according to Regulation (EC) No. 1907/2006



# **TOPREX**

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

1.1 Product identifier

Trade name : TOPREX

Design code : A14049A

Product Registration Number :

MAPP 16456

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

Use of the : Fungicide

Substance/Mixture

1.3 Details of the supplier of the safety data sheet

Company : Syngenta UK Limited

CPC4, Capital Park

Fulbourn, Cambridge CB21 5XE

United Kingdom

Telephone : +44 (0) 1223 883400

Telefax : +44 (0) 1223 882195

E-mail address of person

responsible for the SDS

: customer.services@syngenta.com

1.4 Emergency telephone number

Emergency telephone :

number

: +44 1484 538444

## **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

## Classification (REGULATION (EC) No 1272/2008)

Reproductive toxicity, Category 2 H361d: Suspected of damaging the unborn child.

Short-term (acute) aquatic hazard, H400: Very toxic to aquatic life.

Category 1

Long-term (chronic) aquatic hazard, H410: Very toxic to aquatic life with long lasting

Category 1 effects.

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#### 2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Warning

Hazard statements : H361d Suspected of damaging the unborn child.

H410 Very toxic to aquatic life with long lasting effects.

Supplemental Hazard

Statements

EUH401 To avoid risks to human health and the

environment, comply with the instructions for use.

EUH208 Contains 1,2-benzisothiazol-3-one.

May produce an allergic reaction.

Precautionary statements

P102 Keep out of reach of children.

**Prevention:** 

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye

protection/ face protection.

P201 + P202 Obtain special instructions before use. Do not

handle until all safety precautions have been read and

understood.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/

attention.

P391 Collect spillage.

Disposal:

P501 Dispose of contents/container to a licensed hazardouswaste disposal contractor or collection site except for empty triple rinsed clean containers which can be disposed of as non-

hazardous waste.

Hazardous components which must be listed on the label:

paclobutrazol

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## **SECTION 3: Composition/information on ingredients**

## 3.2 Mixtures

Components

Chemical name	CAS-No.	Classification	Concentration	
	EC-No.		(% w/w)	

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	Index-No.		
	Registration number		
difenoconazole	119446-68-3	Acute Tox. 4; H302	>= 20 - < 25
		Eye Irrit. 2; H319 Aquatic Acute 1; H400	
		Aquatic Chronic 1; H410	
		M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic	
		aquatic toxicity): 10	
paclobutrazol	76738-62-0	Acute Tox. 4; H302 Acute Tox. 4; H332 Eye Irrit. 2; H319 Repr. 2; H361d Aquatic Acute 1; H400	>= 10 - < 20
		Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10	
poly(oxy-1,2-ethanediyl), alpha- sulfo-omega-[tris(1- phenylethyl)phenoxy]-, ammonium salt	119432-41-6	Aquatic Chronic 3; H412	>= 1 - < 2.5
methanol	67-56-1 200-659-6 603-001-00-X 01-2119433307-44	Flam. Liq. 2; H225 Acute Tox. 3; H301 Acute Tox. 3; H331 Acute Tox. 3; H311 STOT SE 1; H370	>= 0.1 - < 1
toluene	108-88-3 203-625-9 601-021-00-3 01-2119471310-51	Flam. Liq. 2; H225 Skin Irrit. 2; H315 Repr. 2; H361d STOT SE 3; H336 (Central nervous system) STOT RE 2; H373 Asp. Tox. 1; H304	>= 0.1 - < 1
1,2-benzisothiazol-3(2H)-one	2634-33-5 220-120-9 613-088-00-6 01-2120761540-60	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 3; H412 M-Factor (Acute aquatic toxicity): 1	>= 0.025 - < 0.05

For explanation of abbreviations see section 16.

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## **SECTION 4: First aid measures**

#### 4.1 Description of 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

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 : Nonspecific

No symptoms known or expected.

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

Treatment : There is no specific antidote available.

Treat symptomatically.

## **SECTION 5: Firefighting 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.

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## 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.

#### **SECTION 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). Clean contaminated surface thoroughly. Clean with detergents. Avoid solvents.

