L1025396 IREL/11U PPE 4072712

Tempo®

syngenta®

TEMPO is an emulsifiable concentrate containing 250g/l (25.5% w/w) trinexapac-ethyl per litre.

FOR USE ONLY AS AN AGRICULTURAL GROWTH REGULATOR

TEMPO is a growth regulator for winter and spring wheat, winter and spring barley, winter and spring oats, durum wheat, rye, triticale, and grassland (seed crops).

PLEASE SEE ACCOMPANYING LEAFLET FOR PRODUCT USE DETAILS.

IN CASE OF TOXIC OR TRANSPORT EMERGENCY RING +44 (0) 1484 538444 ANYTIME (24HR).

PROTECT FROM FROST
SHAKE WELL BEFORE USE

Authorisation Holder	Marketing Company
Syngenta UK Ltd CPC 4, Capital Park, Fulbourn, Cambridge CB21 5XE Tel: +44 (0) 1223 883400	Syngenta Ireland Limited Block 6, Cleaboy Business Park, Old Kilmeaden Road, Waterford Tel: (051) 377203

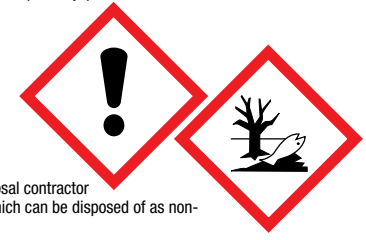
1 Litre

5 391513 810923

FOR PROFESSIONAL USE ONLY

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

TEMPO is an emulsifiable concentrate containing 250g/l (25.5% w/w) trinexapac-ethyl per litre.



Warning
May cause an allergic skin reaction.
Toxic to aquatic life with long lasting effects.
Keep out of reach of children.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wear protective gloves, protective clothing.
IF ON SKIN: Wash with plenty of soap and water.
Collect spillage.
Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for triple rinsed empty clean containers which can be disposed of as non-hazardous waste.
Repeated exposure may cause skin dryness and cracking.

PCS No. 05601

CONDITIONS OF USE
FOR USE ONLY AS AN AGRICULTURAL PLANT GROWTH REGULATOR

Crop	Max individual dose l/ha	Max no. of applications	Max. total dose l/ha per crop/year	Latest time of application
Winter wheat	0.4	-	0.4	Before flag leaf sheath extending stage (GS 41)
Winter barley	0.6	-	0.6	
Winter and spring oats	0.4	-	0.4	Before second node detectable stage (GS 32)
Grassland (seed crop)	0.8	-	0.8	
Spring wheat	0.4	-	0.4	Before third node detectable stage (GS 33)
Spring barley	0.5	-	0.5	
Durum wheat, rye, triticale	0.4	-	0.4	

Additional Safety Information.

(a) Operator Protection
AVOID CONTACT WITH SKIN AND EYES.
WEAR EYE/FACE PROTECTION when handling the concentrate.
FOR USE BY TRACTOR MOUNTED/TRAILLED SPRAYER ONLY.

(b) 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 farmyards and roads.

(c) Storage and disposal.
RINSE CONTAINER THOROUGHLY, by using an integrated pressure rinsing device or manually rinsing three times. Add washings to the sprayer at he time of filling and dispose of safely.
Do not re-use container for any other purpose and dispose of safely.

(d) Restrictions
Apply TEMPO only to healthy, actively growing crops.
Do not apply during periods of frosty weather or when frost is imminent.
Do not apply TEMPO to crops that are stressed by severe weather conditions, drought, frost, disease, insect damage, nutritional deficiency, etc.
Do not apply if rain is expected or if the crop is wet.
Avoid spray drift on to neighbouring crops.

DIRECTIONS FOR USE

PROPERTIES OF TEMPO
TEMPO is a growth regulator for crop height reduction, lodging prevention and yield protection in all varieties of winter and spring wheat, winter and spring barley and winter and spring oats, durum wheat, rye, triticale and grassland (seed crops).

Treatment may lead to ears remaining erect through to harvest.

MIXING AND SPRAYING
Make sure the sprayer is set to give an even application at the correct volume.

Fill the spray tank with half the required volume of clean water and start agitation. Add the required amount of TEMPO, agitate, and continue agitation whilst adding the rest of the water.

Agitate the mixture thoroughly before use and continue agitation during spraying.
Thoroughly wash all spray and measuring equipment with water and a wetting agent immediately after use.

APPLICATION
Spray volume
Apply TEMPO in a minimum of 200 l/ha of water. Increased penetration will be obtained with an increase in water volume but the necessity for this will be dependent on crop growth stage and habit.

Spray nozzles
A medium spray quality is preferred for application of TEMPO. A spray pressure of 2-3 bar is recommended.

Spraying
Take particular care to avoid overlapping of spray swaths.

Apply only using a ground sprayer.

