms & Effects

- Eye contact: Mild irritation.
- Ingestion: Gastrointestinal irritation.
- Skin contact: Irritation with frequent/prolonged exposure.
- Inhalation: Inhalation exposure is unlikely under normal use; avoid breathing mists or vapors.

Advice for Rescuers

- No special protective measures required for rescuers if basic PPE is worn.
- Provide this MSDS to the attending physician.

SECTION 5: Firefighting measures

Item	Details
Suitable Extinguishing Media	Carbon dioxide (CO ₂), water spray.

Item	Details
Unsuitable Extinguishing Media	Not available.
Fire Hazards	Non-flammable. Avoid inhalation of smoke/fumes during fire.
Hazardous Combustion Products	Carbon oxides (CO, CO ₂), nitrogen oxides (NO _x).
Fire-Fighting Precautions	Cool exposed containers with water spray. Remove undamaged containers from the hazard area if safe to do so. Firefighters must wear full protective clothing and self-contained breathing apparatus (SCBA).
Additional Measures	Avoid allowing fire-extinguishing water to enter drains or watercourses.

SECTION 6: Accidental release measures

Personal Precautions & PPE

- Eliminate all ignition sources (no smoking, away from open flames/hot surfaces).
- Wear appropriate PPE: protective gloves, safety goggles, and chemical-resistant clothing.
- Ensure adequate ventilation in the spill area.

Environmental Precautions

- Prevent release to the environment.
- Notify relevant authorities if large spills enter waterways or sewers.

Containment & Cleanup Methods

- Contain the spill to prevent spreading. Plug leaks if safe to do so.
- Absorb small spills with inert materials (e.g., sand, vermiculite) and transfer to sealed containers for disposal.
- For large spills, dike the area and collect the liquid in corrosion-resistant containers. Dispose of via licensed waste management.

Additional Notes

- Do not allow uncontrolled release of the product into the environment.

SECTION 7: Handling and storage

Safe Handling Precautions

- Avoid contact with eyes and skin.
- Do not inhale mists or vapors.
- Keep away from ignition sources; no smoking.
- Empty containers may retain product residues—handle with caution.
- Avoid mixing with incompatible substances (see below).

Storage Conditions

- Store in the original sealed container.
- Keep in a cool, dry, well-ventilated area.
- Protect from direct sunlight.
- Store separately from food, beverages, and animal feed.

Incompatible Substances

- Oxidizing agents, reducing agents, alkaline substances.

- Packaging/Container Materials
- Not available.

SECTION 8: Exposure controls/personal protection

Item	Details
Occupational Exposure Limits	No established OELs for this product.
Biological Limits	No available data.
Engineering Controls	Ensure adequate general ventilation in handling and storage areas.
Personal Protective Equipment (PPE)	- Hand protection: Nitrile gloves (compliant with EN 374). - Eye/Face protection: Sealed safety goggles (compliant with EN 166). - Skin/Body protection: Chemical-resistant clothing or lab coat. - Respiratory protection: Generally not required (inhalation exposure is unlikely).
Environmental Exposure Controls	Prevent uncontrolled release to the environment.
Hygiene Practices	Follow good industrial hygiene and safety procedures. Wash hands thoroughly after handling.

SECTION 9: Physical and chemical properties

Property	Value
Physical State	Liquid
Appearance	Black liquid
Odor	Characteristic odor; to be confirmed by final QC
pH (Undiluted, 25°C)	6-8
Melting Point	Not applicable
Freezing Point	No available data
Boiling Point	No available data
Flash Point	No available data (non-flammable)
Autoignition Temperature	No available data
Decomposition Temperature	No available data
Vapor Pressure	No available data
Relative Vapor Density (Air=1)	No available data
Density	1.1-1.2 g/mL
Solubility in Water	Fully soluble in water
Octanol/Water Partition Coefficient (Log Pow)	No available data
Explosive Limits (LEL/UEL)	No available data (non-explosive)
Radioactivity	No
Oxidizing Properties	No (components are not classified as oxidizing)

SECTION 10: Stability and reactivity

Item	Details
Reactivity	No available data.
Chemical Stability	Stable under normal handling and storage conditions.
Hazardous Reactions	No polymerization reactions expected.
Conditions to Avoid	Excessive heat.
Incompatible Substances	Oxidizing agents, reducing agents, alkaline substances.
Hazardous Decomposition Products	Carbon oxides (CO, CO ₂), nitrogen oxides (NO _x) when burned.