Retain and dispose of contaminated wash water.

#### 6.4 Reference to other sections

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

## **SECTION 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 : No special storage conditions required. Keep containers

according to Regulation (EC) No. 1907/2006



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areas and 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.

Further information on

storage stability

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.

## **SECTION 8: Exposure controls/personal protection**

## 8.1 Control parameters

## **Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
difenoconazole	119446-68- 3	TWA	5 mg/m3	Syngenta
paclobutrazol	76738-62-0	TWA	5 mg/m3	Syngenta
propane-1,2-diol	57-55-6	TWA (particles)	10 mg/m3	GB EH40
	Further inform	nation: Where no spe	ecific short-term exposure lim	it is listed, a
	figure three til	mes the long-term ex	cposure limit should be used.	
	57-55-6	TWA (Total	150 ppm	GB EH40
		vapour and	474 mg/m3	
		particles)		
			ecific short-term exposure lim	
			sposure limit should be used.	
methanol	67-56-1	TWA	200 ppm	2006/15/EC
			260 mg/m3	
	Further information: Indicative, Identifies the possibility of significant uptake			
	through the sl			
	67-56-1	TWA	200 ppm	GB EH40
			266 mg/m3	
	Further information: Can be absorbed through the skin. The assigned			
			ere are concerns that derma	absorption will
	lead to syster	nic toxicity.		
	67-56-1	STEL	250 ppm	GB EH40
			333 mg/m3	
	Further information: Can be absorbed through the skin. The assigned			signed
	substances are those for which there are concerns that dermal absorption will			absorption will
	lead to systemic toxicity.			
toluene	108-88-3	TWA	50 ppm	2006/15/EC
			192 mg/m3	
	Further information: Indicative, Identifies the possibility of significant uptake			
	through the skin			
	108-88-3	STEL	100 ppm	2006/15/EC
	<u> </u>		384 mg/m3	<u> </u>
	Further information: Indicative, Identifies the possibility of significant uptake			

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1	through the	through the skin			
	108-88-3	TWA	50 ppm	GB EH40	
			191 mg/m3		
	substances	Further information: Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
	108-88-3	STEL	100 ppm 384 mg/m3	GB EH40	
	substances	Further information: Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			

# Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health Value effects	
propane-1,2-diol	Workers	Inhalation	Long-term systemic effects	168 mg/m3
	Consumers	Inhalation	Long-term local effects	10 mg/m3
	Consumers	Inhalation	Long-term systemic effects	30 mg/m3
	Workers	Inhalation	Long-term local effects	10 mg/m3
1,2-benzisothiazol- 3(2H)-one	Workers	Inhalation	Long-term systemic effects	6.81 mg/m3
	Workers	Dermal	Long-term systemic effects	0.966 mg/kg
	Consumers	Inhalation	Long-term systemic effects	1.2 mg/m3
	Consumers	Dermal	Long-term systemic effects	0.345 mg/kg
methanol	Workers	Dermal	Short-term exposure, Systemic effects	40 mg/kg
	Workers	Inhalation	Short-term exposure, Systemic effects	260 mg/m3
	Workers	Inhalation	Short-term exposure, Local effects	260 mg/m3
	Workers	Dermal	Long-term systemic effects	40 mg/kg
	Workers	Inhalation	Long-term systemic effects	260 mg/m3
	Workers	Inhalation	Long-term local effects	260 mg/m3
	Consumers	Dermal	Short-term exposure, Systemic effects	8 mg/kg
	Consumers	Inhalation	Short-term exposure, Systemic effects	50 mg/m3
	Consumers	Oral	Short-term exposure, Systemic effects	8 mg/kg
	Consumers	Inhalation	Long-term local effects	50 mg/m3
	Consumers	Oral	Long-term systemic effects	8 mg/kg