RECOMMENDATIONS
Winter Wheat
Timing and dose
Apply at 0.4 l/ha from the leaf sheath erect stage (GS 30) but before the flag leaf extending stage (GS 41).

Winter Barley
Timing and dose
Apply at 0.4 l/ha from the leaf sheath erect stage (GS 30) but before the third node detectable stage (GS 33).

or

Apply at 0.6 l/ha from the flag leaf just visible stage (GS 37) but before the flag leaf extending stage (GS 41).

Spring Barley
Timing and dose
Apply at 0.5 l/ha from the leaf sheath erect stage (GS 30) but before the third node detectable stage (GS 33).

Spring Wheat
Timing and dose
Apply at 0.4 l/ha from the leaf sheath erect stage (GS 30) but before the third node detectable stage (GS 33).

Winter and Spring Oats
Timing and dose
Apply at 0.4 l/ha from the leaf sheath erect stage (GS 30) but before the second node detectable stage (GS 32).

Rye, Triticale and Durum Wheat
Timing and dose
Apply at 0.4 l/ha from the leaf sheath erect stage (GS 30) but before the third node detectable stage (GS 33).

Grassland (seed crops only)
Timing and dose
Apply at 0.8 l/ha from the leaf sheath erect stage (GS 30) but before the second node detectable stage (GS 32).

CROP FAILURE
In the event of crop failure for any reason, cereals and oilseed rape can be planted in soil treated with TEMPO. Due to reduced activity via the root system and to its rapid degradation in soil, no problems with following crops are foreseen for this product.

SAFETY DATA SHEET

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

1.1 Product identifier
Trade name : TEMPO
Design code : A7725M

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 Limited CPC4, Capital Park Fulbourn Cambridge
Telephone:	(01223) 883400
Telefax:	(01223) 882195
Website:	www.syngenta.co.uk

1.4 Emergency telephone number
Emergency telephone number: +44 1484 538444

2. HAZARDS IDENTIFICATION

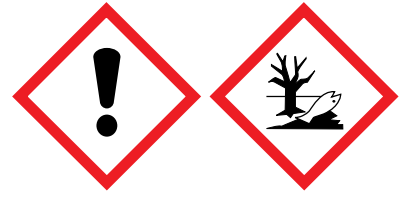
2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin sensitisation, Sub-category 1B	H317: May cause an allergic skin reaction.
Chronic aquatic toxicity, 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.
	H411	Toxic to aquatic life with long lasting effects.
Supplemental Hazard Statements	EUH066	Repeated exposure may cause skin dryness or cracking.
	EUH401	To avoid risks to human health and the environment comply with the instructions for use.
Precautionary Statements	P102	Keep out of reach of children.
	P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
	P280	Wear protective gloves, protective clothing.
	P302+P352	IF ON SKIN: Wash with plenty of soap and water.
	P391	Collect spillage.
	P501	Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

2.3 Other hazards
None known.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration (%)
trinexapac-ethyl	95266-40-3	Aquatic Chronic 2; H411	20 - 30
poly(oxy1,2ethanediyl), alpha isotridecyl-o-mega hydroxy	9043-30-5 500-027-2	Acute Tox.4; H302, Eye Dam. 1; H318	20 -30

For explanation of abbreviations see section 16.

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4. FIRST-AID MEASURES

Description of first aid measures

General advice : Have the product container, label or Safety Data Sheet with you when calling the Syngenta emergency number, a poison control center 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

Treatment : There is no specific antidote available.Treat symptomatically.

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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 or Water spray.

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.

5.3 Advice for firefighters

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.

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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 material 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

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

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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.

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

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.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
trinexapac-ethyl	95266-40-3	TWA	10 mg/m³	Syngenta

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. If airborne mists or vapors 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

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: 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.

Respiratory protection : No personal respiratory protective equipment normally required. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

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.

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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance :	liquid
Colour :	yellow to red brown
Odour :	unpleasant
pH :	2 - 6, Concentration: 1 % w/v
Flash point:	79 °C (1,013 hPa) Method: DIN 51758
Density :	0.98 g/cm3 (25 °C)
Auto-ignition temperature :	355 °C
Viscosity	
Viscosity, dynamic :	10.01 mPa.s (20 °C) 5.45 mPa.s (40 °C)
Explosive properties :	Classification Code: Not explosive
Oxidizing properties :	not oxidizing

9.2 Other information

Surface tension : 28.2 - 28.5 mN/m, 20 °C

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10. STABILITY AND REACTIVITY

10.1 Reactivity
See section 10.3 “Possibility of hazardous reactions”.

10.2 Chemical stability
The product is stable when used in normal conditions

10.3 Possibility of hazardous reactions
Hazardous reactions : No hazardous reactions by normal handling and storage according to provisions.

10.4 Conditions to avoid
Conditions to avoid : No decomposition if used as directed.

10.5 Incompatible materials
Materials to avoid : No substances are known which lead to the formation of hazardous substances or thermal reactions.

