

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 GLOVES when handling the concentrate or 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.

This leaflet is part of the approved Product Label.

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.

Collected clippings must not be composted or used as a mulch as their safety for use on desired plants has not been assessed.

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 outfields 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.)'

RECOMMENDED APPLICATION RATES¹

Grass Species	Situation of Use		
	Golf / 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

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

1.1 Product Identifier

Product Name: PRIMO MAXX II

Design Code: A19238C

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

Use of the Substance/Mixture: Plant growth regulator

1.3 Details of the supplier of the safety data sheet

Company: Syngenta UK Ltd
CPC4, Capital Park, Fulbourn, Cambridge, CB21 5XE

Phone: (01223) 883400

Fax: (01223) 882195

Website: www.syngenta.co.uk

1.4 Emergency telephone number

Emergency phone No.: +44 (0) 1484 538444

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.

Chronic aquatic toxicity, Category 3 H412: Harmful 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 H332 H412	May cause an allergic skin reaction. Harmful if inhaled. Harmful to aquatic life with long lasting effects.
Supplemental Hazard Statements	EUH401	To avoid risks to human health and the environment comply with the instructions for use.
Precautionary Statements	Prevention: P261 P280 Response: P304 + P340 + P312 P333 + P313 P362 + P364	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wear protective gloves. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. If skin irritation or rash occurs: Get medical advice/ attention. Take off contaminated clothing and wash it before reuse.

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.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous Components

Chemical Name	CAS No. EC No. Registration Number	Classification	Concentration (% w/w)
trinexapac-ethyl	95266-40-3	Aquatic Chronic2; H411	>= 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	>= 5 - < 10
2-methylpropan-1-ol	78-83-1 201-148-0 01-2119484609-23	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H336 STOT SE 3; H335	>= 3 - < 5
Substances with a workplace exposure limit :			
(2-methoxymethylethoxy)propanol	34590-94-8 252-104-2 01-2119450011-60		>= 30 - < 50

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.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Medical advice: There is no specific antidote available. Treat symptomatically.

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.

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).

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: No special storage conditions required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

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

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Further information	Identifies the possibility of significant uptake through the skin, Indicative			
	34590-94-8	TWA	50 ppm 300 mg/m ³	CH SUVA
Further information	National Institute for Occupational Safety and Health			
	34590-94-8	STEL	50 ppm 300 mg/m ³	CH SUVA
Further information	National Institute for Occupational Safety and Health			
trinexapac-ethyl	95266-40-3	TWA	5 mg/m ³	Syngenta
2-methylpropan-1-ol	78-83-1	TWA	50 ppm 150 mg/m ³	CH SUVA
Further information	National Institute for Occupational Safety and Health, Institut National de Recherche et de Sécurité pour la prévention des accidents du travail et des maladies professionnelles, Harm to the unborn child is not to be expected when the OEL-value is respected			
	78-83-1	STEL	50 ppm 150 mg/m ³	CH SUVA
Further information	National Institute for Occupational Safety and Health, Institut National de Recherche et de Sécurité pour la prévention des accidents du travail et des maladies professionnelles, Harm to the unborn child is not to be expected when the OEL-value is respected			

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 : 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 EU Directive 89/686/EEC 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. Use only respiratory protection equipment with CE-symbol including four digit test number.

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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance : clear
Odour : strong
pH : 2.8
Flash point : 74 °C
Density : 1.027 g/cm³ (20 °C)
Auto-ignition temperature : 340 °C
Viscosity
Viscosity, dynamic : 98 mPa.s (20 °C)
Oxidizing properties : The substance or mixture is not classified as oxidizing.

9.2 Other Information

Surface tension: 30.5 mN/m

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

See section 10.3 "Possibility of hazardous reactions".

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

Combustion or thermal decomposition will evolve toxic and irritant vapours.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

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

Components:

trinexapac-ethyl:

Acute oral toxicity : LD50 (Rat, male and female): 4,460 mg/kg
Acute inhalation toxicity : LC50 (Rat, male and female): > 5.69 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 4,000 mg/kg
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): > 18.18 mg/l
Exposure time: 6 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat): > 2,000 - 2,460 mg/kg

(2-methoxymethylethoxy)propanol:

Acute oral toxicity : LD50 Oral (Rat): > 5,000 mg/kg
Acute inhalation toxicity : LC50 (Rat): 3.35 mg/l
Exposure time: 7 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 Dermal (Rabbit): 9,510 mg/kg

Skin corrosion/irritation

Product:

Species: Rabbit
Result: No skin irritation

Components:

trinexapac-ethyl:

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:

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: Local Lymph Node Assay
Species: Mouse
Result: May cause sensitisation by skin contact.

