


GROUP 3 | 12 FUNGICIDES

Product registration number: MAPP 16630
UFI: 9TT2-30SM-6003-SFYM

Flowable concentrate for seed treatment containing 25 g/l fludioxonil (2.40% w/w) and 25 g/l difenoconazole (2.40% w/w).

Controls seed-borne diseases on winter crops of wheat, rye and oats and also soil-borne bunt.

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

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

In case of toxic or transport emergency ring (01484) 538444 any time.
PROTECT FROM FROST
MIX THOROUGHLY BEFORE USE
This container should be handled only by mechanical means.

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



1000 litres

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 CLOTHING (COVERALLS) AND SUITABLE PROTECTIVE GLOVES when handling the concentrate, contaminated surfaces or treated seed. WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) when bagging treated seed. However engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.
 WASH HANDS AND EXPOSED SKIN before meals and after work.
 DO NOT HANDLE seed unnecessarily.

(b) Environmental protection

DO NOT CONTAMINATE SURFACE WATERS OR DITCHES with chemical or used container.
 HARMFUL TO GAME AND WILDLIFE. To protect birds and wild mammals, treated seed should not be left on the soil surface. Bury or remove spillages.
 DO NOT USE TREATED SEED as food or feed.
 KEEP TREATED SEED SECURE from people, domestic stock/pets and wildlife at all time during storage and use.
 DO NOT APPLY TREATED SEED FROM THE AIR
 SACKS CONTAINING TREATED SEED MUST NOT BE RE-USED for food or feed.
 LABEL TREATED SEED with the appropriate precautions using printed sacks, labels or bag tags supplied.
 TREATED SEED SHOULD NOT BE BROADCAST.
 Seed should be drilled to a depth of 40mm into a well prepared seed bed. If seed is present on the soil surface, or if spills have occurred, then, if conditions are appropriate, the field should be harrowed and then rolled to ensure good incorporation.

(c) Storage and disposal

KEEP IN ORIGINAL CONTAINER tightly closed in a safe place.
 EMPTY CONTAINER COMPLETELY and dispose of safely.
 DO NOT RE-USE CONTAINER for any purpose.
 LABEL TREATED SEED with the appropriate precautions using printed sacks, labels or bag tags.
 Do not use treated seed as food or feed.

IMPORTANT INFORMATION

FOR USE ONLY AS A SEED TREATMENT

For use on:

Crops	Maximum individual dose (litres/tonne)	Maximum number of treatments	Latest time of application
Winter Wheat (seed), Winter Oats (seed)	2	one per batch	Before drilling
Winter Rye (seed)	1.5	one per batch	Before drilling

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.

ADDITIONAL PRECAUTIONS SPECIFIC TO 1000 LITRE INTERMEDIATE BULK CONTAINERS (IBC).

FOLLOW THE OPERATING INSTRUCTIONS SUPPLIED WITH EACH IBC AT ALL TIMES. (REF. "SAFE OPERATION OF CELEST EXTRA DISPENSING SYSTEM USING IBC")
OPEN THE CONTAINER ONLY AS DIRECTED.
EMPTY IBC'S SHOULD BE TREATED AS FULL CONTAINERS WITH RESPECT TO STORAGE, TRANSPORT AND HANDLING AS THEY WILL STILL BE CONTAMINATED INTERNALLY. DO NOT RINSE OUT THE CONTAINER DO NOT RE-USE THE CONTAINER FOR ANY OTHER PURPOSE.
ENSURE THAT VALVES ARE CLOSED, ALL CAPS ARE SECURED AND THAT THE PRODUCT LABEL IS LEGIBLE.

CELEST® Extra

Flowable concentrate for seed treatment containing 25 g/l fludioxonil and 25 g/l difenoconazole.


Warning
Harmful if inhaled.
Very toxic to aquatic life with long lasting effects.

Keep out of reach of children.

Avoid breathing dust/fume/gas/mist/vapours/spray.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

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.

Contains 1,2-benzisothiazol-3-one. May produce an allergic reaction.

