

2219/2016

Bogard®

GROUP

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FUNGICIDE



Product registration number: MAPP 17310 **UFI:** 9793-40R9-N007-WTVF

An emulsifiable concentrate containing 250 g/l (23.4% w/w) difenoconazole.

A fungicide with contact and systemic activity against light leaf spot, leaf and pod spot (*Alternaria spp*) and stem canker (*Phoma lingam*) on winter and spring sown oilseed rape.

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work.

Syngenta UK Limited
CPC4, Capital Park, Fulbourn, Cambridge, CB21 5XE
Tel: Cambridge (01223) 883400

In case of toxic or transport emergency ring +44 (0)1484 538444 any time

PROTECT FROM FROST.
STORE IN A COOL, DRY PLACE

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This product label is compliant with the
CPA Voluntary Initiative (VI) guidance.



1 Litre

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BOGARD®

An emulsifiable concentrate containing 250 g/l (23.4% w/w) difenoconazole


Signal Word

Danger

Hazard Statements

May be fatal if swallowed and enters airways.
Causes serious eye irritation.
Very toxic to aquatic life with long lasting effects.
Keep out of reach of children.

Precautionary Statements

Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.
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.
Do NOT induce vomiting.
Collect spillage.
Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty triple rinsed clean containers which can be disposed of as non-hazardous waste.
To avoid risks to human health and the environment comply with the instructions for use.
Repeated exposure may cause skin dryness or cracking.

Supplemental Hazard Statements

MAPP 17310 UFI: 9793-40R9-N007-WTVF

IMPORTANT INFORMATION

FOR USE ONLY AS A FUNGICIDE

Crop	Maximum individual dose (litres/product/hectare)	Maximum total dose (litres product/hectare/crop)	Maximum number of treatments	Latest timing of application
Oilseed rape	0.5	1.0	-	End of flowering

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.

L1088055 GBR/04A PPE 4159764

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This leaflet is part of the approved Product Label.

SAFETY PRECAUTIONS

(a) Operator protection

Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:

WEAR SUITABLE PROTECTIVE GLOVES when handling the product or handling contaminated surfaces.

However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.

WASH SPLASHES from skin or eyes immediately.

WASH HANDS AND EXPOSED SKIN before meals and after work.

(b) Environmental protection

To protect aquatic organisms, respect an unsprayed buffer zone distance to surface water bodies in line with LERAP requirements.

DO NOT ALLOW DIRECT SPRAY from horizontal boom sprayers to fall within 5 m of the top of the bank of a static or flowing waterbody, unless a Local Environmental Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 1 m of the top of a ditch which is dry at the time of application. DO NOT ALLOW DIRECT SPRAY from hand held sprayers to fall within 1 m of the top of the bank of a static or flowing waterbody. Aim spray away from water.

This product qualifies for inclusion within the Local Environmental Risk Assessment for Pesticides (LERAP) Scheme. Before each spraying operation from a horizontal boom sprayer either a LERAP must be carried out in accordance with CRD published guidance or the statutory buffer zone must be maintained. The results of the LERAP must be recorded and kept available for inspection for three years.

Do not contaminate water with the product or its container. Do not clean application equipment near surface water. Avoid contamination via drains from farmyards and roads.

(c) Storage and disposal

KEEP IN ORIGINAL CONTAINER tightly closed, in a safe place.

RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of safely.

DIRECTIONS FOR USE

IMPORTANT: This information is approved as part of the Product Label. All instructions within this section must be carefully read in order to obtain safe and successful use of this product.

An emulsifiable concentrate containing 250 g/l (23.4% w/w) difenoconazole. BOGARD is a fungicide with contact and systemic activity against light leaf spot, leaf and pod spot (*Alternaria spp*) and stem canker (*Phoma lingam*).

DISEASES CONTROLLED

BOGARD® controls light leaf spot, leaf and pod spot and stem canker in oilseed rape.

CROP SPECIFIC INFORMATION

WINTER AND SPRING SOWN OILSEED RAPE

BOGARD controls light leaf spot, leaf and pod spot (*Alternaria spp*) and stem canker (*Phoma lingam*).

