



PrimoMaxx II[®]



Product registration number: MAPP: 17509 PCS: 05401 UFI: NHNX-RMXN-CC09-3SGX

A soluble concentrate (SL) formulation containing 116.4g/litre trinexapac-ethyl.

For use as a plant growth regulator on amenity areas, managed amenity turf and amenity grassland.

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work. (L or O only)



PRIMO Maxx II[®]

FOR PROFESSIONAL USE ONLY

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

A soluble concentrate (SL) formulation containing 116.4 g/litre trinexapac-ethyl.

Warning

May cause an allergic skin reaction.

Harmful if inhaled.

May cause damage to organs (Gastrointestinal tract) through prolonged or repeated exposure.

Toxic to aquatic life with long lasting effects

Do not breathe mist or vapours.

Wear protective gloves.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTRE/doctor if you feel unwell.

Get medical advice/attention if you feel unwell.

If skin irritation or rash occurs: Get medical advice/attention.

Collect spillage.

Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty triple rinsed clean containers which can be disposed of as non-hazardous waste.

MAPP: 17509 PCS No. 05401 UFI: NHNX-RMXN-CC09-3SGX



Approval Holder and UK Marketing Company

Syngenta UK Ltd
CPC4, Capital Park, Fulbourn,
Cambridge, CB21 5XE
Tel: Cambridge (01223) 883400

Ireland Marketing Company

Syngenta Ireland Limited
Block 6, Cleaboy Business Park,
Old Kilmeaden Road, Waterford, Ireland
Tel: (051) 377203

PROTECT FROM FROST.

SHAKE WELL BEFORE USE.

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The
Voluntary
Initiative

**In case of toxic or transport emergency ring
0044 (0) 1484 538444 any time (24HR).**

This product label is compliant with the CPA
Voluntary Initiative (VI) guidance (UK only).

Product names marked ® or ™, the ALLIANCE FRAME
the SYNGENTA Logo and the PURPOSE ICON
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10 litres

L1089904 GBRI/06A PPE 4163214

IMPORTANT INFORMATION

FOR USE ONLY AS AN HORTICULTURAL PLANT GROWTH REGULATOR

For use on: Managed amenity turf and amenity grassland.
Maximum individual dose: 3.2 litres product/hectare.
Maximum total dose per year: 16 litres product/hectare/year.

Other Specific Restrictions:

A minimum interval of 7 days must be observed between applications.
No more than 28 applications must be carried out on managed amenity turf and amenity grassland per year.

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.

SAFETY PRECAUTIONS (references to COSHH apply to the UK use only)**(a) Operator protection**

Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) AND SUITABLE PROTECTIVE GLOVES when handling the concentrate.

WEAR SUITABLE PROTECTIVE GLOVES when handling contaminated surfaces.

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) AND SUITABLE PROTECTIVE GLOVES when applying by hand-held equipment.

However, engineering controls may replace personal protective equipment if a COSHH assessment shows that they provide an equal or higher standard of protection.

WASH HANDS AND EXPOSED SKIN before meals and after work.

(b) Consumer protection

NOT TO BE USED ON FOOD CROPS

(c) Environmental Protection

Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from hard surfaces and roads).

(d) Storage and disposal

RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of safely.

DIRECTIONS FOR USE

IMPORTANT: This information is approved as part of the Product Label. All instructions within this section must be carefully read in order to obtain safe and successful use of this product.

RESTRICTIONS

PRIMO Maxx II® may cause temporary yellowing of turf. This usually disappears about one week after application. To minimize yellowing and enhance the green colour of turf, apply readily available nitrogen.

In the absence of adequate nutrition the reduction in grass growth produced by PRIMO MAXX II may be favourable to the development of red thread disease.

Grass species

Some darkening of the turf may occur following application of PRIMO MAXX II.

As some discolouration including lightening or scorch may occur to Annual Meadow Grass, care should be taken if Annual Meadow Grass represents a significant composition of the sward.

Stressed Turf

Turf which is stressed, for example through drought, low fertility or pest/disease attack may show signs of damage after application of PRIMO MAXX II. Any signs of damage are only temporary..

