

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

CA Code (Nufarm)	: 3547
Oracle Recipe Code (Nufarm)	: 610000249
Item codes	: 100012521
Product form	: Mixture
Trade name	: Orius P
Type (Nufarm)	: Country Specific
Country (Nufarm)	: United Kingdom

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category	: Professional use
Use of the substance/mixture	: Fungicide

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Distributor

Nufarm UK Limited
Wyke Lane
Wyke
BD12 9EJ Bradford - UK
T +44 (0)1274 691234 - F +44 (0) 1274691176
infouk@uk.nufarm.com

1.4. Emergency telephone number

Emergency number : +44 (0)1274 696603

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4	H302
Serious eye damage/eye irritation, Category 2	H319
Reproductive toxicity, Category 2	H361d
Hazardous to the aquatic environment — Acute Hazard, Category 1	H400
Hazardous to the aquatic environment — Chronic Hazard, Category 1	H410

Full text of hazard classes and H-statements : see section 16

Adverse physicochemical, human health and environmental effects

Harmful if swallowed. Causes serious eye irritation. Suspected of damaging the unborn child. Very toxic to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP)	: Warning
Hazardous ingredients	: Tebuconazole; Prochloraz; Propanoic acid, 2-hydroxy-2-ethylhexyl ester
Hazard statements (CLP)	: H302 - Harmful if swallowed. H319 - Causes serious eye irritation. H361d - Suspected of damaging the unborn child. H410 - Very toxic to aquatic life with long lasting effects.

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Precautionary statements (CLP)	: P102 - Keep out of reach of children. P201 - Obtain special instructions before use. P270 - Do not eat, drink or smoke when using this product. P280 - Wear protective gloves, protective clothing, face protection, eye protection. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
EUH-statements	: EUH401 - To avoid risks to human health and the environment, comply with the instructions for use. EUH208 - Contains Propanoic acid, 2-hydroxy-, 2-ethylhexyl ester, (2S)-. May produce an allergic reaction.
Extra phrases	: SP 1 - 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)

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Propanoic acid, 2-hydroxy-, 2-ethylhexyl ester, (2S)-	(CAS-No.) 186817-80-1 (EC-No.) 606-097-1 (REACH-no) 01-2119516238-41	40-45	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
prochloraz (ISO); N-propyl-N-[2-(2,4,6-trichlorop henoxo)ethyl]-1H-imidazole-1- carboxamide	(CAS-No.) 67747-09-5 (EC-No.) 266-994-5 (EC Index-No.) 613-128-00-2	22-27	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
tebuconazole (ISO), 1-(4-chlorophenyl)-4,4-dimethyl-3-(1,2,4-triazol-1-ylmethyl)pentan-3-ol	(CAS-No.) 107534-96-3 (EC-No.) 403-640-2 (EC Index-No.) 603-197-00-7	11-13.5	Acute Tox. 4 (Oral), H302 Repr. 2, H361d Aquatic Acute 1, H400 Aquatic Chronic 1, H410 (M=10)
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt	(CAS-No.) 577-11-7 (EC-No.) 209-406-4 (REACH-no) 01-2119491296-29	1.5-3	Skin Irrit. 2, H315 Eye Dam. 1, H318

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention. Call a poison center or a doctor if you feel unwell. See material safety data sheet.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. Call a POISON CENTER/doctor if you feel unwell.
First-aid measures after skin contact	: After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Drink plenty of water. Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after eye contact : Eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

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5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Avoid contact with skin and eyes.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Take off immediately all contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.

Information on mixed storage : Keep away from food, drink and animal feeding stuffs. Keep out of the reach of children.

Special rules on packaging : Keep only in original container. Store in a closed container.

7.3. Specific end use(s)

Fungicide.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protective equipment:

Gloves. Protective clothing. Protective goggles.

Hand protection:

Impermeable protective gloves

Eye protection:

tightly fitting safety goggles

Skin and body protection:

Wear suitable protective clothing

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Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.



Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: orange. light brown.
Odour	: No data available
Odour threshold	: No data available
pH	: 6.8 - 7.8
pH solution concentration	: 1 % CIPAC MT 75.3
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 154 °C EEC A.9
Auto-ignition temperature	: 275 °C EEC A.15
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 1.04 - 1.12 EEC A.3
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: 43.469 mm ² /s (40°C); OECD 114
Viscosity, dynamic	: No data available
Explosive properties	: Product is not explosive.
Oxidising properties	: Non oxidizing material according to EC criteria.
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition generates : Nitrogen oxides. Carbon monoxide. Carbon dioxide. Hydrogen chloride.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Orius P	
LD50 oral rat	2000 mg/kg (OECD 423 method)
LD50 dermal rat	> 2000 mg/kg (OECD 423 method)
LC50 inhalation rat (mg/l)	> 5.35 mg/l/4h (OECD 403 method)

tebuconazole (ISO), 1-(4-chlorophenyl)-4,4-dimethyl-3-(1,2,4-triazol-1-ylmethyl)pentan-3-ol (107534-96-3)	
LD50 oral rat	1700 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 5.093 mg/l/4h

Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt (577-11-7)	
LD50 oral rat	3080 mg/kg
LD50 dermal rabbit	> 10000 mg/kg
LC50 inhalation rat (mg/l)	20 mg/l/4h

Acute toxicity (oral)	: Oral: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 6.8 - 7.8
Serious eye damage/irritation	: Causes serious eye irritation. pH: 6.8 - 7.8
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Suspected of damaging the unborn child.

tebuconazole (ISO), 1-(4-chlorophenyl)-4,4-dimethyl-3-(1,2,4-triazol-1-ylmethyl)pentan-3-ol (107534-96-3)	
NOAEL (animal/male, F0/P)	72.3 mg/kg rat

STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

Orius P	
Viscosity, kinematic	43.469 mm ² /s (40°C); OECD 114

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Very toxic to aquatic life with long lasting effects.
Acute aquatic toxicity	: Very toxic to aquatic life.
Chronic aquatic toxicity	: Very toxic to aquatic life with long lasting effects.

Orius P	
LC50 96h fish	1.77 mg/l Oncorhynchus mykiss (Rainbow trout); OECD 203
EC50 48h crustacea	12 mg/l Daphnia magna; OECD 202
EC50 72h algae	0.41 mg/l Selenastrum capricornutum; OECD 201

tebuconazole (ISO), 1-(4-chlorophenyl)-4,4-dimethyl-3-(1,2,4-triazol-1-ylmethyl)pentan-3-ol (107534-96-3)	
LC50 96h fish	4.4 mg/l Oncorhynchus mykiss (Rainbow trout)
EC50 48h crustacea	2.79 mg/l Daphnia magna (Water flea)
EC50 72h algae	2.83 mg/l Selenastrum capricornutum
EC50 72h algae	1.96 mg/l Desmodesmus subspicatus (green algae)
ErC50 (algae)	0.144 mg/l Lemna gibba (Duckweed); 7 d
NOEC (chronic)	0.01 mg/l Daphnia magna (Water flea)
NOEC chronic fish	0.012 mg/l Oncorhynchus mykiss (Rainbow trout)
LD50, Birds, Oral, Colinus virginianus (Bobwhite Quail)	1988 mg/kg
LD50, oral, Apis mellifera (bee)	> 83,05 µg/bee (48 Hours)