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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.

GENERAL INFORMATION

Results from trials have shown CELEST® EXTRA to be well tolerated over a wide range of sowing dates and conditions. However under adverse environmental or soil conditions, the germination capacity of seed may be reduced and therefore seed rates should be increased in accordance with good agricultural practice.

CELEST EXTRA is effective against benzimidazole resistant and sensitive forms of *Microdochium nivale*.

DISEASES CONTROLLED

Winter Wheat

CELEST EXTRA controls *Microdochium nivale*, *Fusarium culmorum* and *Septoria nodorum* resulting in reductions of seedling blight, stem base browning, snow mould and Septoria seedling blight and controls seed-borne and soil-borne common bunt (*Tilletia caries*).

Winter Oats

CELEST EXTRA controls *Microdochium nivale* and *Fusarium culmorum* resulting in reductions of seedling blight and stem-base browning. CELEST EXTRA controls *Pyrenophora* leaf spot (*Pyrenophora avenae*).

Winter Rye

CELEST EXTRA controls Stripe smut (*Urocystis occulata*).

CROP SPECIFIC INFORMATION

Crops

CELEST EXTRA is recommended as a seed treatment for use on winter crops of wheat, oats and rye.

Timing

Before drilling

Rates of Use

Winter Wheat, winter oats

2.0 litres CELEST EXTRA per tonne of seed

Winter Rye

1.5 litres CELEST EXTRA per tonne of seed

APPLICATION

For 50 - 1000 litre containers: The product should be thoroughly mixed before application using recirculation or paddle mixing equipment to ensure uniform distribution of the product in the tank.

CELEST EXTRA should be applied directly to the seed using conventional seed treatment equipment.

Continuous flow treaters should be calibrated using CELEST EXTRA before use.

Do not apply CELEST EXTRA to cracked, split or sprouted seed.

Storage after Treatment

Ensure seed is of a satisfactory moisture content before storage. Keep in a dry place correctly labelled. Treated seed should be drilled within one month of treatment.

Seed bag labels are available from Syngenta UK Ltd.

Drilling

Seed treated with CELEST EXTRA may affect the flow rate of seed through drills. It is therefore important to check the calibration of the drill with CELEST EXTRA treated seed before drilling commences.

SEED BAG LABEL

This seed has been treated with CELEST EXTRA.

Contains fludioxonil and difenoconazole for control against seed-borne diseases on winter crops of wheat, oats and rye and also soil-borne bunt.

MAPP 16630

SAFETY PRECAUTIONS

HARMFUL TO GAME AND WILDLIFE. To protect birds and wild mammals, treated seed should not be left on the soil surface.

Bury or remove spillages.

THIS SEED HAS BEEN CHEMICALLY TREATED.

DO NOT HANDLE seed unnecessarily.

DO NOT USE TREATED SEED as food or feed.

SACKS CONTAINING TREATED SEED MUST NOT BE RE-USED for food or feed

KEEP TREATED SEED SECURE from people, domestic stock / pets and wildlife at all times during storage and use.

BURY OR REMOVE SPILLAGES.

DO NOT CONTAMINATE surface waters or ditches with chemical or used container.

WASH HANDS AND EXPOSED SKIN before meals and after work.

DO NOT APPLY TREATED SEED FROM THE AIR.

TREATED SEED SHOULD NOT BE BROADCAST.

Seed should be drilled to a depth of 40mm into a well prepared seed bed. If seed is present on the soil surface, or if spills have occurred, then, if conditions are appropriate, the field should be harrowed and then rolled to ensure good incorporation.

CAUTION

CELEST EXTRA may reduce the flow rate of seed in a seed drill. Recalibrate drill with CELEST EXTRA treated seed before drilling.

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Fulbourn

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Tel: Cambridge (01223) 883400

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 Product 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 the Plant Protection Product Regulations.

