

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

1.1. Product identifier

Product name: FREEZE

Product code: 8830

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

Use of substance / mixture: Can be used as a plant growth regulator only.

1.3. Details of the supplier of the safety data sheet

Company name: Headland Agrochemicals

Rectors Lane

Pentre

Flintshire

CH5 2DH

United Kingdom

Tel: +44(0)1244 537370

Fax: +44(0)1244 532097

Email: enquiry@headlandgroup.com

1.4. Emergency telephone number

Emergency tel: +44(0)1244 537370

(office hours only)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: * Eye Irrit. 2: H319; Repr. 1B: H360Df; Aquatic Chronic 2: H411; -: EUH401

Most important adverse effects: Causes serious eye irritation. May damage the unborn child. Suspected of damaging fertility. Toxic to aquatic life with long lasting effects. To avoid risks to human health and the environment, comply with the instructions for use.

2.2. Label elements

Label elements:

Hazard statements: * H319: Causes serious eye irritation.

H360Df: May damage the unborn child. Suspected of damaging fertility.

H411: Toxic to aquatic life with long lasting effects.

EUH401: To avoid risks to human health and the environment, comply with the instructions for use.

Signal words: * Danger

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Hazard pictograms: * GHS07: Exclamation mark

GHS08: Health hazard

GHS09: Environmental



Precautionary statements: * P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P273: Avoid release to the environment.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P501: Dispose of contents/container to hazardous or special waste collection point.

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

*** Hazardous ingredients:**

TETRAHYDROFURFURYL ALCOHOL - REACH registered number(s): 01-2119968921-26-XXXX

EINECS	CAS	PBT / WEL	CLP Classification	Percent
202-625-6	97-99-4	-	Acute Tox. 4: H302; Eye Irrit. 2: H319; Repr. 1B: H360Df	30-60%

TRINEXAPAC-ETHYL

-	95266-40-3	-	Aquatic Chronic 2: H411	10-30%
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POLY(OXY-1,2-ETHANE-DIYL), ALPHA-[2,4,6-TRIS-(1-PHENYLETHYL)-PHENYL]-OMEGA-HYDROXY-

-	99734-09-5	-	Aquatic Chronic 2: H411	10-30%
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DOCUSATE SODIUM

209-406-4	577-11-7	-	Skin Irrit. 2: H315; Eye Dam. 1: H318	1-10%
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Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin. Wash immediately with plenty of soap and water. Consult a doctor if irritation develops.

Eye contact: Bathe the eye with running water for 15 minutes. Remove contact lenses, if present, after the first few minutes, then continue rinsing. Transfer to hospital for specialist examination.

Ingestion: Wash out mouth with water. Do not induce vomiting. Drink several glasses of water or milk. If vomiting occurs, rinse mouth and drink fluids again. Consult a doctor.

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Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Get medical attention if any discomfort continues.

4.2. Most important symptoms and effects, both acute and delayed

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat.

Inhalation: Inhalation of vapours may cause lowered consciousness.

Delayed / immediate effects: No data available.

4.3. Indication of any immediate medical attention and special treatment needed

Immediate / special treatment: Immediate medical attention is required in case of ingestion or eye contact. Show this safety data sheet to the doctor in attendance. There is no known specific antidote for this substance. Gastric lavage and/or administration of activated charcoal can be considered. After decontamination, treatment should be directed at the control of symptoms and the clinical condition.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Dry chemical or carbon dioxide for small fires, water spray or foam for large fires. Avoid heavy hose streams. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: * Vapours of tetrahydrofurfuryl alcohol are heavier than air and may spread along floors. If heated it may form a flammable/slightly explosive vapour-air mixture. In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

5.3. Advice for fire-fighters

Advice for fire-fighters: Approach fire from upwind to avoid hazardous vapours and toxic decomposition products. Fight fire from protected location or maximum possible distance. Dike area to prevent water run off. Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Turn leaking containers leak-side up to prevent the escape of liquid. Avoid and reduce mist formation as much as possible. Eliminate all sources of ignition. In the case of large spills (1 ton or more), alert the appropriate authorities.