SECTION 11: Toxicological information

Category	Details
Acute Toxicity	- Oral LD ₅₀ : Not classified (based on available data). - Dermal LD ₅₀ : Not classified (based on available data). - Inhalation LC ₅₀ : Not classified (inhalation exposure is unlikely).
Skin Corrosion/Irritation	Not classified (based on available data).
Serious Eye Damage/Irritation	Not classified (based on available data; may cause mild irritation).
Respiratory/Skin Sensitization	Not classified (based on available data).
Germ Cell Mutagenicity	Not classified (based on available data).
Carcinogenicity	Not classified (based on available data).
Reproductive Toxicity	Not classified (based on available data).
Specific Target Organ Toxicity (Single Exposure)	Not classified (based on available data).
Specific Target Organ Toxicity (Repeated Exposure)	Not classified (based on available data).
Aspiration Hazard	Not classified (based on available data).

SECTION 12: Ecological information

Item	Details
Aquatic Toxicity	- Acute aquatic toxicity: Not classified (based on available data).- Chronic aquatic toxicity: Not classified (based on available data).
Persistence and Degradability	Biodegradable.
Bioaccumulative Potential	No available data.
Mobility in Soil	No available data.
Other Environmental Effects	No available data (ozone depletion potential: Not available).

SECTION 13: Disposal considerations

Item	Details
Waste Disposal Method	Decontaminate containers before reuse or recycling. Dispose of surplus

Item	Details
	product and contaminated materials in accordance with local, regional, and national regulations.
Contaminated	Dispose of as per local regulations (empty containers may retain
Packaging Disposal	residues—handle like the product).

SECTION 14: Transport information

Regulation	Details
	- UN Number: Not regulated - UN Proper Shipping Name: Not regulated
Road Transport (JT/T 617)	- Transport Hazard Class: Not regulated - Packaging Group: Not regulated - Environmental Hazard: Not regulated
Marine Transport (IMDG Code)	- UN Number: Not regulated - UN Proper Shipping Name: Not regulated - Transport Hazard Class: Not regulated - Packaging Group: Not regulated - Marine Pollutant: No
Air Transport (IATA)	- UN Number: Not regulated - UN Proper Shipping Name: Not regulated - Transport Hazard Class: Not regulated - Packaging Group: Not regulated - Environmental Hazard: No
Transport Precautions	Secure containers to prevent shifting during transport. Protect from direct sunlight and extreme temperatures. Do not mix with food, feed, or hazardous materials.

SECTION 15: Regulatory information

Item	Details
China Regulatory Compliance	Prepared in accordance with GB/T 16483 and GB/T 17519. Product is positioned for fertilizer/agricultural input use; comply with destination-market registration, label, and import requirements.
Other Regions	Destination market to be confirmed. Export use must comply with local fertilizer registration, label, and import requirements. Complies with relevant GHS implementation standards for non-hazardous classification based on available data.

SECTION 16: Other information

Abbreviations and Acronyms

Abbreviation	Full Name
SDS	Safety Data Sheet
CAS	Chemical Abstracts Service
GHS	Globally Harmonized System of Classification and Labelling of Chemicals

Abbreviation	Full Name
EC ₅₀	Effective Concentration 50%
LC ₅₀	Lethal Concentration 50%
LD ₅₀	Lethal Dose 50%
OECD	Organisation for Economic Co-operation and Development
IMDG	International Maritime Dangerous Goods Code
IATA	International Air Transport Association
ATE	Acute Toxicity Estimate
BCF	Bioconcentration Factor

Disclaimer

- This SDS applies only to the specified product (Plant Immune Elicitor). It does not apply to mixtures of this product with other substances unless otherwise stated.
- This SDS provides safety information solely for users with appropriate professional training.
- Users must make independent judgments on the applicability of this document under specific use conditions.
- The manufacturer (Shaanxi Agrinorm Import & Export Co., Ltd.) shall not be liable for any harm caused by improper use of this product or SDS.