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

SAFETY DATA SHEET v11.0

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

1.1 Product Identifier

Trade name : CELEST EXTRA

Design code : A8533G

Product Registration Number : MAPP 16630

Unique Formula Identifier(UFI): 9TT2-30SM-6003-SFYM

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

Use of the Substance/Mixture: Fungicide, Seed treatment

Recommended restrictions on use: professional use

1.3 Details of the supplier of the safety data sheet

Company: Syngenta UK Ltd

CPC4, Capital Park, Fulbourn, Cambridge, CB21 5XE

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 1484 538444

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)


Acute toxicity, Category 4 - H332: Harmful if inhaled.

Short-term (acute) aquatic hazard, Category 1 - H400: Very toxic to aquatic life.

Long-term (chronic) aquatic hazard, Category 1 - H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Hazard pictograms		
Signal Word	Warning	
Hazard Statements	H332 H410	Harmful if inhaled. Very toxic to aquatic life with long lasting effects.
Precautions Statements	P102 P261 P304+P340+P312 P391 P501	Keep out of reach of children. Avoid breathing mist or vapours. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell. Collect spillage. 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.

Additional Labelling

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

EUH208 Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

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. EC No. Index-No. Registration Number	Classification	Concentration
alcohols, C16-18 and C18-unsatd., ethoxylated	68920-66-1 500-236-9 01-2119489407-26	Skin Irrit. 2; H315 Aquatic Chronic 3; H412	>= 2.5 - < 10
Fludioxonil (ISO)	131341-86-1 608-069-00-4	Aquatic Acute1; H400 Aquatic Chronic1; H410 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 10	>= 1 - < 2.5
Difenoconazole	119446-68-3	Acute Tox. 4; H302 Aquatic Acute1; H400 Aquatic Chronic1; H410 Eye Irrit. 2; H319 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10	>= 1 - < 2.5
Poly(oxy-1,2-ethanediyl), alpha-sulfo- omega -[tris(1-phenyl ethyl) phenoxy]- ammonium salt	119432-41-6	Aquatic Chronic3; H412	>= 1 - < 2.5
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 2; H411 M-Factor (Acute aquatic toxicity): 1 specific concentration limit Skin Sens. 1; H317 >= 0,05 %	>= 0.025 - < 0.05
Substances with a workplace exposure limit:			
Propane-1,2-diol	57-55-6 200-338-0 01-2119456809-23		>= 1 - < 10

For explanation of abbreviations see section 16.

SECTION 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.

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. 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](#)

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 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 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.

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
propane-1,2-diol	57-55-6	TWA (particles)	10 mg/m ³	GB EH40
		TWA (Total vapour and particles)	150 ppm 474 mg/m ³	GB EH40
fludioxonil (ISO)	131341-86-1	TWA	5 mg/m ³	Syngenta
difenoconazole	119446-68-3	TWA	5 mg/m ³	Syngenta

Derived No Effect Level (DNEL):

Substance name	End Use	Exposure routes	Potential health effects	Value
propane-1,2-diol	Workers	Inhalation	Long-term systemic effects	168 mg/m ³
	Consumers	Inhalation	Long-term local effects	10 mg/m ³
	Consumers	Inhalation	Long-term systemic effects	30 mg/m ³
	Workers	Inhalation	Long-term local effects	10 mg/m ³
alcohols, C16-18 and C18-unsatd., ethoxylated	Workers	Inhalation	Long-term systemic effects	294 mg/m ³
	Workers	Dermal	Long-term systemic effects	2080 mg/kg
	Consumers	Inhalation	Long-term systemic effects	87 mg/m ³
	Consumers	Dermal	Long-term systemic effects	1250 mg/kg
calcium 4-[(5-chloro- 4-methyl-2- sulphonatophenyl)azo]-3-hydroxy-2- naphthoate	Consumers	Oral	Long-term systemic effects	25 mg/kg
	Workers	Inhalation	Systemic effects	4.4 mg/m ³
	Workers	Dermal	Systemic effects	0.57 mg/kg bw/day
	Consumers	Inhalation	Systemic effects	1.1 mg/m ³
1,2-benzisothiazolol- 3(2H)-one	Consumers	Dermal	Systemic effects	0.2 mg/kg bw/day
	Consumers	Oral	Systemic effects	0.6 mg/kg bw/day
	Workers	Inhalation	Long-term systemic effects	6.81 mg/m ³
	Workers	Dermal	Long-term systemic effects	0.966 mg/kg
	Consumers	Inhalation	Long-term systemic effects	1.2 mg/m ³
	Consumers	Dermal	Long-term systemic effects	0.345 mg/kg

