

PLANT GROWTH REGULATOR

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY OR UNDERTAKING

IDENTIFICATION OF THE SUBSTANCE OR PREPARATION

Tradename **MODDUS**
 Design Code **A7725M**
 AGI Code **12007**

COMPANY IDENTIFICATION

Company Syngenta Crop Protection UK Ltd
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2. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS

CAS-NO.	CHEMICAL NAME	CONCENTRATION (% W/W)	HAZARD SYMBOLS	RISK PHRASES (R)
95266-40-3	trinexapac-ethyl	25	N	50/53
9043-30-5	poly(oxy-1,2-ethanediyl), alpha-isotridecyl-omega-hydroxy-	20–30	N, Xn	22, 41, 51/53

3. HAZARDS IDENTIFICATION

May cause sensitisation by skin contact. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. FIRST-AID MEASURES

General advice: Have the product container, label or Material Safety Data Sheet with you when calling the Syngenta emergency number, a Poison Control Centre or physician, or going for treatment.

Inhalation: Remove 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.

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.

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.

Ingestion: If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting.

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

P L A N T G R O W T H R E G U L A T O R

5. FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA:

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

Extinguishing media – large fires: Use alcohol-resistant foam or water spray.

Extinguishing media which must not be used for safety reasons: Do not use a solid water stream as it may scatter and spread fire.

Specific hazards during fire fighting: 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.

Special protective equipment for fire-fighters: In the event of fire, wear 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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Refer to protective measures listed in sections 7 and 8.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

Methods for cleaning up: Contain and collect spillage 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).

Additional advice: If the product contaminates rivers and lakes or drains inform respective authorities.

7. HANDLING AND STORAGE

HANDLING

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

STORAGE

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 feed.

Other data: Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

Components	Exposure limit(s)	Value type	Source
trinexapac-ethyl	10 mg/m ³	8 h TWA	SYNGENTA

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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. If airborne mists or vapours are generated, use local exhaust ventilation controls. Assess exposure and use any additional measures to keep airborne levels below any relevant exposure limit. Where necessary, seek additional occupational hygiene advice.

PERSONAL PROTECTIVE EQUIPMENT

When using this product refer to the label for details. In all other cases, use the following Personal Protective Equipment:

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. Personal protective equipment should be certified to appropriate standards.

Respiratory protection: No personal respiratory protective equipment normally required. A particulate filter respirator may be necessary until effective technical measures are installed.

Hand protection: Chemical resistant gloves should be used. Gloves should be certified to an appropriate standard. Gloves should have a minimum breakthrough time that is appropriate to the duration of exposure. The breakthrough time of gloves varies according to the thickness, material and manufacturer. Gloves should be changed when breakthrough is suspected. Suitable material: nitrile rubber

Eye protection: Eye protection is not usually required. Follow any site specific eye protection policies. Eye/face protection should be certified to EN 166.

Skin and body protection: Assess the exposure and select chemical resistant clothing based on the potential for contact and the permeation / penetration characteristics of the clothing material. Wash with soap and water after removing protective clothing. Decontaminate clothing before re-use, or use disposable equipment (suits, aprons, sleeves, boots, etc.). Wear as appropriate: impervious protective suit.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State/Form:	Liquid.
Colour:	Yellow to red brown.
Odour:	Unpleasant.
pH:	2–6 (1% w/v)
Flash-Point:	79 °C (1013 hPa; DIN 51758)
Oxidising Properties:	Not oxidising.
Explosive Properties:	Not explosive.
Density:	0.96–1.00 g/cm ³ (20 °C)
Water Solubility:	Miscible
Dynamic Viscosity:	10.01 mPa.s (20 °C)
Dynamic Viscosity:	5.45 mPa.s (40 °C)
Surface Tension:	28.2–28.5 mN/m (20 °C)

10. STABILITY AND REACTIVITY

Hazardous decomposition products: Combustion or thermal decomposition will evolve toxic and irritant vapours.

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Hazardous reactions: None known. Hazardous polymerisation does not occur. Stable under normal conditions.

11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity LD₅₀: > 5000 mg/kg (rat)

Acute Dermal Toxicity LD₅₀: > 4000 mg/kg (rat)

Acute Skin Irritation: Non irritant (rabbit; assessment according to 93/21/EEC)

Acute Eye Irritation: Non irritant (rabbit; assessment according to 93/21/EEC)

Skin Sensitisation: Sensitising (guinea pig; assessment according to 93/21/EEC)

Long term toxicity: Did not show carcinogenic, teratogenic or mutagenic effects in animal experiments.

12. ECOLOGICAL INFORMATION

ELIMINATION INFORMATION (PERSISTENCE AND DEGRADABILITY)

Bioaccumulation: Trinexapac-ethyl does not bioaccumulate.

Stability in water: Trinexapac-ethyl is not persistent in water.

Stability in soil: Trinexapac-ethyl is of low persistence in soil.

Mobility: Trinexapac-ethyl has medium mobility in soil.

ECOTOXICITY EFFECTS

Toxicity to Fish LC₅₀: 5–50 mg/l (zebra-fish; 96 h; Derived from components)

Toxicity to Algae EC₅₀: ca 1.6 mg/l (*Anabaena flos-aquae* (bluegreen algae); 120 h)

Toxicity to Aquatic Invertebrates EC₅₀: 25–50 mg/l (*Daphnia magna Straus*; 48 h; Derived from components)

13. DISPOSAL CONSIDERATIONS

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 for local recycling or waste disposal. Do not re-use empty containers.

14. TRANSPORT INFORMATION

Special Information: Use unbreakable containers, make sure they cannot fall, and label in accordance with regulations.

RAIL/ROAD/SEA/AIR (RID/ADR/IMDG/IATA)	Class	UN no.	Packaging Group
	9	3082	III

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

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15. REGULATORY INFORMATION

Hazard Symbols / Classifications	N Xi	DANGEROUS FOR THE ENVIRONMENT IRRITANT.
Risk phrases (R)	43 51/53	May cause sensitisation by skin contact. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety phrases (S)	2 13 20/21 35 36/37 57	Keep out of the reach of children. Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. This material and its container must be disposed of in a safe way. Wear suitable protective clothing and gloves. Use appropriate containment to avoid environmental contamination.
Special label		To avoid risks to man and the environment, comply with the instructions for use.

16. OTHER INFORMATION

Approval number: MAFF 08801.

Based upon SDS release date 02/08/2005 version 8. DPD compliant. Major change to every section. (a) replace 36/38 with 41 in section 2.

Always read the label. Use pesticides safely.

Text of R phrases mentioned in Section 2:

R22 Harmful if swallowed.

R41 Risk of serious damage to eyes.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.