

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY

Product name:	Trinexapac-ethyl 250G/L EC
Other name:	/
Recommended use of the chemical and restrictions on use	Plant growth regulator
Supplier name:	Shandong Weifang Rainbow Chemical Co., Ltd.
Supplier address:	Binhai Economic Development Area, Weifang, Shandong, China
Supplier phone:	+86-531-88875222, 88875231
Supplier fax:	+86-531-88875232, 88875224
Emergency phone number:	+86-531-88875222

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Acute toxicity - Oral (Category 5)

Acute toxicity - Dermal (Category 5)

Acute toxicity - Inhalation (Category 5)

Serious eye damage/eye irritation (Category 1)

Hazardous to the aquatic environment — Acute Hazard (Category 2)

Hazardous to the aquatic environment — Chronic Hazard (Category 3)

GHS Label elements, including precautionary statements:



Signal word: Danger

Hazard statements:

H303: May be harmful if swallowed

H313: May be harmful in contact with skin

H318: Causes serious eye damage.

H333: May be harmful if inhaled

H401: Toxic to aquatic life.

H412: Harmful to aquatic life with long lasting effects

Precautionary statements:

P273 Avoid release to the environment.

P280 Wear eye protection/face protection.

P301 + P317 IF SWALLOWED: Get medical help.

P302 + P317 IF ON SKIN: Get medical help.

P304 + P317 IF INHALED: Get medical help.

P305 + P354 + P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P317 Get medical help.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards which do not result in classification:

Not available

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3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration
Trinexapac-ethyl	95266-40-3	250G/L
Other ingredients	/	Up to 1L

4. FIRST - AID MEASURES

Description of necessary first aid measures

Ingestion	Do NOT induce vomiting if swallowed.
Inhalation	Remove patient to fresh air. Lie down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply resuscitation. Seek medical assistance soon if irritation persists.
Skin contact	Take off contaminated clothing. Wash skin with plenty of soap and water immediately. Call a poison control center or doctor for treatment advice. Wash contaminated clothing before reuse.
Eye contact	If in eyes, hold eye open and rinse slowly and gently for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a POISON CENTRE or doctor for treatment advice.

Most important symptoms/effects, acute and delayed

To our knowledge, adverse effects in humans have not been reported. Eye contact can result in irritation. In animal tests, reduced activity and shortness of breath were seen at high exposure.

Indication of immediate medical attention and special treatment needed:

A specific antidote against this substance is not known. Treatment is as for a general chemical. Gastric lavage and/or administration of activated charcoal can be considered.

5. FIRE FIGHTING MEASURES

Extinguishing media

Foam, CO₂ or dry chemical. Soft stream water fog or fine water spray if no alternatives. Contain all runoff.

Special hazards arising from the chemical:

The combustion of the product may generate toxic or irritating gases.

Special protective actions for fire-fighters:

Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe or contact smoke, gases or vapors generated.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Keep people away from and upwind of spill/leak. Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment. When dealing with a spillage do not eat, drink or smoke.

Environmental precautions:

Minimise spread. Keep out of drains, sewers, ditches and water ways.

Methods and materials for containment and cleaning up:

Isolate and post spill area. Wear appropriate protective clothing and prevent material from entering waterways. Absorb spills with inert material and place in waste containers. Wash area with water and absorb with further inert material.

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7. HANDLING AND STORAGE

Precautions for safe handling:

Avoid contact with skin and eyes. Ensure adequate ventilation. Keep away from: sparks, open flame and direct sunlight.

Conditions for safe storage, including any incompatibilities:

Store locked up in original packaging. Keep tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Appropriate engineering controls:

Use in ventilated areas. Keep containers closed when not in use

Personal protective equipment:

Eye and face protection: When handling wear eye protection, waterproof gloves, boots, hat and cotton overalls

Skin protection: Wear appropriate chemical resistant clothing to prevent skin contact depending on the extent of exposure. During most normal work situations where exposure to the material cannot be avoided for a limited time span, waterproof pants and apron of chemical resistant material or coveralls of polyethylene (PE) will be sufficient. Coveralls of PE must be discarded after use if contaminated. In cases of appreciable or prolonged exposure, coveralls of barrier laminate may be required.