Predicted No Effect Concentration (PNEC):

Substance name	Environmental Compartment	Value
propane-1,2-diol	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
	Soil	50 mg/kg
alcohols, C16-18 and C18- unsatd., ethoxylated	Fresh water	0.007 mg/l
	Freshwater - intermittent	0.1 mg/l
	Marine water	0.001 mg/l
	Sewage treatment plant	10 g/l
	Fresh water sediment	22.79 mg/kg
	Marine sediment	2.28 mg/kg
	Soil	1 mg/kg

Substance name	Environmental Compartment	Value
1,2-benzisothiazol-3(2H)-one	Fresh water	0.00403 mg/l
	Marine water	0.000403 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

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

Remarks : No special protective equipment required.

Skin and body protection : No special protective equipment required. Select skin and body protection based on the physical job requirements.

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Suitable respiratory equipment: Respirator with a half face mask.

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.

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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance :	liquid
Colour :	light red to dark red
Odour :	faint
Odour Threshold :	No data available
pH :	5 - 9
	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
Relative vapour density :	No data available
Density :	1.066 g/cm ³ (25 °C)
Solubility(ies)	
Water solubility :	No data available
Solubility in other solvents :	No data available
Partition coefficient:	
noctanol/water:	No data available
Auto-ignition temperature :	465 °C
Decomposition temperature :	No data available
Viscosity, dynamic :	78 - 1,133 mPa.s (40 °C) 66 - 1,287 mPa.s (20 °C)

Viscosity, kinematic : No data available
Explosive properties : Not explosive
Oxidizing properties : The substance or mixture is not classified as oxidizing.

9.2 Other Information

Surface tension : 29.8 mN/m, 20 °C
Particle size : 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 exposure: Ingestion, Inhalation, 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): > 2.68 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance/mixture is not toxic on inhalation as defined by dangerous goods regulations.

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Components:

fludioxonil (ISO):

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg
Acute inhalation toxicity : LC50 (Rat, male and female): > 2.6 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
Assessment: The substance or mixture has no acute dermal toxicity

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

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

Acute oral toxicity : LD50 (Rat, male): 670 mg/kg
Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Product:

Species : Rabbit

Result : No skin irritation

Components:

alcohols, C16-18 and C18-unsatd., ethoxylated:

Result : Irritating to skin.

fludioxonil (ISO):

Species : Rabbit

Result : No skin irritation

difenoconazole:

Species : Rabbit

Result : No skin irritation

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

Species : Rabbit

Result : Mild skin irritation

Serious eye damage/eye irritation

Product:

Species : Rabbit

Result : No eye irritation

Components:

fludioxonil (ISO):

Species : Rabbit

Result : No eye irritation

difenoconazole:

Species : Rabbit

Result : Irritation to eyes, reversing within 7 days

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

Species : Rabbit

Result : Risk of serious damage to eyes.

Respiratory or skin sensitisation

Product:

Test Type : Buehler Test

Species : Guinea pig

Result : Did not cause sensitisation on laboratory animals.

Components:

fludioxonil (ISO):

Species : Guinea pig

Result : Did not cause sensitisation on laboratory animals.

difenoconazole:

Species : Guinea pig

Result : Did not cause sensitisation on laboratory animals.

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

Result : Probability or evidence of skin sensitisation in humans

Germ cell mutagenicity

Components:

fludioxonil (ISO):

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

difenoconazole:

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

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

Germ cell mutagenicity- Assessment: Weight of evidence does not support classification as a germ cell mutagen.

