

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

1.1. Product identifier

CA Code (Nufarm) : 3550
Oracle Recipe Code (Nufarm) : 610000260
Item codes : 100012089
Product form : Mixture
Trade name : DEACON
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]

Serious eye damage/eye irritation, Category 2
H319
Reproductive toxicity, Category 2 H361d
Hazardous to the aquatic environment — H410
Chronic Hazard, Category 1
Full text of hazard classes and H-statements : see section 16

Adverse physicochemical, human health and environmental effects

Causes serious eye damage. 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) :



GHS07

GHS08

GHS09

Signal word (CLP) :

Warning

Hazardous ingredients :

tebuconazole (ISO), 1-(4-chlorophenyl)-4,4-dimethyl-3-(1,2,4-triazol-1-ylmethyl)pentan-3-ol; Propanoic acid, 2-hydroxy-, 2-ethylhexyl ester, (2S)-; Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt; rosin; colophony

Hazard statements (CLP) :

H319 - Causes serious eye irritation.
H361d - Suspected of damaging the unborn child.
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) :

P102 - Keep out of reach of children.
P201 - Obtain special instructions before use.
P264 - Wash hands thoroughly after handling.

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	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)-, rosin; colophony. 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

No additional information available

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	56-62	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
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	18-22	Acute Tox. 4 (Oral), H302 Repr. 2, H361d Aquatic Acute 1, H400 Aquatic Chronic 1, H410 (M=10)
rosin; colophony	(CAS-No.) 8050-09-7 (EC-No.) 232-475-7 (EC Index-No.) 650-015-00-7 (REACH-no) 01-2119480418-32	2-5	Skin Sens. 1, H317
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	2-4	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. See material safety data sheet.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Gently wash with plenty of soap and water. After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
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	: Call a poison center or a doctor if you feel unwell. Rinse mouth out with water. Drink plenty of water. Do not induce vomiting.

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

Symptoms/effects after inhalation	: None under normal use.
Symptoms/effects after skin contact	: May cause sensitisation of susceptible persons. None under normal conditions.
Symptoms/effects after eye contact	: Eye irritation.
Symptoms/effects after ingestion	: None under normal conditions.

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.

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)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

rosin; colophony (8050-09-7)		
United Kingdom	Local name	Rosin-based solder flux fume
United Kingdom	WEL TWA (mg/m ³)	0.05 mg/m ³
United Kingdom	WEL STEL (mg/m ³)	0.15 mg/m ³
United Kingdom	Remark (WEL)	Sen (Capable of causing occupational asthma. See paragraphs 53–56)
United Kingdom	Regulatory reference	EH40. HSE

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:

Protective gloves

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Reusable gloves	Rubber				

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Eye protection:

Type	Use	Characteristics	Standard
Safety goggles			

Skin and body protection:

Wear suitable protective clothing

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
Appearance	: clear.
Colour	: Yellow.
Odour	: Organic solvent.
Odour threshold	: No data available
pH	: 4.6 - 5.6
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	: 86 °C EEC A.9
Auto-ignition temperature	: 270 °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	: 0.9 - 1.1 OECD 109
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: 21.9 mm ² /s 40°C; OECD 114 CIPAC MT 192
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.

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10.4. Conditions to avoid

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

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

DEACON	
LD50 oral rat	> 2000 mg/kg (OECD 423 method)
LD50 dermal rat	> 2000 mg/kg (OECD 402 method)
LC50 inhalation rat (mg/l)	> 5.4 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)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: rabbit (Based on available data, the classification criteria are not met) pH: 4.6 - 5.6
Serious eye damage/irritation	: rabbit pH: 4.6 - 5.6
Respiratory or skin sensitisation	: Guinea pig (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)

DEACON	
Viscosity, kinematic	21.9 mm ² /s 40°C; OECD 114 CIPAC MT 192

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Very toxic to aquatic life with long lasting effects.
Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Very toxic to aquatic life with long lasting effects.

DEACON	
LC50 96h fish	19.7 mg/l Oncorhynchus mykiss; OECD 203
EC50 48h crustacea	29.5 mg/l OECD 202
EC50 72h algae	15.5 mg/l Scenedesmus Subspicatus; 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)

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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)	
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)
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)
LD50, Dermal, Apis mellifera (bee)	200 µg/bee (48 Hours)

Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt (577-11-7)	
LC50 96h fish	20 - 40 mg/l Oncorhynchus mykiss (Rainbow trout)
LC50 96h fish	< 24 mg/l Oncorhynchus mykiss (Rainbow trout)
EC50 48h crustacea	36 mg/l Daphnia magna (Water flea)

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)

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.

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

DEACON	
Surface tension	31.1 mN/m 20.2°C; EEC A.5 OECD 115

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

12.5. Results of PBT and vPvB assessment

No additional information available

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)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tebuconazole)	Environmentally hazardous substance, liquid, n.o.s. (Tebuconazole)
Transport document description		
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tebuconazole), 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tebuconazole), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Tebuconazole), 9, III
14.3. Transport hazard class(es)		
9	9	9

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ADR	IMDG	IATA
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

- 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

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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