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tebuconazole (ISO), 1-(4-chlorophenyl)-4,4-dimethyl-3-(1,2,4-triazol-1-ylmethyl)pentan-3-ol (107534-96-3)	
LD50, Dermal, Apis mellifera (bee)	200 µg/bee (48 Hours)
prochloraz (ISO); N-propyl-N-[2-(2,4,6-trichlorop henoxo)ethyl]-1H-imidazole-1- carboxamide (67747-09-5)	
Additional Ecotox information	
Birds Oral LD50 (Bobwhite Quail)	624 mg/Kg
Bees Oral LD50	684 µ/Bee
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt (577-11-7)	
LC50 96h fish	20 - 40 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [semi-static])
LC50 96h fish	< 24 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 48h crustacea	36 mg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2. Persistence and degradability

tebuconazole (ISO), 1-(4-chlorophenyl)-4,4-dimethyl-3-(1,2,4-triazol-1-ylmethyl)pentan-3-ol (107534-96-3)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	DT50 365d (Water); 34.8d (Soil)
prochloraz (ISO); N-propyl-N-[2-(2,4,6-trichlorop henoxo)ethyl]-1H-imidazole-1- carboxamide (67747-09-5)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	DT50 Water 11.7d; Soil 223.62d

12.3. Bioaccumulative potential

tebuconazole (ISO), 1-(4-chlorophenyl)-4,4-dimethyl-3-(1,2,4-triazol-1-ylmethyl)pentan-3-ol (107534-96-3)	
Bioconcentration factor (BCF REACH)	78
Log Pow	3.7 20°C; pH7
Bioaccumulative potential	No bioaccumulation.
prochloraz (ISO); N-propyl-N-[2-(2,4,6-trichlorop henoxo)ethyl]-1H-imidazole-1- carboxamide (67747-09-5)	
Bioconcentration factor (BCF REACH)	150-247
Log Pow	4.3
Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt (577-11-7)	
BCF fish 1	3.47 - 3.78

12.4. Mobility in soil

Orius P	
Surface tension	35.6 mN/m OECD 115; EEC A.5
tebuconazole (ISO), 1-(4-chlorophenyl)-4,4-dimethyl-3-(1,2,4-triazol-1-ylmethyl)pentan-3-ol (107534-96-3)	
Mobility in soil	Koc 769
prochloraz (ISO); N-propyl-N-[2-(2,4,6-trichlorop henoxo)ethyl]-1H-imidazole-1- carboxamide (67747-09-5)	
Mobility in soil	Koc 1222-8654

12.5. Results of PBT and vPvB assessment

Orius P	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information




In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA
14.1. UN number		
3082	3082	3082
14.2. UN proper shipping name		
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tebuconazole, Prochloraz)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tebuconazole, Prochloraz)	Environmentally hazardous substance, liquid, n.o.s. (Tebuconazole, Prochloraz)

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ADR	IMDG	IATA
Transport document description		
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tebuconazole, Prochloraz), 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tebuconazole, Prochloraz), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Tebuconazole, Prochloraz), 9, III
14.3. Transport hazard class(es)		
9	9	9
		
14.4. Packing group		
III	III	III
14.5. Environmental hazards		
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes
No supplementary information available		

14.6. Special precautions for user

- Overland transport

Classification code (ADR)	: M6
Special provisions (ADR)	: 274, 335, 375, 601
Limited quantities (ADR)	: 5I
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Special packing provisions (ADR)	: PP1
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T4
Portable tank and bulk container special provisions (ADR)	: TP1, TP29
Tank code (ADR)	: LGBV
Vehicle for tank carriage	: AT
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV13
Hazard identification number (Kemler No.)	: 90
Orange plates	: 

Tunnel restriction code (ADR)	: -
EAC code	: •3Z

- Transport by sea

Special provisions (IMDG)	: 274, 335, 969
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
Special packing provisions (IMDG)	: PP1
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP2, TP29
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-F
Stowage category (IMDG)	: A

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- Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y964
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 964
PCA max net quantity (IATA)	: 450L
CAO packing instructions (IATA)	: 964
CAO max net quantity (IATA)	: 450L
Special provisions (IATA)	: A97, A158, A197
ERG code (IATA)	: 9L

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage
H319	Causes serious eye irritation.
H361d	Suspected of damaging the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
EUH208	Contains . May produce an allergic reaction.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

NUFARM SDS TEMPLATE

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product