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	Consumers	Inhalation	Long-term systemic effects	50 mg/m3
	Consumers	Dermal	Long-term systemic effects	8 mg/kg
	Consumers	Inhalation	Short-term exposure, Local effects	50 mg/m3
toluene	Workers	Inhalation	Long-term systemic effects	192 mg/m3
	Workers	Dermal	Long-term systemic effects	384 mg/kg
	Workers	Inhalation	Acute local effects	384 mg/m3
	Workers	Inhalation	Acute systemic effects	384 mg/m3
	Workers	Inhalation	Long-term local effects	192 mg/m3
	Consumers	Oral	Long-term systemic effects	8.13 mg/kg
	Consumers	Dermal	Long-term systemic effects	226 mg/kg
	Consumers	Inhalation	Acute systemic effects	226 mg/m3
	Consumers	Inhalation	Acute local effects	226 mg/m3
	Consumers	Inhalation	Long-term local effects	56.5 mg/m3
	Consumers	Inhalation	Long-term systemic effects	56.5 mg/m3

# Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Environmental Compartment	Value
Fresh water	260 mg/l
Marine water	26 mg/l
Intermittent use/release	183 mg/l
Sewage treatment plant	20000 mg/l
Marine sediment	57.2 mg/kg
Fresh water sediment	572 mg/kg
Soil	50 mg/kg
Fresh water	0.00403 mg/l
Marine water	0.00403 mg/l
Sewage treatment plant	1.03 mg/l
Fresh water sediment	0.0499 mg/kg
Marine sediment	0.00499 mg/kg
Freshwater - intermittent	0.0011 mg/l
Marine water - intermittent	0.000110 mg/l
Soil	3 mg/kg
Fresh water	154 mg/l
Marine water	15.4 mg/l
Soil	22.5 mg/kg
Sewage treatment plant	100 mg/l
Fresh water	0.68 mg/l
Marine sediment	16.39 mg/kg
Sewage treatment plant	13.61 mg/l
Intermittent release	0.68 mg/l
	Fresh water  Marine water  Intermittent use/release  Sewage treatment plant  Marine sediment  Fresh water sediment  Soil  Fresh water  Marine water  Sewage treatment plant  Fresh water sediment  Fresh water sediment  Fresh water sediment  Marine sediment  Freshwater - intermittent  Marine water - intermittent  Soil  Fresh water  Marine water  Soil  Sewage treatment plant  Fresh water  Soil  Sewage treatment plant  Fresh water  Marine sediment  Sewage treatment plant

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 Marine water
 0.68 mg/l

 Fresh water sediment
 16.39 mg/kg

 Soil
 2.89 mg/kg

### 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.

Maintain air concentrations below occupational exposure standards. 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 : 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.

The selected protective gloves have to satisfy the

specifications of Regulation (EU) 2016/425 and the standard

EN 374 derived from it.

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

concentration and amount of dangerous substances, and to

the specific work-place.

Remove and wash contaminated clothing before re-use.

Wear as appropriate: Impervious clothing

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.

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## **SECTION 9: Physical and chemical properties**

9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour : off-white to beige

Odour : characteristic
Odour Threshold : No data available

pH : 4-8

Concentration: 1 % w/v

Melting point/range : No data available

Boiling point/boiling range : No data available

Flash point : Method: Pensky-Martens closed cup

does not flash

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 : 1.11 g/cm3 (20 °C)

Solubility(ies)

Solubility in other solvents : No data available

Partition coefficient: n- : No data available

octanol/water

Auto-ignition temperature : > 650 °C

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : 36.2 - 263 mPa.s (40 °C)

49.1 - 317 mPa.s (20 °C)

Explosive properties : Not explosive

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

#### 9.2 Other information

No data available

## **SECTION 10: Stability and reactivity**

## 10.1 Reactivity

None reasonably foreseeable.

#### 10.2 Chemical stability

Stable under normal conditions.

## 10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid : No decomposition if used as directed.

10.5 Incompatible materials

Materials to avoid : None known.

## 10.6 Hazardous decomposition products

Hazardous decomposition

products

: No hazardous decomposition products are known.

