

Section 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product Name: TRINESTAR®
Product Code: 011-01
UFI Code : JUWT-097V-6005-PKUQ

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product Use: Agriculture – Plant Growth Regulator

1.3 Details of the supplier of the safety data sheet

Company: Life Scientific Ltd,
Block 4,
Belfield Office Park,
Beech Hill Road,
Dublin 4
Ireland
Telephone: +353 (0) 1 2832024
Email: info@lifescientific.com
Web: www.lifescientific.com

1.4 Emergency contact information

In case of Emergency: Tel. NHS 111

Section 2. HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008

Skin Sens	Category 1	H317
Aquatic Chronic	Category 1	H411

2.2 Label Elements

Labelling according to Regulation (EU) 1272/2008

Hazard Pictograms:



Signal Word:

Warning

Hazard Phrases:

H317	May cause an allergic skin reaction
H411	Toxic to aquatic life with long lasting effects

Precautionary Phrases:

P102	Keep out of reach of children.
P261	Avoid breathing spray.
P280	Wear protective gloves/clothing.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.
P501	Dispose of contents/container in accordance with local/national guidelines and recommendations.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.
SP1	Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).

2.3 Other Hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

No substances fulfil the criteria set out in Annex II, Part A of the REACH Regulation (EC) No 1907/2006.

3.2 Mixtures

Chemical Name	CAS No	EC No	Classification (Regulation (EC) 1272/2008)	Concentration (% w/w)
Trinexapac-ethyl	95266-40-3	-	Aquatic Chronic 1; H410	25
Poly(oxy-1,2-ethanediyl), alpha-isotridecyl- omegahydroxy	9043-30-5	500-027-2	Acute Tox. 4, H302 Eye Dam. 1, H318	20 - 30

Section 4. FIRST AID MEASURES

4.1 Description of first aid measures

General information:	In the event of any complaints or symptoms, avoid further exposure. Treat symptomatically. If unwell, consult a physician showing the product container, label or this safety data sheet.
Inhalation:	If inhaled, remove victim to fresh air. If breathing is difficult, give oxygen. If breathing is irregular or stopped, give artificial respiration. Keep patient warm and at rest. Consult a physician or Poison Control Centre immediately.
Ingestion:	DO NOT induce vomiting unless directed to do so by a Poison Control Centre. Never give anything by mouth to an unconscious person. Seek medical advice immediately and show the product container, label or data sheet if possible.
Skin contact:	Remove contaminated clothing immediately. Wash skin immediately with plenty of water. If skin irritation persists, consult a physician. Wash contaminated clothing before re-use.
Eye contact:	Remove contact lenses if present. Rinse immediately with plenty of water, with the eyelid open for at least 15 minutes. Obtain immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: None known.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physicians: Treat symptomatically. There is no specific antidote available

Section 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

For small fires: Use water spray, dry chemical, alcohol-resistant foam or carbon dioxide.
For large fires: Use alcohol-resistant foam or water spray. Avoid using a solid water stream as it may cause the fire to scatter or spread.

5.2 Special hazards arising from the substance or mixture

This product contains combustible organic components. Fire will produce a thick black smoke containing hazards products of combustion. Exposure to products of combustion may be a health hazard. Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.

5.3 Advice for firefighters

Wear self-contained breathing apparatus with full face shield. Fight fire from a safe distance and a protected location.

Section 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use appropriate personal protective equipment see section 8. For safe handling and storage, see section 7.

6.2 Environmental precautions

Prevent further leaking or spillage if safe to do so. Prevent entry into sewers and public waters. In the event of a major spillage, contact an expert immediately. Notify appropriate authorities if the product enters sewers or public waters. Make provisions to collect extinguishing water after fires. If the product contaminates rivers and lakes or drains, inform respective authorities

6.3 Methods and materials for containment and cleaning up

Contain spillage. Use non-combustible absorbent material to absorb spillage and place in container for disposal according to local/national legislation.

6.4 Reference to other sections

See Section 7 for information on handling and storage and Section 8 for information on PPE

Section 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

No special technical protective measures required. No special handling advice required. Read label before use. DO NOT eat, drink or smoke during use. Avoid contact with skin and eyes.

7.2 Conditions for safe storage, including any incompatibilities

No special storage conditions required. Keep containers tightly closed in a cool, dry and well-ventilated area. Keep out of reach of children. Keep separate from food, drink and animal feed.

7.3 Specific end use(s)

None.

