

PRIMO 250 EC

Version Revision Date: SDS Number: This version replaces all previous versions.

1.0 15.12.2022 S00049653963

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : PRIMO 250 EC

Design code : A7725M

Manufacturer or supplier's details

Company : Syngenta Asia Pacific Pte. Ltd

Address : No. 1 HarbourFront Avenue, #03-03 Keppel Bay Tower

Singapore 098632

Telephone : +65 6333 6400

Emergency telephone number : +60 376 283 812

Telefax : +65 6338 1256

Recommended use of the chemical and restrictions on use

Recommended use : Plant growth regulator

2. HAZARDS IDENTIFICATION

GHS Classification

Skin sensitisation : Sub-category 1B

Long-term (chronic) aquatic

hazard

Category 1

GHS label elements

Hazard pictograms





Signal word : Warning

Hazard statements : H317 May cause an allergic skin reaction.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : Prevention:

P261 Avoid breathing mist or vapours.

P272 Contaminated work clothing should not be allowed out of

the workplace.

P280 Wear protective gloves.

Response:



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P302 + P352 IF ON SKIN: Wash with plenty of water.

P333 + P313 If skin irritation or rash occurs: Get medical ad-

vice/ attention.

P362 + P364 Take off contaminated clothing and wash it before

reuse.

P391 Collect spillage.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
trinexapac-ethyl (ISO)	95266-40-3	>= 25 -< 30
poly(oxy-1,2-ethanediyl), alpha-isotridecyl- omega-hydroxy-	9043-30-5	>= 20 -< 30
toluene	108-88-3	>= 0.1 -< 1

4. FIRST AID MEASURES

General advice : Have the product container, label or Safety Data Sheet with

you when calling the 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 respira-

tion.

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.

Most important symptoms : Nonspecific



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and effects, both acute and

delayed

No symptoms known or expected.

Notes to physician : There is no specific antidote available.

Treat symptomatically.

5. FIREFIGHTING MEASURES

Suitable extinguishing media : Extinguishing media - small fires

Use water spray, alcohol-resistant foam, dry chemical or car-

bon 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.

Specific hazards during fire-

fighting

As the product contains combustible organic components, fire

will produce dense black smoke containing hazardous prod-

ucts of combustion (see section 10).

Exposure to decomposition products may be a hazard to

health.

Flash back possible over considerable distance.

Specific extinguishing meth-

ods

Do not allow run-off from fire fighting to enter drains or water

courses.

Cool closed containers exposed to fire with water spray.

Special protective equipment

for firefighters

Wear full protective clothing and self-contained breathing ap-

paratus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emer-

gency procedures

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 concentra-

tions. Vapours can accumulate in low areas.

Remove all sources of ignition. Pay attention to flashback.

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.

Methods and materials for containment and 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.

7. HANDLING AND STORAGE



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Advice on safe handling : Avoid contact with skin and eyes.

When using do not eat, drink or smoke.

Use only in an area containing flame proof equipment. Take precautionary measures against static discharges.

For personal protection see section 8.

Conditions for safe storage : Keep containers tightly closed in a dry, cool and well-

ventilated 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.

Further information on stor-

age stability

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	CAS-No.	Value type	Control parame-	Basis
		(Form of	ters / Permissible	
		exposure)	concentration	
trinexapac-ethyl (ISO)	95266-40-3	TWA	5 mg/m3	Syngenta
toluene	108-88-3	PEL (long	50 ppm	SG OEL
		term)	188 mg/m3	
		TWA	20 ppm	ACGIH

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sam- pling time	Permissible concentra-tion	Basis
toluene	108-88-3	toluene	Blood	Prior to last shift of work- week	0.05 mg/l	SG BTLV
		Toluene	In blood	Prior to last shift of work- week	0.02 mg/l	ACGIH BEI
		Toluene	Urine	End of shift (As soon as possible after exposure ceases)	0.03 mg/l	ACGIH BEI
		o-Cresol	Urine	End of shift (As soon as possible after exposure	0.3 mg/g Creatinine	ACGIH BEI



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ceases)

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 $\ensuremath{\mathbf{.}}$

actual risks in use.

Maintain air concentrations below occupational exposure

standards.

Where necessary, seek additional occupational hygiene ad-

vice.