Light Leaf Spot

Spray protectively with 0.5 litres BOGARD per ha from the 4 expanded true leaf stage in the autumn where there is a high risk of disease. A repeat spray may be made in the spring at the beginning of stem extension if visual symptoms develop.

In areas of low disease risk, spraying may be delayed until the spring when crops should be sprayed at the first sign of disease.

For moderate control of light leaf spot only, a 2 spray programme of 0.25 litres per ha may be used, starting in the autumn.

Leaf and Pod Spot (*Alternaria spp*)

For effective control spray 0.5 litres BOGARD per ha at the end of flowering.

Stem Canker (*Phoma lingam*)

Spray 0.5 litres BOGARD per ha in the autumn after the 4 expanded true leaf stage when disease symptoms first occur. Repeat with an additional application of 0.5 litres per ha if foliar disease symptoms redevelop in late winter or early spring with a maximum total dose of no more than 1.0 litre per ha.

ALTERNATIVELY

A 2 spray programme of 0.25 litres BOGARD per ha may be used, starting in the autumn when disease symptoms first occur, with the second application 4-6 weeks after the initial application. Repeat with an additional application of 0.5 litres per ha if foliar disease symptoms redevelop in late winter or early spring with a maximum total dose of no more than 1.0 litre per ha.

MIXING AND SPRAYING

Mixing

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

Fill the spray tank with half the required volume of clean water and start agitation. Add the required amount of BOGARD and continue agitation while adding the rest of the water.

Agitate the mixture thoroughly before use and continue agitation during spraying.

Thoroughly wash all spray equipment with water immediately after use.

Spray Volume

200L water per hectare

Spraying

Apply as a MEDIUM quality spray as defined by BCPC. A spray pressure of 2-3 bars is preferred.

RESISTANCE MANAGEMENT

BOGARD is a DMI fungicide. Strains of Light Leaf Spot resistant to DMI fungicides are known to exist. To avoid development of resistance, apply product protectively in response to disease forecasts. Where possible, when Light Leaf Spot is present, avoid the use of DMI based fungicides when targeting other diseases such as Sclerotinia at mid flowering.

Section 6 of the Health and Safety at Work Act Additional Product Safety Information

(This section does not form part of the product label under the Plant Protection Products Regulations 1995.)

The product label provides information on a specific pesticidal use of the product; do not use otherwise, unless you have assessed any potential hazard involved, the safety measures required and that the particular use has 'Extension of Use' approval or is otherwise permitted under the Plant Protection Products Regulations.

The information on this label is based on the best available information including data from test results.

Safety Data Sheet

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

1.1 Product Identifier

Product Name: BOGARD

Design Code: A7402T

Product Registration number: MAPP 17310

1.2 Relevant Identified Uses of the substance or mixture and uses advised against

Use of the Substance/Mixture: Fungicide

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 phone No.: +44 (0) 1484 538444

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Eye irritation, Category 2 H319: Causes serious eye irritation.
Aspiration hazard, Category 1 H304: May be fatal if swallowed and enters airways.
Acute aquatic toxicity, Category 1 H400: Very toxic to aquatic life.
Chronic aquatic toxicity, Category 1 H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal Word	Danger	
Hazard Statements	H304 H319 H410	May be fatal if swallowed and enters airways. Causes serious eye irritation. Very toxic to aquatic life with long lasting effects.
Supplemental Hazard Statements	EUH066 EUH401	Repeated exposure may cause skin dryness or cracking. To avoid risks to human health and the environment comply with the instructions for use.

Precautionary Statements	P102 P273 P280 P301+P310 P331 P305+P351 +P338 P337 + P313 P391 P501	Keep out of reach of children. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection. IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting 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. Collect spillage. Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty triple rinsed clean containers which can be disposed of as non-hazardous waste.
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Hazardous components which must be listed on the label:

- solvent naphtha (petroleum), heavy arom.