DIRECTIONS FOR USE

PRIMO MAXX II for turf growth management reduces the frequency of mowing and the amount of grass clippings by reducing the growth of turfgrasses.

PRIMO MAXX II can be used on well maintained quality sports turf including golf course greens, green surrounds, tees and fairways. Application of PRIMO MAXX II is also permitted on bowling greens and tennis courts as well as winter sports pitches, cricket outfield and polo fields. The use of PRIMO MAXX II is extended to cemeteries, parks and similar areas down to turf. PRIMO MAXX II can only be applied to home and ornamental lawns by a professionally qualified operator. Management of difficult to mow areas, such as sloping ground, and to minimise the need for edging turf along pavements and flower beds are other areas of use for PRIMO MAXX II.

PRIMO MAXX II reaches the growing point through the foliage and it is not washed off by rainfall or irrigation 1 hour after application. Watering-in is not required. For best results PRIMO MAXX II should be applied to high quality turfgrass which receives adequate fertilization and water and is therefore not stressed.

Environmental conditions, management and cultural practices that affect turf growth and vigour (e.g. fertility level, moisture availability, plant height and frequency of mowing, etc.) will influence the response of the turf to PRIMO MAXX II applications.

CROP SPECIFIC INFORMATION

How PRIMO MAXX II works

The active ingredient in PRIMO MAXX II, trinexapac-ethyl, causes a temporary halt to the production of gibberellic acid, a plant growth hormone which is responsible for the top growth of the plant. Trinexapac-ethyl is taken up by the foliage of the grass plant and is translocated systemically to the growing point of the plant. After application the turf grass grows more slowly than in untreated areas, with shorter leaf blades.

PRIMO MAXX II does not control dicotyledonous weeds in turf and these should be controlled as part of a normal turf maintenance programme.

Turf grasses absorb trinexapac-ethyl very rapidly and it is rainfast 1 hour after application. Do not apply to bare ground since PRIMO MAXX II is absorbed through the foliage.

At the recommended rate, on turf cut at 12 mm or more, one application will give a reduction in fresh weight of grass clippings of up to 50% and a reduction in grass height of up to 20% for up to four weeks. Responses on fine turf (cut at up to 6mm) will be less.

Timing

Apply PRIMO MAXX II to actively growing turf. If turf is going into dormancy because of high or low temperatures or lack of moisture, apply a lower rate of PRIMO MAXX II. Do not treat turf under stress from lack of soil moisture, as damage may occur.

The turf must be dry before application. Adequate soil moisture is essential for PRIMO MAXX II to be effective and avoid damage to the turf.

Do not apply during periods of frost or when rain is expected within 1 hour.

Over-Seeding

When using PRIMO MAXX II as part of an over-seeding programme the product should be applied 3-5 days prior to sowing. Subsequent applications of PRIMO MAXX II after over-seeding should not begin until 80-90% grass cover is restored.

Re-Seeding

When using PRIMO MAXX II as part of a re-seeding programme applications can begin at 80-90% ground cover.

General Maintenance

Areas treated should continue to receive regular good maintenance practices including irrigation, fertilization, weed, disease and insect control when necessary and as recommended for quality turf.

Rates of use

Apply PRIMO MAXX II in sufficient water (300 – 1000 litres water per hectare) to provide a uniform and thorough coverage of the turfgrass foliage, using a MEDIUM spray quality (as defined in the BCPC classification scheme).

No significant effect of PRIMO MAXX II is expected on existing broad-leaved plants in the area to be treated. However, avoid application over areas with desired plants (ornamental flower beds etc.)¹

RECOMMENDED APPLICATION RATES¹

Grass Species	Situation of Use		
	Green Bowling green	Tees and fairway type turf (cut at < 18 mm)	Sports field / Out field (cut at >18 mm)
Bent / Fescue /Meadow grass mix (Agrostis / Festuca / Poa sp mix)	0.4 l/ha ²	1.6 l/ha ²	2.4 l/ha ²
Perennial ryegrass (<i>Lolium perenne</i>)		2.4 l/ha	3.2 l/ha

¹ These rates should provide up to 50% suppression of turf growth under good growing conditions for up to 4 weeks with minimal yellowing.