## **SECTION 11: Toxicological information**

## 11.1 Information on toxicological effects

Information on likely routes of : Ingestion

exposure Inhalation Skin conta

Skin contact Eye contact

#### **Acute toxicity**

**Product:** 

Acute oral toxicity : LD50 (Rat, female): > 2,000 mg/kg

Assessment: The substance or mixture has no acute oral

toxicity

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.05 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute

inhalation toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg

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Assessment: The substance or mixture has no acute dermal

toxicity

**Components:** 

difenoconazole:

Acute oral toxicity : LD50 (Rat, male and female): 1,453 mg/kg

Assessment: The component/mixture is moderately toxic after

single ingestion.

Acute inhalation toxicity : LC50 (Rat, male and female): > 3,300 mg/m3

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute

inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2,010 mg/kg

Assessment: The substance or mixture has no acute dermal

toxicity

paclobutrazol:

Acute oral toxicity : LD50 (Rat, female): 1,336 mg/kg

LD50 (Rat, male): 1,954 mg/kg

Acute inhalation toxicity : LC50 (Rat, female): 3.13 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

LC50 (Rat, male): 4.79 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg

Assessment: The substance or mixture has no acute dermal

toxicity

methanol:

Acute oral toxicity : Acute toxicity estimate: 102.04 mg/kg

Assessment: The component/mixture is toxic after single

ingestion.

Acute inhalation toxicity : Acute toxicity estimate: 0.5 - 1 mg/l

Test atmosphere: dust/mist Method: Expert judgement

Assessment: The component/mixture is toxic after short term

inhalation.

Acute dermal toxicity : Acute toxicity estimate: 306.12 mg/kg

Assessment: The component/mixture is toxic after single

contact with skin.

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1,2-benzisothiazol-3(2H)-one:

Acute oral toxicity : LD50 (Rat): 1,020 mg/kg

Skin corrosion/irritation

**Product:** 

Species : Rabbit

Result : No skin irritation

**Components:** 

difenoconazole:

Species : Rabbit

Result : No skin irritation

paclobutrazol:

Species : Rabbit

Result : No skin irritation

toluene:

Species : Rabbit

Result : Irritating to skin.

1,2-benzisothiazol-3(2H)-one:

Result : Irritating to skin.

Serious eye damage/eye irritation

**Product:** 

Species : Rabbit

Result : No eye irritation

**Components:** 

difenoconazole:

Species : Rabbit

Result : Irritation to eyes, reversing within 7 days

paclobutrazol:

Species : Rabbit

Result : Irritation to eyes, reversing within 7 days

1,2-benzisothiazol-3(2H)-one:

Result : Risk of serious damage to eyes.

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Respiratory or skin sensitisation

**Product:** 

**Buehler Test** Test Type **Species** Guinea pig

Result Did not cause sensitisation on laboratory animals.

**Components:** 

difenoconazole:

**Species** Guinea pig

Did not cause sensitisation on laboratory animals. Result

paclobutrazol:

Species Guinea pig

Result Does not cause skin sensitisation.

1,2-benzisothiazol-3(2H)-one:

Result Probability or evidence of skin sensitisation in humans

Germ cell mutagenicity

**Components:** 

difenoconazole:

Germ cell mutagenicity-

Assessment

Animal testing did not show any mutagenic effects.

paclobutrazol:

Germ cell mutagenicity-

Assessment

Animal testing did not show any mutagenic effects.

methanol:

Germ cell mutagenicity-

Assessment

Animal testing did not show any mutagenic effects.

Carcinogenicity

Components:

difenoconazole:

Carcinogenicity -: Weight of evidence does not support classification as a

Assessment carcinogen, In a two-year feeding study of mice, an oncogenic

effect was seen in the livers of males and females., The observed tumors do not appear to be relevant for men.

paclobutrazol:

Carcinogenicity -

No evidence of carcinogenicity in animal studies.

Assessment

methanol:

Carcinogenicity -No evidence of carcinogenicity in animal studies.

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Assessment

Reproductive toxicity

**Components:** 

difenoconazole:

Reproductive toxicity -

Assessment

No toxicity to reproduction

paclobutrazol:

Reproductive toxicity -

Assessment

Some evidence of adverse effects on development, based on animal experiments., Animal testing did not show any effects

on fertility.

methanol:

Reproductive toxicity -

Assessment

No toxicity to reproduction

toluene:

Reproductive toxicity -

Assessment

Some evidence of adverse effects on development, based on

animal experiments.