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.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous Component(s)

Chemical Name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
solvent naphtha (petroleum), highly arom.	64742-94-5 265-198-5 649-424-00-3 01-2119451151-53	Asp. Tox. 1; H304 Aquatic Chronic 2; H411	>= 50 - < 70
difenoconazole	119446-68-3	Acute Tox. 4; H302 Eye Irrit. 2; H319 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 20 - < 25
calcium bis(dodecylbenzenesulphonate), branched	70528-83-5 234-360-7 01-2119964467-24	Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Dam. 1; H318 Aquatic Chronic 2; H411	>= 3 - < 5
poly(oxy-1,2-ethanediyl), alpha-9-octadecenyl-omega-hydroxy-,(Z)-	9004-98-2 500-016-2	Acute Tox. 4; H302 Eye Dam. 1; H318	>= 3 - < 10

Chemical Name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
2-methylpropan-1-ol	78-83-1 201-148-0 603-108-00-1 01-2119484609-23	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H336 STOT SE 3; H335	>= 1 - < 3
naphthalene	91-20-3 202-049-5 601-052-00-2	Flam. Sol. 2; H228 Acute Tox. 4; H302 Carc. 2; H351 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 0.25 - < 1

For explanation of abbreviations see section 16.

4. FIRST-AID MEASURES

4.1 Description of first aid measures

General Advice: Have the product container, label or Material Safety Data Sheet with you when calling the Syngenta emergency number, a poison control centre 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: contains petroleum distillates and/or aromatic solvents.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: Aspiration may cause pulmonary oedema and pneumonitis.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: There is no specific antidote available. Treat symptomatically. Do not induce vomiting: contains petroleum distillates and/or aromatic solvents.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:

Extinguishing media - small fires

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Extinguishing media - large fires

Use alcohol-resistant foam or water spray.

Unsuitable extinguishing media:

Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting: 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. Flash back possible over considerable distance.

5.3 Advice for fire-fighters

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.

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.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling: No special protective measures against fire required. Avoid contact with skin and eyes.

When using do not eat, drink or smoke. For personal protection see section 8.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: No special storage conditions required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
solvent naphtha (petroleum), heavy arom.	64742-94-5	TWA	8 ppm 50 mg/m ³	Supplier

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
difenoconazole	119446-68-3	TWA	5 mg/m ³	Syngenta
2-methylpropan-1-ol	78-83-1	TWA	50 ppm 154 mg/m ³	GB EH40
	78-83-1	STEL	75 ppm 231 mg/m ³	GB EH40
naphthalene	91-20-3	TWA	10 ppm 50 mg/m ³	91/322/EEC
Further information	Indicative			

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: Tightly fitting safety goggles

Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.

Use eye protection according to EN 166.

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 EU Directive 89/686/EEC 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: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Suitable respiratory equipment: Respirator with combination filter for vapour/particulate (EN 141)

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

Filter type: Combined particulates and organic vapour type (A-P)

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance:

Liquid

Colour:

Yellow to brown

Odour:

Aromatic

Odour Threshold:

No data available

pH:

5 - 9. Concentration: 1 % w/w

Melting point/range:

No data available

Boiling point/boiling range:

No data available

Flash point:

71 °C

Method: Seta 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:

1.071 g/cm³ (20 °C)

Solubility in other solvents:

No data available

Partition Coefficient n-octanol/water:

No data available

Autoignition temperature:

460 °C

Decomposition temperature:

No data available

Viscosity, dynamic:

26.0 mPa.s (20 °C)

10.5 mPa.s (40 °C)

Explosive properties:

Not explosive

Oxidizing properties:

The substance or mixture is not classified as oxidizing.

9.2 Other Information

Surface tension:

36.0 mN/m, 25 °C

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.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity: LD50 (Rat, female): 3,129 mg/kg
Acute inhalation toxicity: LC50 (Rat, male and female): > 5.17 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

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

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

calcium bis(dodecylbenzenesulphonate), branched:

Acute dermal toxicity: Acute toxicity estimate: 1,100 mg/kg
Method: Converted acute toxicity point estimate
Assessment: The component/mixture is moderately toxic after single contact with skin.

poly(oxy-1,2-ethanediyl), alpha-9-octadecenyl-omega-hydroxy-,(Z)-:

Acute oral toxicity: LD50 (Rat): 500 - 2,000 mg/kg

2-methylpropan-1-ol:
Acute oral toxicity: LD50 (Rat): 2,830 - 3,350 mg/kg

naphthalene:
Acute oral toxicity: Assessment: The component/mixture is moderately toxic after single ingestion.