² Where yellowing of *Poa annua* is a concern, use half this rate.

PRIMO MAXX II use rates may need to be reduced by up to 50% less than the recommended rate for the situation of use for turfgrass grown under conditions of low fertility or other factors that stress the turf.

USE OF PRIMO MAXX II WITH LINE MARKING AGENTS

PRIMO MAXX II can extend the duration of marking visibility when applied before or with line marking agents.

Before line marking: Apply in 300 – 1000 litres water per hectare, using the dose of PRIMO MAXX II appropriate to the situation as detailed under 'RECOMMENDED APPLICATION RATES'¹

Marking paint mix: Mix PRIMO MAXX II with water first when combining with latex-based marking agents.

Refer to the marking agents product label for further instructions. Apply PRIMO MAXX II at a rate of 2ml per litre of marking paint mix

MULTIPLE APPLICATIONS

Multiple applications of PRIMO MAXX II can be made each growing season to provide season long growth suppression, but do not exceed a total of 16 litres of product per hectare per year.

MIXING AND SPRAYING

PRIMO MAXX II may be applied with knapsack sprayers, hand sprayers, boom sprayers and spray-gun application devices. Ensure that the sprayer or other applicator is clean and calibrated to give the correct volume and an even application. Add half of the required water to the sprayer. Add the required amount of PRIMO MAXX II and then the remaining water and begin agitation. Thoroughly wash all spraying equipment immediately after use. The diluted product must be used on the day of mixing.

For further information please see www.greencast.co.uk or www.greencast.ie

Section 6 of the Health and Safety at Work Act **Additional Product Safety Information (UK only)**

(This section does not form part of the product label under the Plant Protection Product Regulations 1995.)

The product label provides information on a specific pesticidal use of the product; do not use otherwise, unless you have assessed any potential hazard involved, the safety measures required and that the particular use has 'Extension of Use' approval or is otherwise permitted under the Plant Protection Product Regulations (UK only).

The information on this label is based on the best available information including data from test results.

SAFETY DATA SHEET - v11.0

SECTION 1. IDENTIFICATION OF THE SUBSTANCE, MIXTURE AND OF THE COMPANY/ UNDERTAKING

1.1 Product Identifier

Trade Name: PRIMO MAXX II

Design Code: A19238C

Product Registration number: MAPP 17509, PCS No. 05401

Unique Formula Identifier (UFI): NHNX-RMXN-CCOJ-3SGX

1.2 Relevant Identified Uses of the substance or mixture and uses advised against

Use of the Substance/Mixture: Plant growth regulator

Recommended restrictions on use: professional use

1.3 Details of the supplier of the safety data sheet

Approval Holder and UK Marketing Company

Syngenta UK Limited

CPC4, Capital Park

Fulbourn, Cambridge CB21 5XE

United Kingdom

Telephone: +44 (0) 1223 883400

Telefax: +44 (0) 1223 882195

Ireland Marketing Company

Syngenta Ireland Limited

Block 6, Cleaboy Business Park,

Old Kilmeaden Road, Waterford, Ireland

Telephone: +44 (051) 377203

E-mail address of person responsible for the SDS: customer.services@syngenta.com

1.4 Emergency telephone number

Emergency phone No.: Syngenta +44 1484 538444

Poisons Information Centre of Ireland

Members of Public: +353 (1) 809 2166. (8.00 a.m. to 10.00 p.m. 7 days a week)

Healthcare Professionals: +353 (1) 809 2566 (24-hour service)

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4 - H332: Harmful if inhaled.

Skin sensitisation, Category 1 - H317: May cause an allergic skin reaction.

Specific target organ toxicity - single exposure, Category 3, Respiratory system - H335: May cause respiratory irritation.

Specific target organ toxicity - repeated exposure, Category 2, Gastrointestinal tract - H373: May cause damage to organs through prolonged or repeated exposure.