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6.2. Environmental precautions

Environmental precautions: Contain the spillage using bunding. Do not discharge into drains or rivers. Wash waters must be prevented from entering surface water drains. Accidental release into water courses must be alerted to the appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Do not use equipment in clean-up procedure which may produce sparks. Surface water drains within close vicinity of the spill should be covered. Spills on the floor or other impervious surface should be absorbed onto an absorptive material such as hydrated lime, universal binder, or other absorbent clays. Collect the contaminated absorbent in suitable containers. Rinse the area with water and industrial detergent. Absorb wash liquid onto absorbent and transfer to suitable containers. Used containers should be properly closed and labelled. Spills which soak into the ground should be dug up and placed in suitable containers. Spills in water should be contained as much as possible by isolation of the contaminated water. The contaminated water must be collected and removed for treatment or disposal. Refer to section 13 of SDS for suitable method of disposal.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS. Refer to section 13 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: * Keep away from sources of ignition and protect from exposure to fire and heat. Inhalation of the product's vapours can cause lowered consciousness, increasing risk when operating machinery and driving. Avoid direct contact with the substance. Material should be handled by mechanical means as much as possible. Ensure there is sufficient ventilation of the area. Exhaust gases should be filtered or treated otherwise. For use as a plant growth regulator, look for precautions and personal protection measures on the officially approved label or other official guidance or policy in force. If these are lacking, see section 8. Remove contaminated clothing immediately after handling, then wash thoroughly and put on clean clothes. Clean protective clothing and protective equipment with soap and water after use. Collect all wash water and dispose of as hazardous waste.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Keep container tightly closed. The storage room should be constructed of incombustible material, closed, dry, ventilated and with impermeable floor. The room should only be used for storage of chemicals, and without access to unauthorised persons or children. Food, drink, feed and seed should not be present. A warning sign reading 'POISON' is recommended. A hand wash station should be available.

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7.3. Specific end use(s)

Specific end use(s): The product is a registered plant growth regulator which may only be used for the applications it is registered for, in accordance with a label approved by the regulatory authorities.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits: No data available.

DNEL/PNEC Values

Hazardous ingredients:

TETRAHYDROFURFURYL ALCOHOL

Type	Exposure	Value	Population	Effect
DNEL	Inhalation	1.4 mg/m ³	-	-
PNEC	Fresh water	1.9 mg/l	-	-
PNEC	Marine water	0.19 mg/l	-	-

TRINEXAPAC-ETHYL

Type	Exposure	Value	Population	Effect
DNEL	-	0.34 mg/kg.bw/day	-	Systemic
PNEC	Aquatic environment	0.041 mg/l	-	-

8.2. Exposure controls

Engineering measures: When used in a closed system, personal protection equipment will not be required. The following is meant for other situations, when the use of a closed system is not possible, or when it is necessary to open the system. Consider the need to render equipment or piping system non-hazardous before opening.

Respiratory protection: In the event of a discharge of the material which produces a heavy vapour or mist, workers must put on officially approved respiratory protection equipment with a universal filter type including particle filter.

Hand protection: Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber. The breakthrough times of these materials for the product are unknown. Replace gloves frequently and limit work done manually.

Eye protection: Safety goggles. Ensure eye bath is to hand.

Skin protection: Waterproof pants and apron of chemical resistant material or coveralls with polyethylene (PE) coating will be sufficient for short time exposure. Coveralls must be discarded after use if contaminated. In cases of prolonged exposure, barrier laminate coveralls may be required.

Environmental: Refer to specific Member State legislation for requirements under Community environmental legislation.

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Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid
Colour: * Various
Odour: Glue-like
Oxidising: Non-oxidising (by EC criteria)
Solubility in water: Dispersible in water
Viscosity: 23 mPa.s at 20°C; 10 mPa.s at 40°C
Flash point°C: 78
Autoflammability°C: 268
pH: 3.4-3.6 (1%, 20°C)
Part.coeff. n-octanol/water: See section 12.3
Relative density: 1.10 g/ml (20°C)

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable at room temperature.

10.3. Possibility of hazardous reactions

Hazardous reactions: * Heating of the product may produce combustible vapour which can form slightly explosive mixtures with air. The vapours can also be harmful and irritating.

10.4. Conditions to avoid

Conditions to avoid: Heat. Direct sunlight. Sources of ignition.

10.5. Incompatible materials

Materials to avoid: * Strong oxidising agents. Strong reducing agents.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes. See subsection 5.2.

Section 11: Toxicological information

11.1. Information on toxicological effects

Toxicity values:

Route	Species	Test	Value	Units
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ORAL	RAT	LD50	>2000	mg/kg
DERMAL	RAT	LD50	>2000	mg/kg
INHALATION	RAT	4H LC50	>5.16	mg/l

Hazardous ingredients:

TETRAHYDROFURFURYL ALCOHOL

ORAL	RAT	LD50	1600	mg/kg
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TRINEXAPAC-ETHYL

DERMAL	RAT	LD50	>4000	mg/kg
INHALATION	RAT	4H LC50	>5.3	mg/l
ORAL	RAT	LD50	4210	mg/kg

DOCUSATE SODIUM

DERMAL	RAT	LD50	>10000	mg/kg
INHALATION	RAT	4H LC50	20	mg/l
ORAL	RAT	LD50	>2100	mg/kg

Relevant hazards for substance:

Hazard	Route	Basis
Serious eye damage/irritation	OPT	Hazardous: calculated
Reproductive toxicity	--	Hazardous: calculated

Symptoms / routes of exposure

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat.