STOT - single exposure

**Components:** 

methanol:

Target Organs : Eyes, Central nervous system

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

toxicant, single exposure, category 1.

toluene:

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

toxicant, single exposure, category 3 with narcotic effects.

STOT - repeated exposure

Components:

toluene:

Target Organs : Central nervous system

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

toxicant, repeated exposure, category 2.

Repeated dose toxicity

**Components:** 

difenoconazole:

Remarks : No adverse effect has been observed in chronic toxicity tests.

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#### **Aspiration toxicity**

### Components:

#### toluene:

May be fatal if swallowed and enters airways.

## **SECTION 12: Ecological information**

### 12.1 Toxicity

**Product:** 

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 7.1 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 4.8 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

ErC50 (Raphidocelis subcapitata (freshwater green alga)): 3.2

mg/l

Exposure time: 96 h

NOEC (Raphidocelis subcapitata (freshwater green alga)): 0.1

mg/l

Exposure time: 96 h

ErC50 (Lemna gibba (gibbous duckweed)): 0.45 mg/l

Exposure time: 7 d

NOEC (Lemna gibba (gibbous duckweed)): 0.027 mg/l

Exposure time: 7 d

**Ecotoxicology Assessment** 

Acute aquatic toxicity : Very toxic to aquatic life.

**Components:** 

difenoconazole:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 1.1 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 0.77 mg/l

Exposure time: 48 h

EC50 (Americamysis): 0.15 mg/l

Exposure time: 96 h

Toxicity to algae/aquatic

plants

EC50 (Navicula pelliculosa (Freshwater diatom)): 0.091 mg/l

Exposure time: 72 h

NOEC (Navicula pelliculosa (Freshwater diatom)): 0.053 mg/l

according to Regulation (EC) No. 1907/2006



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Exposure time: 72 h

ErC50 (Desmodesmus subspicatus (green algae)): 0.0876

Exposure time: 72 h

NOEC (Desmodesmus subspicatus (green algae)): 0.0086

Exposure time: 72 h

M-Factor (Acute aquatic

toxicity)

10

Toxicity to microorganisms EC50 (activated sludge): > 100 mg/l

Exposure time: 3 h

Toxicity to fish (Chronic

toxicity)

NOEC: 0.0076 mg/l Exposure time: 34 d

Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other :

aquatic invertebrates

(Chronic toxicity)

NOEC: 0.0056 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea)

NOEC: 0.0023 mg/l Exposure time: 28 d Species: Americamysis

M-Factor (Chronic aquatic

toxicity)

: 10

paclobutrazol:

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)): 27.8 mg/l

Exposure time: 96 h

LC50 (Lepomis macrochirus (Bluegill sunfish)): 23.6 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 29 mg/l

Exposure time: 48 h

EC50 (Mysidopsis bahia (opossum shrimp)): > 9 mg/l

Exposure time: 72 h

Toxicity to algae/aquatic

plants

ErC50 (Raphidocelis subcapitata (freshwater green alga)): >

15.2 mg/l

Exposure time: 96 h

ErC50 (Lemna gibba (gibbous duckweed)): 0.0283 mg/l

Exposure time: 7 d

NOEC (Lemna gibba (gibbous duckweed)): 0.002 mg/l

End point: Growth rate Exposure time: 7 d

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ErC50 (Myriophyllum spicatum (Eurasian watermilfoil)): 0.022

mg/l

Exposure time: 14 d

NOEC (Myriophyllum spicatum (Eurasian watermilfoil)):

0.0028 mg/l

End point: Growth rate Exposure time: 14 d

M-Factor (Acute aquatic

toxicity)

10

Toxicity to fish (Chronic

toxicity)

NOEC: 0.049 mg/l Exposure time: 32 d

Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other : NOEC: 0.32 mg/l

aquatic invertebrates

(Chronic toxicity)

Exposure time: 22 d

Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic

toxicity)

10

**Ecotoxicology Assessment** 

Acute aquatic toxicity Very toxic to aquatic life.