Section 8. EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control parameters

Component	Exposure Limit	Value Type	Source
Trinexapac-ethyl	5 mg/m ³	TWA	Supplier

8.2 Exposure controls

Respiratory protection:	No personal respiratory protective equipment normally required. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators
Skin protection:	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Remove and wash contaminated clothing before re-use. Wear as appropriate: Impervious clothing
Hand protection:	Use nitrile rubber or other suitable chemical-resistant gloves. Gloves should have a minimum breakthrough time that is appropriate to the duration of exposure. Gloves should be changed when breakthrough is suspected.
Eye protection:	Eye protection is not usually required. Follow any site-specific eye protection policies. Eye/face protection should be certified to EN 166.
Engineering measures:	Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. If airborne mists or vapours are generated, use local exhaust ventilation controls. Assess exposure and use appropriate additional measures to keep airborne levels below the relevant exposure limit. Where necessary, seek occupational hygiene advice.
Hygiene measures:	When using, DO NOT eat, drink or smoke. Wash hands and face with soap and water before breaks. Shower at the end of the workday. Decontaminate protective clothing before re-use.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance

Form	Liquid
Colour	Yellow to red brown
Odour	Solvent odour

Chemical properties

pH (at 20 °C)	2–6 (1% w/v)
Oxidising properties	Not oxidising
Explosive properties	Not explosive
Density (g/cm ³)	0.96-1.00
Miscibility in water	Miscible
Log P octanol/water at 20°C	No data available
Flash point (°C)	80 °C
Dynamic viscosity	5.45 mPa.s (40 °C)
Surface Tension	28.2–28.5 mN/m (20 °C)

9.2 Other Information

None.

Section 10. STABILITY AND REACTIVITY

10.1 Reactivity

None

10.2 Chemical Stability

Stable under normal storage conditions.

10.3 Possibility of hazardous reactions

None known.

10.4 Conditions to avoid

No decomposition if used as directed

10.5 Incompatible material

Will not occur

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

Section 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

LD ₅₀ oral toxicity rat (male and female)	>5000 mg/kg.
LD ₅₀ dermal toxicity rat (male and female)	>4000 mg/kg.
Acute Inhalation toxicity (LC ₅₀ rat)	> 2.51 mg/L (Exposure time: 4 h)
Eye irritation rabbit	Non- Irritant
Skin irritation rabbit	Non- Irritant
Sensitisation guinea pig	May cause sensitisation by skin contact
Long-term toxicity	No evidence of carcinogenic, teratogenic or mutagenic effects in animal experiments.

11.2 Information on other hazards

Endocrine disrupting properties:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Section 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Ecotoxicity

Toxicity to fish:	LC50 (Oncorhynchus mykiss (rainbow trout)): 24 mg/L Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:EC50 (Daphnia magna Straus): 2.9 mg/L :Exposure time: 48 h
Toxicity to algae/aquatic Plants	ErC50 (Anabaena flos-aquae (cyanobacterium)): 8.3 mg/L Exposure time: 96 h ErC50 (Lemna gibba (gibbous duckweed)): 55 mg/L Exposure time: 7 d

12.2 Persistence and degradability

Biodegradability : Not readily biodegradable.
Stability in water : Degradation half life: 3.9 - 5.5 d
Product is not persistent.

12.3 Bioaccumulative potential

Trinexapac-ethyl does not bioaccumulate

Partition coefficient: noctanol/water: log Pow: -2.1 (25 °C)
log Pow: -0.29 (25 °C)
log Pow: 1.5 (25 °C)

12.4 Mobility in soil

Trinexapac-ethyl has moderate mobility in soil
Stability in soil : Dissipation time: < 0.2 d
Percentage dissipation: 50 % (DT50)
Remarks: Product is not persistent.

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher

12.7 Other adverse effects

No data available

Section 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal procedures Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. Where possible, recycling is preferred to disposal or incineration. If recycling is not practical, dispose of in compliance with local regulations.

Contaminated packaging Empty remaining contents. Triple rinse containers. Add washings to sprayer at time of filling. Do not re-use empty containers. Empty containers should be taken for local recycling or waste disposal.

Section 14. TRANSPORT INFORMATION

Transport the product in accordance with the provisions of ADR for road, RID for rail, IMDG for the sea, and ICAO / IATA for air transport

14.1 UN Number

3082

14.2 UN proper shipping name

Environmentally hazardous substance, liquid, N.O.S., (Trinexapac-ethyl).

14.3 Transport hazard class(es)

9

14.4 Packing group

III

14.5 Environmental hazards

Environmentally hazardous, Marine pollutant

14.6 Special precautions for user

None

14.7 Transport in bulk according to Annex II of Marpol 73/78 and the IBC code

No information available

Section 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulation/legislation specific for the substance or mixture

To avoid risks to human health and the environment, comply with the instructions for use.

15.2 Chemical safety assessment

None

Section 16. OTHER INFORMATION

Full list of relevant hazard and precautionary statements that were not given in full in sections 2 and 3.

H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.

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