Long-term (chronic) aquatic hazard, Category 2 - H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms		
Signal Word	Warning	
Hazard Statements	H317	May cause an allergic skin reaction.
	H332	Harmful if inhaled.
	H335	May cause respiratory irritation.
	H373	May cause damage to organs (Gastrointestinal tract) through prolonged or repeated exposure.
	H411	Toxic to aquatic life with long lasting effects.
Precautionary Statements	P260	Do not breathe the mist or vapours.
	P280	Wear protective gloves.
	P304+P340+	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
	P312	Get medical advice/attention if you feel unwell.
	P314	Get medical advice/attention if you feel unwell.
	P333+P313	If skin irritation/rash occurs: Get medical advice/attention.
	P391	Collect spillage.
	P501	Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty triple rinsed clean containers which can be disposed of as non-hazardous waste.

Hazardous components which must be listed on the label:

- (2-methoxymethylethoxy)propanol
- trinexapac-ethyl (ISO)
- 2-methylpropan-1-ol

Additional Labelling

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

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

3.2 Mixtures

Components

Chemical Name	CAS No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
(2-methoxymethylethoxy)propanol	34590-94-8 252-104-2 01-2119450011-60- XXXX	STOT SE 3; H335 (Respiratory system)	>= 30 - < 50

Chemical Name	CAS No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
trinexapac-ethyl (ISO)	95266-40-3 607-752-00-4	Skin Sens. 1B; H317 STOT RE 2; H373 (Gastrointestinal tract) Aquatic Chronic 1; H410 M-Factor (Chronic aquatic toxicity): 1	>= 10 - < 20
calcium dodecylbenzene sulphonate	26264-06-2 247-557-8 01-2119560592-37	Skin Irrit. 2; H315 Eye Dam. 1; H318 Aquatic Chronic 3; H412	>= 3 - < 10
2-methylpropan-1-ol	78-83-1 201-148-0 603-108-00-1 01-2119484609-23	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H336 (Central nervous system) STOT SE 3; H335 (Respiratory system)	>= 3 - < 10

For explanation of abbreviations see section 16.

SECTION 4. FIRST-AID MEASURES

4.1 Description of first aid measures

General advice : Have the product container, label or Safety Data Sheet with you when calling the emergency number, a poison control centre or physician, or going for treatment.

If inhaled : Move the victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a physician or poison control centre immediately.

In case of skin contact : Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.

If swallowed : If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting: contains petroleum distillates and/or aromatic solvents.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: Aspiration may cause pulmonary oedema and pneumonitis.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: There is no specific antidote available. Treat symptomatically. Do not induce vomiting: contains petroleum distillates and/or aromatic solvents.

SECTION 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media :

Extinguishing media - small fires: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Extinguishing media - large fires: Alcohol-resistant foam

Unsuitable extinguishing media: Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting: As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10). Exposure to decomposition products may be a hazard to health. Flash back possible over considerable distance.

5.3 Advice for fire-fighters

Special protective equipment for firefighters: Wear full protective clothing and self-contained breathing apparatus.

Further information : Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Refer to protective measures listed in sections 7 and 8. Keep people away from and upwind of spill/leak. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Remove all sources of ignition. Pay attention to flashback.

6.2 Environmental precautions

Environmental precautions : Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/ national regulations (see section 13). Clean contaminated surface thoroughly. Clean with detergents. Avoid solvents. Retain and dispose of contaminated wash water.

6.4 Reference to other sections

For disposal considerations see section 13., Refer to protective measures listed in sections 7 and 8.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling : No special protective measures against fire required. Avoid contact with skin and eyes. When using do not eat, drink or smoke. For personal protection see section 8.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: Keep containers tightly closed in a dry, cool and wellventilated place. Keep out of the reach of children. Keep away from combustible material. Keep in an area equipped with sprinklers. Keep away from food, drink and animal feedingstuffs. No smoking.