Chronic aquatic toxicity Very toxic to aquatic life with long lasting effects.

poly(oxy-1,2-ethanediyl), alpha-sulfo-omega-[tris(1-phenylethyl)phenoxy]-, ammonium salt:

LC50 (Oncorhynchus mykiss (rainbow trout)): 33 mg/l Toxicity to fish

Exposure time: 96 h

aquatic invertebrates

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 24 mg/l

Exposure time: 48 h

toluene:

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

1,2-benzisothiazol-3(2H)-one:

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)): 2.18 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 2.94 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

ErC50 (Raphidocelis subcapitata (freshwater green alga)):

0.15 mg/l

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Exposure time: 72 h

M-Factor (Acute aquatic

toxicity)

: 1

Toxicity to fish (Chronic

toxicity)

NOEC: 0.3 mg/l Exposure time: 28 d

Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other :

aquatic invertebrates

NOEC: 1.7 mg/l Exposure time: 21 d

(Chronic toxicity) Species: Daphnia (water flea)

12.2 Persistence and degradability

Components:

difenoconazole:

Biodegradability : Result: Not readily biodegradable.

Stability in water : Degradation half life: 1 d

Remarks: Product is not persistent.

paclobutrazol:

Biodegradability : Result: Not readily biodegradable.

Stability in water : Degradation half life: 167 - 1,378 d

Remarks: Persistent in water.

toluene:

Biodegradability : Result: Readily biodegradable.

1,2-benzisothiazol-3(2H)-one:

Biodegradability : Result: rapidly degradable

12.3 Bioaccumulative potential

**Components:** 

difenoconazole:

Bioaccumulation : Remarks: High bioaccumulation potential.

Partition coefficient: n-

octanol/water

: log Pow: 4.4 (25 °C)

paclobutrazol:

Bioaccumulation : Remarks: Does not bioaccumulate.

toluene:

Bioaccumulation : Remarks: Does not bioaccumulate.

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1,2-benzisothiazol-3(2H)-one:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

12.4 Mobility in soil

**Components:** 

difenoconazole:

Distribution among : Remarks: Low mobility in soil.

environmental compartments

Stability in soil : Dissipation time: 149 - 187 d

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

paclobutrazol:

Distribution among : Remarks: Moderately mobile in soils

environmental compartments

Stability in soil : Dissipation time: 43 - 634 d

Percentage dissipation: 50 % (DT50)

Remarks: Persistent in soil.

12.5 Results of PBT and vPvB assessment

**Product:** 

Assessment : This substance/mixture contains no components considered

to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of

0.1% or higher...

Components:

difenoconazole:

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)..

paclobutrazol:

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)..

methanol:

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)..

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toluene:

Assessment : This substance is not considered to be persistent,

bioaccumulating and toxic (PBT)..

12.6 Other adverse effects

**Product:** 

Additional ecological

information

Short-term (acute) aquatic hazard

Classification of the product is based on the summation of the

concentrations of classified components.

**SECTION 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.

Waste Code : uncleaned packagings

15 01 10, packaging containing residues of or contaminated

by hazardous substances

**SECTION 14: Transport information** 

14.1 UN number

ADN : UN 3082
ADR : UN 3082
RID : UN 3082
IMDG : UN 3082
IATA : UN 3082

14.2 UN proper shipping name

**ADN** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(DIFENOCONAZOLE AND PACLOBUTRAZOL)

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

according to Regulation (EC) No. 1907/2006



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N.O.S.