Skin corrosion/irritation

Product:

Species: Rabbit
Result: No skin irritation
Result: Repeated exposure may cause skin dryness or cracking.

Components:

difenoconazole:

Species: Rabbit
Result: No skin irritation

calcium bis(dodecylbenzenesulphonate), branched:

Result: Irritating to skin.

2-methylpropan-1-ol:

Result: Irritating to skin.

Serious eye damage/eye irritation

Product:

Species: Rabbit
Result: Moderate eye irritation

Components:

difenoconazole:

Species: Rabbit
Result: Irritation to eyes, reversing within 7 days
calcium bis(dodecylbenzenesulphonate), branched:
Result: Risk of serious damage to eyes.
poly(oxy-1,2-ethanediyl), alpha-9-octadecenyl-omega-hydroxy-,(Z)-:
Species: Rabbit

Result: Irreversible effects on the eye

2-methylpropan-1-ol:

Result: Risk of serious damage to eyes.

Respiratory or skin sensitisation

Product:

Species: Guinea pig
Result: Did not cause sensitisation on laboratory animals.

Components:

difenoconazole:

Species: Guinea pig
Result: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Components:

difenoconazole:

Germ cell mutagenicity- Assessment Animal testing did not show any mutagenic effects.

2-methylpropan-1-ol:

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

Carcinogenicity

Components:

difenoconazole:

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

2-methylpropan-1-ol:

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

naphthalene:

Carcinogenicity - Assessment: Limited evidence of carcinogenicity in animal studies

Reproductive toxicity

Components:

difenoconazole:

Reproductive toxicity - Assessment: No toxicity to reproduction

2-methylpropan-1-ol:

Reproductive toxicity - Assessment: Animal testing did not show any effects on fertility.

Animal testing did not show any effects on foetal development.

STOT - single exposure

Components:

2-methylpropan-1-ol:

Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

Repeated dose toxicity

Components:

difenoconazole:

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

Aspiration toxicity

Components:

solvent naphtha (petroleum), heavy arom.:

May be fatal if swallowed and enters airways.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Product:

Toxicity to fish: LC50 (*Oncorhynchus mykiss* (rainbow trout)): 3.7 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates: EC50 (*Daphnia magna* (Water flea)): 4.3 mg/l
Exposure time: 48 h

Toxicity to algae: ErC50 (*Desmodesmus subspicatus* (green algae)): 4.4 mg/l
Exposure time: 72 h

Ecotoxicology Assessment

Acute aquatic toxicity: Very toxic to aquatic life., Classification of the product is based on the summation of the concentrations of classified components.

Chronic aquatic toxicity: Very toxic to aquatic life with long lasting effects., Classification of the product is based on the summation of the concentrations of classified components.

Components:

solvent naphtha (petroleum), heavy arom.:

Ecotoxicology Assessment

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

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 bahia* (Mysid shrimp)): 0.15 mg/l
Exposure time: 96 h

Toxicity to algae: EC50 (*Navicula pelliculosa* (Freshwater diatom)): 0.091 mg/l
Exposure time: 72 h
NOEC (*Navicula pelliculosa* (Freshwater diatom)): 0.053 mg/l
Exposure time: 72 h
NOEC (*Desmodesmus subspicatus* (green algae)): 0.0086 mg/l
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: 0.0046 mg/l

Exposure time: 28 d

Species: *Americamysis*

10

M-Factor (Chronic aquatic toxicity):

calcium bis(dodecylbenzenesulphonate), branched:

Ecotoxicology Assessment

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

poly(oxy-1,2-ethanediyl), alpha-9-octadecenyl-omega-hydroxy-,(Z)-:

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

Exposure time: 96 h

Ecotoxicology Assessment

Acute aquatic toxicity:

Chronic aquatic toxicity:

2-methylpropan-1-ol:

Toxicity to daphnia and other aquatic invertebrates:

This product has no known ecotoxicological effects.

This product has no known ecotoxicological effects.