Respiratory protection: Wear respiratory protection if ventilation is inadequate. Use particle filter with medium efficiency for solid and liquid particles.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color etc.):	Yellow to Brown Transparent Liquid
-Odor:	Soap-like
Odor threshold:	No data available
pH:	3.0-5.0
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point:	No data available
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Upper/lower flammability or explosive limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Density:	0.971-0.991 g/cm ³ (20 °C)
Solubility(ies):	Emulsifiable
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available

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10. STABILITY AND REACTIVITY

Reactivity:

Stable under normal conditions.

Chemical stability:

Relatively stable in neutral, weakly acidic and weakly alkaline media.

Possibility of hazardous reactions:

No dangerous reactions occur if stored and handled according to the indications.

Conditions to avoid:

Extreme temperatures and direct sunlight.

Incompatible materials:

No data available

Hazardous decomposition products:

No hazardous decomposition products result under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Acute health effects:

Eye irritation	Serious irritant
Skin irritation	Non-irritant
Skin sensitization	Not sensitizing

Numerical measures of toxicity:

Acute oral LD ₅₀ :	5000 mg/kg in the rat
Acute dermal LD ₅₀ :	>2000 mg/kg in the rat
Acute inhalation LC ₅₀ :	>6.874 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Fish - 96 hour LC ₅₀	8.84 mg/L (Danio rerio)
Daphnia - 48 hour EC ₅₀	55.48 mg/L (<i>Daphnia magna</i>)
Algae – 72 hour E _r C ₅₀	86.19mg/L (<i>Pseudokirchneriella subcapitata</i>)
Algae – Chronic NOEC	1mg/L ((<i>Pseudokirchneriella subcapitata</i>))
Birds - Acute LD ₅₀	>2000 mg/kg (<i>Colinus coturnix japonica</i>)
Honeybee – Acute contact LD ₅₀	390 µg/bee
Honeybee – Acute oral LD ₅₀	155.61 µg/bee
Earthworm - Acute LD ₅₀	128.05 mg/kg

Persistence and degradability:

Soil degradation: 2017 EU dossier lab studies DT₅₀ range 0.045-0.72 days, DT₉₀ range 0.15-2.4 days, soils=5;

Field studies from 2005 EU dossier DT₅₀ range 6.9-21 days;

Aqueous photolysis DT₅₀ (days) at pH 7: Data for artificial sunlight, 40 deg N, faster at higher temperatures

Aqueous hydrolysis DT₅₀ (days) at 20 °C and pH 7: pH sensitive: Stable at pH 5 and pH 7, DT₅₀ 10.9 days at pH 9

Bioaccumulative potential:

Bioconcentration factor (BCF): 6 L/kg wwt

Mobility in the soil:

H-dependent (lowest adsorption at high pH).

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K_{foc} values determined were: 629 L/kg, $1/n=0.92$ (pH5.9 clay), 284 L/kg, $1/n=1.01$ (pH6.5 sand) 143 L/kg, $1/n=0.92$ (pH6.7 loam) 60 L/kg, $1/n=0.92$ (pH7.5 sandy loam).

Other adverse effects:

Not available.

13. DISPOSAL CONSIDERATIONS

Safe handling of waste residues and disposal methods:

PRODUCT Keep out of drains, sewers, ditches and water ways. Recycle if appropriate facilities/equipment available. Burn in special, controlled high temperature incinerator. Otherwise bury in approved landfill. Follow all local/ regional/ national/ international regulations.

DISPOSAL

CONTAINER Emptied packaging may retain product residue. Observe all labelled safeguards until packaging is destroyed. Store for collection by approved waste disposal service or dispose of by burying in approved landfill.

DISPOSAL

14. TRANSPORT INFORMATION

UN Number: 3082

Road Transport ADR/IRD:

Class:9

Packaging group: III

UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID.N.O.S

Maritime Transport IMDG/IMO:

Class:9

Packaging group: III

UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID.N.O.S

Marine Pollutant (Y/N): Yes

Air transport IATA/ICAO:

Class:9

Packaging group: III

UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID.N.O.S

Special/Environmental Precautions: None known.

15. REGULATORY INFORMATION

The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given.

Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with local laws.

16. OTHER INFORMATION

The data given here is based on current knowledge and experience. The purpose of this safety data sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

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