(DIFENOCONAZOLE AND PACLOBUTRAZOL)

RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(DIFENOCONAZOLE AND PACLOBUTRAZOL)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(DIFENOCONAZOLE AND PACLOBUTRAZOL)

**IATA** : Environmentally hazardous substance, liquid, n.o.s.

(DIFENOCONAZOLE AND PACLOBUTRAZOL)

## 14.3 Transport hazard class(es)

ADN : 9
ADR : 9
RID : 9
IMDG : 9
IATA : 9

#### 14.4 Packing group

#### **ADN**

Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9

#### **ADR**

Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9
Tunnel restriction code : (-)

#### **RID**

Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9

## **IMDG**

Packing group : III
Labels : 9
EmS Code : F-A, S-F

## IATA (Cargo)

Packing instruction (cargo : 964

aircraft)

Packing instruction (LQ) : Y964
Packing group : III

Labels : Miscellaneous

IATA (Passenger)

Packing instruction : 964

according to Regulation (EC) No. 1907/2006



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(passenger aircraft)

Packing instruction (LQ) : Y964
Packing group : III

Labels : Miscellaneous

#### 14.5 Environmental hazards

**ADN** 

Environmentally hazardous : yes

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

**IMDG** 

Marine pollutant : yes

IATA (Passenger)

Environmentally hazardous : yes

IATA (Cargo)

Environmentally hazardous : yes

## 14.6 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.

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

Not applicable for product as supplied.

## **SECTION 15: Regulatory information**

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) Conditions of restriction for the following entries should be considered:

Number on list 3

Not applicable

methanol (Number on list 69) toluene (Number on list 48)

Regulation (EC) No 649/2012 of the European

Parliament and the Council concerning the export and

import of dangerous chemicals

REACH - Candidate List of Substances of Very High : Not applicable

Concern for Authorisation (Article 59).

REACH - List of substances subject to authorisation : Not applicable

(Annex XIV)

Regulation (EC) No 1005/2009 on substances that : Not applicable

deplete the ozone layer

Regulation (EU) 2019/1021 on persistent organic : Not applicable

pollutants (recast)

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Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Quantity 1 Quantity 2

E1 ENVIRONMENTAL 100 t 200 t

**HAZARDS** 

## 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.

Use plant protection products safely. Always read the label and product information before use. Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

#### 15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

## **SECTION 16: Other information**

#### **Full text of H-Statements**

H225 : Highly flammable liquid and vapour.

H301 : Toxic if swallowed.
H302 : Harmful if swallowed.

H304 : May be fatal if swallowed and enters airways.

H311 : Toxic in contact with skin. H315 : Causes skin irritation.

H317 : May cause an allergic skin reaction.
H318 : Causes serious eye damage.

H318 : Causes serious eye damage. H319 : Causes serious eye irritation.

H331 : Toxic if inhaled. H332 : Harmful if inhaled.

H336 : May cause drowsiness or dizziness.
H361d : Suspected of damaging the unborn child.

H370 : Causes damage to organs.

H373 : May cause damage to organs through prolonged or repeated

exposure.

H400 : Very toxic to aquatic life.

H410 : Very toxic to aquatic life with long lasting effects.
H412 : Harmful to aquatic life with long lasting effects.

#### Full text of other abbreviations

Acute Tox. : Acute toxicity

Aquatic Acute : Short-term (acute) aquatic hazard
Aquatic Chronic : Long-term (chronic) aquatic hazard

Asp. Tox. : Aspiration hazard Eye Dam. : Serious eye damage

Eye Irrit. : Eye irritation
Flam. Liq. : Flammable liquids
Repr. : Reproductive toxicity

Skin Irrit. : Skin irritation
Skin Sens. : Skin sensitisation

STOT RE : Specific target organ toxicity - repeated exposure

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STOT SE : Specific target organ toxicity - single exposure

2006/15/EC : Europe. Indicative occupational exposure limit values

GB EH40 : UK. EH40 WEL - Workplace Exposure Limits

2006/15/EC / TWA : Limit Value - eight hours 2006/15/EC / STEL : Short term exposure limit

GB EH40 / TWA : Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL : Short-term exposure limit (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; 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; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RID -Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations: vPvB - Very Persistent and Very Bioaccumulative

## **Further information**

## Classification of the mixture: Classification procedure:

Repr. 2 H361d Calculation method

Aquatic Acute 1 H400 Based on product data or assessment
Aquatic Chronic 1 H410 Based on product data or assessment

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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

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GB/EN