7.3 Specific end use(s)

Specific use(s) : For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
(2-methoxymethylethoxy) propanol	34590-94-8	TWA	50 ppm 308 mg/m ³	2000/39/EC
Further information: Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.				
		OELV - 8 hrs (TWA)	50 ppm 308 mg/m ³	IE OEL
Further information: Identifies the possibility of significant uptake through the skin, indicative				
trinexapac-ethyl (ISO)	95266-40-3	TWA	5 mg/m ³	Syngenta
2-methylpropan-1-ol	78-83-1	OELV - 8 hrs (TWA)	50 ppm 154 mg/m ³	IE OEL
		OELV - 15 min (STEL)	75 ppm 231 mg/m ³	IE OEL

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
(2-methoxymethylethoxy) propanol	Workers	Dermal	Long-term systemic effects	82.5 mg/kg
	Workers	Inhalation	Long-term systemic effects	263 mg/m ³
	Consumers	Dermal	Long-term systemic effects	36 mg/kg
	Consumers	Inhalation	Long-term systemic effects	38 mg/m ³
	Consumers	Oral	Long-term systemic effects	11 mg/kg
castor oil, ethoxylated	Workers	Inhalation	Long-term systemic effects	16.4 mg/m ³
	Workers	Dermal	Long-term systemic effects	4.67 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	2.9 mg/m ³
	Consumers	Dermal	Long-term systemic effects	1.67 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	1.67 mg/kg bw/day
calcium dodecylbenzene sulphonate	Workers	Inhalation	Long-term systemic effects	52 mg/m ³
	Workers	Inhalation	Acute systemic effects	52 mg/m ³
	Workers	Inhalation	Long-term local effects	52 mg/m ³

Substance name	End Use	Exposure routes	Potential health effects	Value
	Workers	Inhalation	Acute local effects	52 mg/m ³
	Workers	Dermal	Long-term systemic effects	57.2 mg/kg
	Workers	Dermal	Acute systemic effects	80 mg/kg
	Workers	Dermal	Long-term local effects	1.57 mg/cm ²
	Workers	Dermal	Acute local effects	1.57 mg/cm ²
2-methylpropan-1-ol	Workers	Inhalation	Long-term systemic effects, Long-term local effects	310 mg/m ³
	Consumers	Inhalation	Long-term systemic effects, Long-term local effects	55 mg/m ³
	Consumers	Oral	Long-term systemic effects, Long-term local effects	25 mg/kg

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
(2-methoxymethylethoxy)propanol	Fresh water	0.1 mg/l
	Marine water	0.01 mg/l
	Intermittent use/release	1 mg/l
	Sewage treatment plant	4 mg/l
	Fresh water sediment	0.386 mg/kg
castor oil, ethoxylated	Marine sediment	0.0386 mg/kg
	Soil	0.0185 mg/kg
	Fresh water sediment	0.0129 mg/kg dry weight (d.w.)
calcium dodecylbenzene sulphonate	Marine sediment	0.00129 mg/kg dry weight (d.w.)
	Soil	0.00258 mg/kg dry weight (d.w.)
	Fresh water	0.28 mg/l
	Marine water	0.458 mg/l
2-methylpropan-1-ol	Freshwater - intermittent	0.05 mg/l
	Sewage treatment plant	5 mg/l
	Fresh water sediment	27.5 mg/kg
	Marine sediment	2.75 mg/kg
	Fresh water	0.4 mg/l
2-methylpropan-1-ol	Sewage treatment plant	10 mg/l
	Soil	0.0699 mg/kg
	Marine sediment	0.152 mg/kg
	Fresh water sediment	1.52 mg/kg
	Marine water	0.04 mg/l

8.2 Exposure controls Engineering Measures:

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. The extent of these protection measures depends on the actual risks in use. Maintain air concentrations below occupational exposure standards. Where necessary, seek additional occupational hygiene advice.

Personal protective equipment

Eye protection : No special protective equipment required.

Hand protection

Material : Nitrile rubber

Break through time : > 480 min

Glove thickness : 0.5 mm

Remarks : Wear protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Skin and body 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

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Suitable respiratory equipment: Respirator with a half face mask.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used. Filter type : Particulates type (P)

Protective measures : The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice.