Inhalation: Inhalation of vapours may cause lowered consciousness.

Delayed / immediate effects: No data available.

Other information: * In animal tests, reduced activity and shortness of breath were seen at high exposure.

Section 12: Ecological information

12.1. Toxicity

*** Ecotoxicity values:**

Species	Test	Value	Units
EARTHWORMS (<i>Eisenia fetida</i>)	14d NOEC	>1000	mg/kg.soil
HONEYBEES (<i>Apis mellifera</i>)	48H LD50 oral	90.8	µg/bee

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HONEYBEES (<i>Apis mellifera</i>)	48H LD50 contact	>100	µg/bee
DUCKWEED (<i>Lemna gibba</i>)	7d NOErC	1.0	mg/l
DUCKWEED (<i>Lemna gibba</i>)	7d ErC50	99.1	mg/l
DAPHNIDS (<i>Daphnia magna</i>)	48H EC50	>100	mg/l
ALGAE (<i>Pseudokirchneriella subcapitata</i>)	72H IC50	25.4	mg/l
RAINBOW TROUT (<i>Oncorhynchus mykiss</i>)	96H LC50	54.0	mg/l
RAINBOW TROUT (<i>Oncorhynchus mykiss</i>)	96H NOEC	3.4	mg/l
JAPANESE QUAIL (<i>Coturnix japonica</i>)	14d LC50	>2000	mg/kg

12.2. Persistence and degradability

Persistence and degradability: * Trinexapac-ethyl does not meet the criteria for being readily biodegradable, but it is degraded in the environment. Half-life times are usually less than 1 day in soil. Degradation products are further degraded, but slower. Degradation occurs mainly microbiologically. Tetrahydrofurfuryl alcohol is considered readily biodegradable from the result of a screening test, where 96% of the substance degraded within 120 hours. Hazardous degradation products are not likely.

12.3. Bioaccumulative potential

Bioaccumulative potential: * Tetrahydrofurfuryl alcohol: Log Kow = -0.11. Trinexapac-ethyl: Log Kow at 25°C = 1.5 (pH 5); -0.29 (pH 6.9); -2.1 (pH 8.9). The potential for bioaccumulation is low, given the bioaccumulation factor of Trinexapac-ethyl is 6 for whole fish.

12.4. Mobility in soil

Mobility: * Under normal conditions, Trinexapac-ethyl is considered moderately mobile in soil. Tetrahydrofurfuryl alcohol is expected to have high mobility in soil.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: No data available.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Waste that cannot be reused or chemically reprocessed can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Disposal of packaging: Triple rinse (or equivalent) and offer for recycling or reconditioning. Do not discharge cleaning water to sewer systems. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials. Alternatively, packaging can be delivered to a licensed service for disposal of hazardous waste.

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NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

14.1. UN number

UN number: UN3082

14.2. UN proper shipping name

Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(TRINEXAPAC-ETHYL)

14.3. Transport hazard class(es)

Transport class: 9

14.4. Packing group

Packing group: III

14.5. Environmental hazards

Environmentally hazardous: Yes

Marine pollutant: Yes

14.6. Special precautions for user

Special precautions: Do not discharge to the environment.

Tunnel code: E

Transport category: 3

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport in bulk: The product is not transported in bulk tankers.

Section 15: Regulatory information

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

Specific regulations: * The employer shall assess any risks to the safety or health and any possible effect on the pregnancies or breastfeeding of workers and decide what measures should be taken (Dir. 92/85/EEC). Workers under the age of 18 are not permitted to work with the product. All ingredients in this product are covered by EU chemical legislation. Product Registration Number: MAPP 15871.

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

* indicates text in the SDS which has changed since the last revision.

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Phrases used in s.2 and s.3: EUH401: To avoid risks to human health and the environment, comply with the instructions for use.

H302: Harmful if swallowed.

H315: Causes skin irritation.

H318: Causes serious eye damage.

H319: Causes serious eye irritation.

H360Df: May damage the unborn child. Suspected of damaging fertility.

H411: Toxic to aquatic life with long lasting effects.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.