Personal protective equipment

Respiratory protection

No personal respiratory protective equipment normally re-

quired.

When workers are facing concentrations above the exposure

limit they must use appropriate certified respirators.

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.

Eye protection : No special protective equipment required.

Skin and body protection : Choose body protection in relation to its type, to the concen-

tration and amount of dangerous substances, and to the spe-

cific work-place.

Remove and wash contaminated clothing before re-use.

Wear as appropriate: Impervious clothing

Protective measures : The use of technical measures should always have priority

over the use of personal protective equipment.

When selecting personal protective equipment, seek appro-

priate professional advice.



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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : brown orange

Odour : unpleasant

Odour Threshold : No data available

pH : 2-6

Concentration: 1 % w/v

Melting point/range : No data available

Boiling point/boiling range : No data available

Flash point : 80 °C

Method: Pensky-Martens closed cup

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapour pressure : No data available

Relative vapour density : No data available

Density : 0.96 - 1.00 g/cm3 (20 °C)

Solubility(ies)

Solubility in other solvents : No data available

Partition coefficient: n-

octanol/water

: No data available

Auto-ignition temperature : 250 °C

Decomposition temperature : No data available

Viscosity



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Viscosity, dynamic : 10.01 mPa.s (20 °C)

5.45 mPa.s (40 °C)

Viscosity, kinematic : No data available

Explosive properties : Not explosive

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

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

Particle size : No data available

10. STABILITY AND REACTIVITY

Reactivity : None reasonably foreseeable.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reac-

tions

No dangerous reaction known under conditions of normal use.

Conditions to avoid : No decomposition if used as directed.

Incompatible materials : None known.

Hazardous decomposition

products

No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of :

exposure

Ingestion Inhalation Skin contact Eye contact

Acute toxicity

Product:

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

Acute inhalation toxicity : LC50 (Rat, male and female): > 2.51 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhala-

tion toxicity

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

Assessment: The substance or mixture has no acute dermal

toxicity



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Components:

trinexapac-ethyl (ISO):

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 inhala-

tion toxicity

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

Assessment: The substance or mixture has no acute dermal

toxicity

poly(oxy-1,2-ethanediyl), alpha-isotridecyl-omega-hydroxy-:

Acute oral toxicity : LD50 (Rat): 1,940 mg/kg

Skin corrosion/irritation

Product:

Species : Rabbit

Result : No skin irritation

Species : Rabbit

Result : Repeated exposure may cause skin dryness or cracking.

Components:

trinexapac-ethyl (ISO):

Species : Rabbit

Result : No skin irritation

toluene:

Species : Rabbit

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

poly(oxy-1,2-ethanediyl), alpha-isotridecyl-omega-hydroxy-:

Species : Rabbit



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Result : Irreversible effects on the eye

Respiratory or skin sensitisation

Product:

Species : Guinea pig

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

Components:

trinexapac-ethyl (ISO):

Test Type : Local lymph node assay (LLNA)

Species : Mouse

Result : Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Components:

trinexapac-ethyl (ISO):

Germ cell mutagenicity -

Assessment

Animal testing did not show any mutagenic effects.

poly(oxy-1,2-ethanediyl), alpha-isotridecyl-omega-hydroxy-:

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

Assessment

Carcinogenicity

Components:

trinexapac-ethyl (ISO):

Carcinogenicity - Assess-

ment

: No evidence of carcinogenicity in animal studies.

Reproductive toxicity

Components:

trinexapac-ethyl (ISO):

Reproductive toxicity - As-

sessment

: No toxicity to reproduction

toluene:

Reproductive toxicity - As-

sessment

Some evidence of adverse effects on development, based on

animal experiments.



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STOT - single exposure

Components:

toluene:

Assessment : The substance or mixture is classified as specific target organ

toxicant, single exposure, category 3 with narcotic effects.

STOT - repeated exposure

Components:

trinexapac-ethyl (ISO):

Assessment : The substance or mixture is not classified as specific target

organ toxicant, repeated exposure.

toluene:

Target Organs : Central nervous system

Assessment : The substance or mixture is classified as specific target organ

toxicant, repeated exposure, category 2.

Aspiration toxicity

Components:

toluene:

May be fatal if swallowed and enters airways.