Carcinogenicity

Components:

fludioxonil (ISO):

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

difenoconazole:

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

Reproductive toxicity

Components:

fludioxonil (ISO):

Reproductive toxicity - Assessment: No toxicity to reproduction

difenoconazole:

Reproductive toxicity - Assessment: No toxicity to reproduction

Repeated dose toxicity

Components:

difenoconazole:

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

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Product:

Toxicity to fish : LC50 (*Oncorhynchus mykiss* (rainbow trout)): 6.9 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates: EC50 (*Daphnia magna* (Water flea)): 11 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (*Raphidocelis subcapitata* (freshwater green alga)): 15 mg/l
Exposure time: 72 h
NOEC (*Raphidocelis subcapitata* (freshwater green alga)): 3.9 mg/l
End point: Growth rate
Exposure time: 72 h

Components:

alcohols, C16-18 and C18-unsatd., ethoxylated:

Toxicity to fish : LC50 (Fish): estimated 1.26 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates: EC50 (Aquatic invertebrates (general)): 2.6 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants: EC50 (algae): 2.3 mg/l
Exposure time: 72 h
EC10 (algae): 0.33 mg/l
End point: Biomass
Exposure time: 72 h

fludioxonil (ISO):

Toxicity to fish : LC50 (*Oncorhynchus mykiss* (rainbow trout)): 0.23 mg/l
Exposure time: 96 h
LC50 (*Pimephales promelas* (fathead minnow)): 0.7 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates: EC50 (*Daphnia magna* (Water flea)): 0.4 mg/l
EC50 (*Americamysis*): 0.27 mg/l
Exposure time: 96 h

Toxicity to algae/aquatic plants: ErC50 (*Raphidocelis subcapitata* (freshwater green alga)): 0.259 mg/l
Exposure time: 96 h
EC10 (*Raphidocelis subcapitata* (freshwater green alga)): 0.077 mg/l
End point: Growth rate
Exposure time: 96 h
ErC50 (*Skeletonema costatum* (marine diatom)): 0.43 mg/l
Exposure time: 96 h
NOEC (*Skeletonema costatum* (marine diatom)): 0.14 mg/l
End point: Growth rate
Exposure time: 96 h

M-Factor (Acute aquatic toxicity): 1
M-Factor=1 used for transport classification

Toxicity to microorganisms :	EC50 (activated sludge): > 1,000 mg/l Exposure time: 3 h
Toxicity to fish (Chronic toxicity):	NOEC: 0.04 mg/l Exposure time: 28 d Species: <i>Oncorhynchus mykiss</i> (rainbow trout) NOEC: 0.018 mg/l Exposure time: 116 d Species: <i>Pimephales promelas</i> (fathead minnow)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):	NOEC: 0.035 mg/l Exposure time: 21 d Species: <i>Daphnia magna</i> (Water flea) NOEC: 0.018 mg/l Exposure time: 28 d Species: <i>Americamysis</i>
M-Factor (Chronic aquatic toxicity):	10 M-Factor=1 used for transport classification
difenoconazole:	
Toxicity to fish :	LC50 (<i>Oncorhynchus mykiss</i> (rainbow trout)): 1.1 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates:	EC50 (<i>Daphnia magna</i> (Water flea)): 0.77 mg/l Exposure time: 48 h EC50 (<i>Americamysis</i>): 0.15 mg/l Exposure time: 96 h
Toxicity to algae/aquatic plants:	EC50 (<i>Navicula pelliculosa</i> (Freshwater diatom)): 0.091 mg/l Exposure time: 72 h NOEC (<i>Navicula pelliculosa</i> (Freshwater diatom)): 0.053 mg/l Exposure time: 72 h ErC50 (<i>Desmodesmus subspicatus</i> (green algae)): 0.0876 mg/l Exposure time: 72 h EC10 (<i>Desmodesmus subspicatus</i> (green algae)): 0.015 mg/l End point: Growth rate 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: <i>Pimephales promelas</i> (fathead minnow)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):	NOEC: 0.0056 mg/l Exposure time: 21 d Species: <i>Daphnia magna</i> (Water flea) NOEC: 0.0023 mg/l Exposure time: 28 d Species: <i>Americamysis</i>
M-Factor (Chronic aquatic toxicity):	10
poly(oxy-1,2-ethanediyl), alpha-sulfo-omega-[tris(1-phenylethyl)phenoxy]-, ammonium salt:	
Toxicity to fish :	LC50 (<i>Oncorhynchus mykiss</i> (rainbow trout)): 33 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates:	EC50 (<i>Daphnia magna</i> (Water flea)): 24 mg/l Exposure time: 48 h
1,2-benzisothiazol-3(2H)-one:	
Toxicity to fish :	LC50 (<i>Oncorhynchus mykiss</i> (rainbow trout)): 2.18 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates:	EC50 (<i>Daphnia magna</i> (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
Exposure time: 72 h
EC10 (*Raphidocelis subcapitata* (freshwater green alga)): 0.04 mg/l
End point: Growth rate
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 (Chronic toxicity): NOEC: 1.7 mg/l
Exposure time: 21 d
Species: *Daphnia* (water flea)