Environmental exposure controls

Water:

Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state : clear

Colour : yellow

Odour : strong

Odour Threshold : No data available

Melting point/range : No data available

Boiling point/boiling range : No data available

Flammability : No data available

Upper explosion limit / Upper flammability limit: No data available

Lower explosion limit / Lower flammability limit: No data available

Flash point : 78 °C

Method: Pinsky-Martens closed cup, Non-equilibrium method

Auto-ignition temperature : 340 °C

Decomposition temperature : No data available

pH : 2.8. Concentration: 100 % w/v

Viscosity, dynamic : 98 mPa.s (20 °C)

Viscosity, kinematic : No data available

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: octanol/ water: No data available

Vapour pressure : No data available

Density : 1.03 g/cm³ (20 °C)

Relative vapour density : No data available

Particle size : No data available

9.2 Other information

Explosives : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Evaporation rate : No data available

Surface tension : 30.5 mN/m

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

None reasonably foreseeable.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid : No decomposition if used as directed.

10.5 Incompatible materials

Materials to avoid : None known.

10.6 Hazardous decomposition products

Hazardous decomposition products: No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Information on likely routes of exposure: Ingestion, Inhalation, Skin contact, Eye contact

Acute toxicity

Product:

Acute oral toxicity :

LD50 (Rat, female): > 5,000 mg/kg

Acute inhalation toxicity :

LC50 (Rat, male and female): 2.85 - 5.06 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance/mixture is not toxic on inhalation as defined by dangerous goods regulations.

LD50 (Rat, male and female): > 5,000 mg/kg

Acute dermal toxicity :

Components:

trinexapac-ethyl (ISO):

LD50 (Rat, male and female): 4,460 mg/kg

Acute oral toxicity :

LC50 (Rat, male and female): > 5.69 mg/l

Acute inhalation toxicity :

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhalation toxicity

LD50 (Rat, male and female): > 4,000 mg/kg

Acute dermal toxicity :

Assessment: The substance or mixture has no acute dermal toxicity

2-methylpropan-1-ol:

Acute oral toxicity :

LD50 (Rat): 2,830 - 3,350 mg/kg

Acute inhalation toxicity :

LC50 (Rat): > 24.6 mg/l

Exposure time: 4 h

Test atmosphere: vapour

Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity :

LD50 (Rabbit): > 2,000 - 2,460 mg/kg

Skin corrosion/irritation

Product:

Species: Rabbit

Result: No skin irritation

Components:

trinexapac-ethyl (ISO):

Species: Rabbit

Result: No skin irritation

calcium dodecylbenzene sulphonate:

Result: Irritating to skin.

2-methylpropan-1-ol:

Result: Irritating to skin.

Serious eye damage/eye irritation

Product:

Species: Rabbit

Result: No eye irritation

Components:

trinexapac-ethyl (ISO):

Species: Rabbit

Result: No eye irritation

calcium dodecylbenzene sulphonate:

Result: Risk of serious damage to eyes.

2-methylpropan-1-ol:

Result: Risk of serious damage to eyes.

Respiratory or skin sensitisation

Product:

Test Type: mouse lymphoma cells

Species: Mouse

Result: The product is a skin sensitiser, sub-category 1B.

Components:

trinexapac-ethyl (ISO):

Test Type: mouse lymphoma cells

Species: Mouse

Result: Did not cause sensitisation on laboratory animals.

2-methylpropan-1-ol:

Species : Guinea pig

Result : Did not cause sensitisation on laboratory animals.

Remarks : Information given is based on data obtained from similar substances.

Germ cell mutagenicity

Components:

trinexapac-ethyl (ISO):

Germ cell mutagenicity- Assessment: Animal testing did not show any mutagenic effects.

(2-methoxymethylethoxy)propanol:

Germ cell mutagenicity- Assessment: In vitro tests did not show mutagenic effects

Carcinogenicity

Components:

trinexapac-ethyl (ISO):

Carcinogenicity - Assessment: No evidence of carcinogenicity in animal studies.