NOEC : 20 mg/l

Exposure time: 21 d

Test Type: semi-static test

naphthalene:

Ecotoxicology Assessment

Acute aquatic toxicity:

Very toxic to aquatic life.

Chronic aquatic toxicity:

Very toxic to aquatic life with long lasting effects.

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.

poly(oxy-1,2-ethanediyl), alpha-9-octadecenyl-omega-hydroxy-,(Z)-:

Biodegradability: Result: Readily biodegradable.

12.3 Bioaccumulative potential

Components:

difenoconazole:

Bioaccumulation: Remarks: High bioaccumulation potential.

Partition coefficient: n-octanol/water: log Pow: 4.4 (25 °C)

12.4 Mobility in soil

Components:

difenoconazole:

Distribution among environmental compartments: Remarks: Low mobility in soil.

Stability in soil: Dissipation time: 149 - 187 d

Percentage dissipation: 50 % (DT50)

Remarks: Product is not persistent.

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).

2-methylpropan-1-ol:

Assessment: This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6 Other adverse effects

No data available

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 for local recycling or waste disposal. Do not re-use empty containers.

Waste Code: uncleaned packagings

150110, packaging containing residues of or contaminated by dangerous substances

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 SOLVENT NAPHTHA)

ADR: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(DIFENOCONAZOLE AND SOLVENT NAPHTHA)

RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(DIFENOCONAZOLE AND SOLVENT NAPHTHA)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(DIFENOCONAZOLE AND SOLVENT NAPHTHA)

IATA: Environmentally hazardous substance, liquid, n.o.s.
(DIFENOCONAZOLE AND SOLVENT NAPHTHA)

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

ErnS Code: F-A, S-F

IATA (Cargo)

Packing instruction (cargo aircraft): 964

Packing instruction (LQ): Y964

Packing group: III

Labels: Miscellaneous

IATA (Passenger)

Packing instruction (passenger aircraft): 964

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)

Marine pollutant: yes

IATA (Cargo)

Marine pollutant: yes

14.6 Special precautions for user

Not applicable

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

Not applicable for product as supplied.

15. REGULATORY INFORMATION

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59): Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants: Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals:

Not applicable

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 HAZARDS	100 t	200 t
34 Petroleum products: (a) gasolines and naphthas, (b) kerosenes (including jet fuels), (c) gas oils (including diesel fuels, home heating oils and gas oil blending streams),(d) heavy fuel oils (e) alternative fuels serving the same purposes and with similar properties as regards flammability and environmental hazards as the products referred to in points (a) to (d)	2,500 t	25,000 t

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.

15.2 Chemical safety assessment

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

16. OTHER INFORMATION

Full text of H-Statements

H226: Flammable liquid and vapour.

H228: Flammable solid.

H302: Harmful if swallowed.

H304: May be fatal if swallowed and enters airways.

H312: Harmful in contact with skin.

H315: Causes skin irritation.

H318: Causes serious eye damage.

H319: Causes serious eye irritation.

H335: May cause respiratory irritation.

H336: May cause drowsiness or dizziness.

H351: Suspected of causing cancer.

H400: Very toxic to aquatic life.

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

H411: Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.: Acute toxicity

Aquatic Acute: Acute aquatic toxicity

Aquatic Chronic: Chronic aquatic toxicity

Asp. Tox.: Aspiration hazard

Carc.: Carcinogenicity

Eye Dam.: Serious eye damage

Eye Irrit.: Eye irritation

Flam. Liq.: Flammable liquids

Flam. Sol.: Flammable solids

Skin Irrit.: Skin irritation

STOT SE: Specific target organ toxicity - single exposure

91/322/EEC: Europe. Commission Directive 91/322/EEC on establishing indicative limit values

GB EH40: UK. EH40 WEL - Workplace Exposure Limits

91/322/EEC / TWA: Limit Value - eight hours

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 (Cana-da); 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; 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:

Eye Irrit. 2	H319	On basis of test data.
Asp. Tox. 1	H304	Calculation method Aquatic Acute 1 H400 On basis of test data.
Aquatic Chronic 1	H410	On basis of test data.

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.