12.2 Persistence and degradability

Components:

alcohols, C16-18 and C18-unsatd., ethoxylated:

Biodegradability : Result: rapidly biodegradable

Remarks: Based on data from similar materials

fludioxonil (ISO):

Biodegradability : Result: Not readily biodegradable.

Stability in water : Degradation half life: 450 - 700 d

Remarks: Persistent in water.

difenoconazole:

Biodegradability : Result: Not readily biodegradable.

Stability in water : Degradation half life: 1 d

Remarks: Product is not persistent.

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

Biodegradability : Result: rapidly degradable

12.3 Bioaccumulative potential

Components:

fludioxonil (ISO):

Bioaccumulation : Remarks: Does not bioaccumulate.

Partition coefficient: noctanol/water: log Pow: 4.12 (25 °C)

difenoconazole:

Bioaccumulation : Remarks: High bioaccumulation potential.

Partition coefficient: noctanol/water: log Pow: 4.4 (25 °C)

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

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

12.4 Mobility in soil

Components:

fludioxonil (ISO):

Distribution among environmental compartments: Remarks: immobile

Stability in soil : Dissipation time: 14 d

Percentage dissipation: 50 % (DT50)

Remarks: Product is not persistent.

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:**fludioxonil (ISO):**

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).

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).

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

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**Product:**

Endocrine disrupting potential: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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

SECTION 14. TRANSPORT INFORMATION**14.1 UN number**

ADR : UN 3082

RID : UN 3082

IMDG : UN 3082

IATA : UN 3082

14.2 UN proper shipping name

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(DIFENOCONAZOLE AND FLUDIOXONIL)

RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(DIFENOCONAZOLE AND FLUDIOXONIL)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(DIFENOCONAZOLE AND FLUDIOXONIL)

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

(DIFENOCONAZOLE AND FLUDIOXONIL)

14.3 Transport hazard class(es)

ADR : 9

RID : 9

IMDG : 9

IATA : 9

14.4 Packing group

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 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

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

Relevant EU provisions transposed through retained EU law
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII): Conditions of restriction for the following entries should be considered: Number on list 3
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 (EU) 2019/1021 on persistent organic pollutants (recast): Not applicable
UK REACH List of substances subject to authorisation (Annex XIV): Not applicable
GB Export and import of hazardous chemicals - Prior Informed Consent (PIC) Regulation: 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	

Other regulations:

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

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.

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.

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

Eye Dam. : Serious eye damage

Eye Irrit. : Eye irritation

Skin Irrit. : Skin irritation

Skin Sens. : Skin sensitisation

GB EH40 : UK. EH40 WEL - Workplace Exposure Limits

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

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIC - Australian Inventory of Industrial Chemicals; 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; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:

Aquatic Chronic 1

H410

Classification procedure:

Calculation method

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 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.