Reproductive toxicity

Components:

trinexapac-ethyl (ISO):

Reproductive toxicity - Assessment: No toxicity to reproduction

(2-methoxymethylethoxy)propanol:

Reproductive toxicity - Assessment: Animal testing did not show any effects on foetal development.

STOT - single exposure**Components:****2-methylpropan-1-ol:**

Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

Aspiration toxicity**Components:****(2-methoxymethylethoxy)propanol:**

May be harmful if swallowed and enters airways.

STOT - repeated exposure**Components:****trinexapac-ethyl (ISO):**

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

SECTION 12. ECOLOGICAL INFORMATION**12.1 Toxicity****Product:**

Toxicity to fish :

LC50 (*Oncorhynchus mykiss* (rainbow trout)): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:

EC50 (*Daphnia magna* (Water flea)): > 100 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants:

ErC50 (*Raphidocelis subcapitata* (freshwater green alga)): > 100 mg/l
Exposure time: 72 h
NOEC (*Raphidocelis subcapitata* (freshwater green alga)): 100 mg/l
End point: Growth rate
Exposure time: 72 h

Components:**trinexapac-ethyl (ISO):**

Toxicity to fish :

LC50 (*Oncorhynchus mykiss* (rainbow trout)): 68 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:

LC50 (*Aceriomyia*): 6.5 mg/l
Exposure time: 96 h

Toxicity to algae/aquatic plants:

ErC50 (*Raphidocelis subcapitata* (freshwater green alga)): 24.5 mg/l
Exposure time: 96 h
NOEC (*Raphidocelis subcapitata* (freshwater green alga)): 8.0 mg/l
End point: Growth rate
Exposure time: 96 h
ErC50 (*Myriophyllum spicatum* (Eurasian watermilfoil)): 1.2 mg/l
Exposure time: 14 d
EC10 (*Myriophyllum spicatum* (Eurasian watermilfoil)): 0.011 mg/l
End point: Growth rate
Exposure time: 14 d

Toxicity to microorganisms:

EC50 (activated sludge): > 100 mg/l
Exposure time: 3 h

Toxicity to fish (Chronic toxicity):

NOEC: 0.41 mg/l
Exposure time: 35 d
Species: *Pimephales promelas* (fathead minnow)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):

NOEC: 2.4 mg/l
Exposure time: 21 d
Species: *Daphnia magna* (Water flea)
M-Factor (Chronic aquatic toxicity):1

Ecotoxicology Assessment

Acute aquatic toxicity:

Toxic to aquatic life.

calcium dodecylbenzene sulphonate:**Ecotoxicology Assessment**

Chronic aquatic toxicity:

Harmful to aquatic life with long lasting effects.

2-methylpropan-1-ol:

Toxicity to fish :

LC50 (*Pimephales promelas* (fathead minnow)): 1,430 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:

EC50 (*Daphnia pulex* (Water flea)): 1,100 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants:

EC50 (*Raphidocelis subcapitata* (freshwater green alga)): 1,799 mg/l
Exposure time: 72 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):

NOEC: 20 mg/l
Exposure time: 21 d
Species: *Daphnia magna* (Water flea)

12.2 Persistence and degradability

Components:

trinexapac-ethyl (ISO):

Biodegradability: Result: Not readily biodegradable.

Stability in water: Degradation half life: 3.9 - 5.5 d, Remarks: Product is not persistent.

2-methylpropan-1-ol:

Biodegradability: Result: Readily biodegradable.

12.3 Bioaccumulative potential

Components:

trinexapac-ethyl (ISO):

Bioaccumulation: Remarks: Does not bioaccumulate.

Partition coefficient: noctanol/water: log Pow: -2.1 (25 °C), log Pow: -0.23 (25 °C), log Pow: 1.5 (25 °C)

12.4 Mobility in soil

Components:

trinexapac-ethyl (ISO):

Distribution among environmental compartments: Remarks: Moderately mobile in soils

Stability in soil: Dissipation time: < 0.2 d, Percentage dissipation: 50 % (D1=0), Remarks: Product is not persistent.

12.5 Results of PBT and vPvB assessment

Product:

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.