12. ECOLOGICAL INFORMATION

Ecotoxicity

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/aquatic

plants

ErC50 (Anabaena flos-aquae (cyanobacterium)): 8.3 mg/l

Exposure time: 96 h

ErC50 (Lemna gibba (gibbous duckweed)): 55 mg/l

Exposure time: 7 d

NOEC (Anabaena flos-aquae (cyanobacterium)): 8.0 mg/l

End point: Growth rate Exposure time: 96 h

NOEC (Lemna gibba (gibbous duckweed)): 8.0 mg/l

End point: Frond growth Exposure time: 7 d



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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 (Americamysis): 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/i

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 fish (Chronic tox-

icity)

NOEC (Pimephales promelas (fathead minnow)): 0.41 mg/l

Exposure time: 35 d

Toxicity to daphnia and other aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 2.4 mg/l

Exposure time: 21 d

M-Factor (Chronic aquatic

toxicity)

1

Toxicity to microorganisms

EC50 (activated sludge): > 100 mg/l

Exposure time: 3 h

poly(oxy-1,2-ethanediyl), alpha-isotridecyl-omega-hydroxy-:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 1 - 10 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 5 - 10 mg/l

Exposure time: 48 h

Ecotoxicology Assessment

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

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

toluene:



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Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 5.5 mg/l

Exposure time: 96 h

Toxicity to daphnia and other

aquatic invertebrates

EC50 (Ceriodaphnia dubia (water flea)): 3.78 mg/l

Exposure time: 48 h

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.

toluene:

Biodegradability : Result: Readily biodegradable.

Bioaccumulative potential

Components:

trinexapac-ethyl (ISO):

Bioaccumulation : Remarks: Does not bioaccumulate.

Partition coefficient: n-

octanol/water

log Pow: -2.1 (25 °C)

log Pow: -0.29 (25 °C)

log Pow: 1.5 (25 °C)

toluene:

Bioaccumulation : Remarks: Does not bioaccumulate.

Mobility in soil

Components:

trinexapac-ethyl (ISO):

Distribution among environ-

mental compartments

: Remarks: Moderately mobile in soils

Stability in soil : Dissipation time: < 0.2 d

Percentage dissipation: 50 % (DT50) Remarks: Product is not persistent.

Other adverse effects

Components:

trinexapac-ethyl (ISO):



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Results of PBT and vPvB

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).

toluene:

Results of PBT and vPvB

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).

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Do not contaminate ponds, waterways or ditches with chemi-

cal or used container.

Do not dispose of waste into sewer.

Where possible recycling is preferred to disposal or incinera-

tion.

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 han-

dling site for recycling or disposal. Do not re-use empty containers.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(TRINEXAPAC-ETHYL)

Class : 9
Packing group : III
Labels : 9

IATA-DGR

UN/ID No. : UN 3082

Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.

(TRINEXAPAC-ETHYL)

Class : 9 Packing group : III

Labels : Miscellaneous

Packing instruction (cargo :

aircraft)

Packing instruction (passen-

: 964

964

ger aircraft)

Environmentally hazardous : yes

IMDG-Code



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Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

UN 3082

(TRINEXAPAC-ETHYL)

Class Packing group Ш Labels 9 EmS Code F-A, S-F Marine pollutant ves

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

Not applicable for product as supplied.

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.

15. REGULATORY INFORMATION

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

Workplace Safety and Health Act and Workplace Safety and Health (General Provisions) Regulations: This product is subjected to the SDS, labelling, PEL and other requirements in the Act/Regulations.

Environmental Protection and Management Act and Not applicable Environmental Protection and Management (Hazard-

ous Substances) Regulations

Fire Safety (Petroleum and Flammable Materials) Not applicable

Regulations

16. OTHER INFORMATION

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Date format dd.mm.yyyy

Full text of other abbreviations

ACGIH USA. ACGIH Threshold Limit Values (TLV) ACGIH BEI ACGIH - Biological Exposure Indices (BEI) SG BTLV Singapore. Biological Threshold Limit Values

SG OEL Singapore. Workplace Safety and Health (General Provisions)

Regulations - First Schedule Permissible Exposure Limits of

Toxic Substances.

ACGIH / TWA 8-hour, time-weighted average

Permissible Exposure Level (PEL) Long Term SG OEL / PEL (long term)



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AllC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; 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 Organisation 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; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; 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; (Q)SAR - (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; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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.

SG/EN