10.6 Hazardous decomposition products
Combustion or thermal decomposition will evolve toxic and irritant vapors.

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11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
Product:
Acute oral toxicity: LD50 (Mouse, male and female): > 5,000 mg/kg
Acute inhalation toxicity: Acute toxicity estimate: > 5.0 mg/l
Acute dermal toxicity: LD50 (Rat, male and female): > 4,000 mg/kg

Components:
trinexapac-ethyl:

Acute oral toxicity :	LD50 (Rat, male and female): 4,460 mg/kg
	LD50 (Rat, female): > 2,000 mg/kg
Acute inhalation toxicity :	LC50 (Rat, male and female): > 5.69 mg/l
	Exposure time: 4 h
Acute dermal toxicity :	LD50 (Rat, male and female): > 4,000 mg/kg
	LD50 (Rat, male and female): > 2,000 mg/kg

Skin corrosion/irritation
Product:
Species: Rabbit
Result: Non-irritating

Components:
trinexapac-ethyl:
Species: Rabbit
Result: Slightly irritating

Serious eye damage/eye irritation
Product:
Species: Rabbit
Result: Non-irritating
Components:
trinexapac-ethyl:
Species: Rabbit
Result: Mildly irritating

Respiratory or skin sensitisation
Product:
Species: Guinea pig
Result: A skin sensitizer in animal tests.
Components:
trinexapac-ethyl:
Species: Guinea pig
Result: Not a skin sensitizer in animal tests.

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

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

Reproductive toxicity
Components:
trinexapac-ethyl:
Reproductive toxicity - Assessment: No toxicity to reproduction

Repeated dose toxicity
Components:
trinexapac-ethyl:
Remarks: No adverse effect has been observed in chronic toxicity tests.

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12. ECOLOGICAL INFORMATION

12.1 Toxicity

Product:

Toxicity to fish :	LC50 (*Oncorhynchus mykiss* (rainbow trout)): 24 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates:	EC50 (*Daphnia magna Straus*): 2.9 mg/l Exposure time: 48 h
Toxicity to algae :	EbC50 (*Anabaena flos-aquae* (bluegreen algae)): 5.6 mg/l Exposure time: 96 h ErC50 (*Anabaena flos-aquae* (bluegreen algae)): 8.3 mg/l Exposure time: 96 h EbC50 (*Lemna gibba* (duckweed)): 25 mg/l Exposure time: 7 d ErC50 (*Lemna gibba* (duckweed)): 55 mg/l Exposure time: 7 d

Components:

trinexapac-ethyl:

Toxicity to fish :	LC50 (*Oncorhynchus mykiss* (rainbow trout)): 68 mg/l Exposure time: 96 h NOEC (*Pimephales promelas* (fathead minnow)): 0.41 mg/l Exposure time: 35 d
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 EbC50 (*Pseudokirchneriella subcapitata* (green algae)): 14.3 mg/l Exposure time: 96 h
Toxicity to bacteria :	EC50 (activated sewage sludge): > 100 mg/l Exposure time: 3 h

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: Not persistent in water.

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: Trinexapac-ethyl has medium mobility in soil.
Stability in soil : Percentage dissipation: 50 % (DT50: < 0.2 d)
Remarks: Not persistent in soil.

12.5 Results of PBT and vPvB assessment

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)..

12.6 Other adverse effects

Product:

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

Components:

trinexapac-ethyl:

Additional ecological information: Remarks: No data available

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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.

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14. TRANSPORT INFORMATION

Land transport (ADR/RID)

14.1 UN number:	UN 3082
14.2 UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRINEXAPAC-ETHYL)
14.3 Transport hazard class(es):	9
14.4 Packing group:	III
Labels:	9
14.5 Environmental hazards :	Environmentally hazardous
Tunnel restriction code:	E

Sea transport (IMDG)

14.1 UN number:	UN 3082
14.2 UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRINEXAPAC-ETHYL)
14.3 Transport hazard class(es):	9
14.4 Packing group:	III
Labels:	9
14.5 Environmental hazards :	Environmentally hazardous

Air transport (IATA-DGR)

14.1 UN number:	UN 3082
14.2 UN proper shipping name:	Environmentally hazardous substance, liquid, n.o.s. (TRINEXAPAC-ETHYL)
14.3 Transport hazard class(es):	9
14.4 Packing group:	III
Labels:	9

14.6 Special precautions for user

none

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

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15. REGULATORY INFORMATION

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

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.

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16. OTHER INFORMATION

Approval number, PCS No. 05601.

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

Based upon SDS release dated 04/02/2016, version 12 with local amendment.

Full text of H-Statements

H302 : Harmful if swallowed.
H318 : Causes serious eye damage.
H411 : Toxic to aquatic life with long lasting effects.

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.