Components:

trinexapac-ethyl (ISO):

Assessment: This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

This substance is not considered to be very persistent and very bioaccumulating (vPvB).

2-methylpropan-1-ol:

Assessment: This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6 Endocrine disrupting properties

Product:

Assessment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(n) 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

Product: 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 practicable, dispose of in compliance with local regulations.

Contaminated packaging: Empty remaining contents. Triple rinse containers. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Waste Code: uncleaned packagings. 15 01 10, packaging containing residues of or contaminated by hazardous substances

SECTION 14. TRANSPORT INFORMATION

14.1 UN number

ADR:	RID:	IMDG:	IATA:
UN 3082	UN 3082	UN 3082	UN 3082

14.2 UN proper shipping name

ADR: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRINEXAPAC-ETHYL)
RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRINEXAPAC-ETHYL)
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRINEXAPAC-ETHYL)
IATA: Environmentally hazardous substance, liquid, n.o.s. (TRINEXAPAC-ETHYL)

14.3 Transport hazard class(es)

ADR:	RID:	IMDG:	IATA:
9	9	9	9

14.4 Packing group

ADR:	RID:	IMDG:
Packing group: III Classification Code: M6 Hazard Identification Number: 90 Labels: 9 Tunnel restriction code: (-)	Packing group: III Classification Code: M6 Hazard Identification Number: 90 Labels: 9	Packing group: III Labels: 9 EmS Code: F-A, S-F
IATA (Cargo)	IATA (Passenger)	
Packing instruction (cargo aircraft): 964 Packing instruction (LQ): Y964 Packing group: III Labels: Miscellaneous	Packing instruction (passenger aircraft): 964 Packing instruction (LQ): Y964 Packing group: III Labels: Miscellaneous	

14.5 Environmental hazards

ADR:	RID:	IMDG:	IATA (Passenger)	IATA (Cargo)
Environmentally hazardous: yes	Environmentally hazardous: yes	Marine pollutant: yes	Environmentally hazardous: yes	Environmentally hazardous: yes

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15. REGULATORY INFORMATION

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII). Conditions of restriction for the following entries should be considered: Number on list 3

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59): Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals: Not applicable

UK REACH List of substances subject to authorisation (Annex XIV): Not applicable

GB Export and import of hazardous chemicals - Prior Informed Consent (PIC) Regulation: Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

	Quantity 1	Quantity 2
E2 ENVIRONMENTAL HAZARDS	200 t	500 t

Other regulations:

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work. Use plant protection products safely. Always read the label and product information before use. Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable. Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

SECTION 16. OTHER INFORMATION

Full text of H-Statements	Full text of other abbreviations
H226 : Flammable liquid and vapour.	Aquatic Chronic : Long-term (chronic) aquatic hazard
H315 : Causes skin irritation.	Eye Dam. : Serious eye damage
H317 : May cause an allergic skin reaction.	Flam. Liq. : Flammable liquids
H318 : Causes serious eye damage.	Skin Irrit. : Skin irritation
H335 : May cause respiratory irritation.	Skin Sens. : Skin sensitisation
H336 : May cause drowsiness or dizziness.	STOT RE : Specific target organ toxicity - repeated exposure
H373 : May cause damage to organs through prolonged or repeated exposure.	STOT SE : Specific target organ toxicity - single exposure
H410 : Very toxic to aquatic life with long lasting effects.	2000/39/EC : Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
H412 : Harmful to aquatic life with long lasting effects.	IE OEL : Ireland. List of Chemical Agents and Occupational Exposure Limit Values - Schedule 1
	2000/39/EC / TWA : Limit Value - eight hours
	IE OEL / OELV - 8 hrs (TWA) : Occupational exposure limit value (8-hour reference period)
	IE OEL / OELV - 15 min (STEL) : Occupational exposure limit value (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxin; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ECx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organization for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50% of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; QSAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:	Classification procedure:	
Acute Tox. 4	H332	Based on product data or assessment
Skin Sens. 1B	H317	Based on product data or assessment
STOT SE 3	H335	Calculation method
STOT RE 2	H373	Calculation method
Aquatic Chronic 2	H411	Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.