Components:

trinexapac-ethyl:

Species: Guinea pig
Result: Did not cause sensitisation on laboratory animals.

2-methylpropan-1-ol:

Result: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Components:

trinexapac-ethyl:

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

2-methylpropan-1-ol:

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:

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

2-methylpropan-1-ol:

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

Reproductive toxicity

Components:

trinexapac-ethyl:

Reproductive toxicity - Assessment: No toxicity to reproduction

2-methylpropan-1-ol:

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

Animal testing did not show any effects on foetal development.

(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.

Repeated dose toxicity

Components:

trinexapac-ethyl:

Remarks: No adverse effect has been observed in chronic toxicity tests.

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 :	EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l Exposure time: 72 h

Components:

trinexapac-ethyl:

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

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): > 142 mg/l
Exposure time: 48 h

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 24.5 mg/l

Exposure time: 96 h

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)

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

Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates:

EC50 (Daphnia magna (Water flea)): 1,100 mg/l

Exposure time: 48 h

Test Type: static test

NOEC : 20 mg/l

Exposure time: 21 d

Test Type: semi-static test

Toxicity to algae :

EC50 (Pseudokirchneriella subcapitata (green algae)): 1,799 mg/l

End point: Growth rate

Exposure time: 72 h

(2-methoxymethylethoxy)propanol:

Toxicity to fish : LC50 (Poecilia reticulata (guppy)): > 1,000 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:

EC50 (Daphnia magna (Water flea)): 1,919 mg/l

Exposure time: 48 h

Toxicity to algae :

ErC50 (Pseudokirchneriella subcapitata (green algae)): > 969 mg/l

Exposure time: 96 h

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

NOEC: > 0.5 mg/l

Exposure time: 22 d

Species: Daphnia magna (Water flea)

Ecotoxicology Assessment

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

12.2 Persistence and degradability

Components:

trinexapac-ethyl:

Biodegradability : Result: Not readily biodegradable.

Stability in water : Degradation half life: 3.9 - 5.5 d

Remarks: Product is not persistent.

(2-methoxymethylethoxy)propanol:

Biodegradability : Result: Readily biodegradable.

Biodegradation: 75 %

Exposure time: 28 d

12.3 Bioaccumulative potential

Components:

trinexapac-ethyl:

Bioaccumulation : Remarks: 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

Components:

trinexapac-ethyl:

Distribution among environmental compartments: Remarks: Moderately mobile in soils

Stability in soil : Percentage dissipation: 50 % (DT50: < 0.2 d)

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:

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)..

(2-methoxymethylethoxy)propanol:

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 Other adverse effects

Product:

Additional ecological information: Classification of the product is based on the summation of the concentrations of classified components.

Components:

trinexapac-ethyl:

Additional ecological information : No data available

calcium dodecylbenzene sulphonate:

Additional ecological information: No data available

2-methylpropan-1-ol:

Additional ecological information: No data available

(2-methoxymethylethoxy)propanol:

Additional ecological information: 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.

SECTION 14. TRANSPORT INFORMATION

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

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

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

Not applicable

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.

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

Further information

Approval number, MAPP 17509. PCS No. 05401

Use plant protection products safely. Always read the label and product information before use.

Based upon SDS release dated 14/09/2016, version 5.0 with local amendment.

Full text of H-Statements

H226: Flammable liquid and vapour.

H315: Causes skin irritation.

H318: Causes serious eye damage.

H335: May cause respiratory irritation.

H336: May cause drowsiness or dizziness.

H411: Toxic to aquatic life with long lasting effects.

H412: Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Aquatic Chronic : Chronic aquatic toxicity

Eye Dam. : Serious eye damage

Flam. Liq. : Flammable liquids

Skin Irrit. : Skin irritation

STOT SE : Specific target organ toxicity - single exposure

Further information

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.

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 GLOVES when handling the concentrate or 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.

