

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758



TIZCA®

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	30.06.2025	50000004	Date of first issue: 01.08.2020

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

1.1 Product identifier

Product name TIZCA®

Other means of identification

Product code 50000004

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

Use of the Sub- : Fungicide
stance/Mixture

Recommended restrictions : Use as recommended by the label.
on use

1.3 Details of the supplier of the safety data sheet

Supplier Address

FMC Agro Limited
Rectors Lane, Pentre
Flintshire
CH5 2DH
United Kingdom

Telephone: + 44 1244 537370
E-mail address: SDS-Info@fmc.com .

1.4 Emergency telephone number

For leak, fire, spill or accident emergencies, call:
England and Wales: 44-870-8200418 (CHEMTREC)

Medical emergency:
England and Wales: 111
Scotland: 84 54 24 2424

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)**

Skin sensitisation, Sub-category 1B

H317: May cause an allergic skin reaction.

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Reproductive toxicity, Category 2	H361d: Suspected of damaging the unborn child.
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 :
H317 May cause an allergic skin reaction.
H361d Suspected of damaging the unborn child.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements :
Prevention:
P201 Obtain special instructions before use.
P261 Avoid breathing mist or vapours.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P391 Collect spillage.
Disposal:
P501 Dispose of contents/container as hazardous waste in accordance with local regulations.

Hazardous components which must be listed on the label:

fluazinam (ISO)
1,2-benzisothiazol-3(2H)-one

Additional Labelling

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

For special phrases (SP) and safety intervals, consult the label.

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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.

None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
fluazinam (ISO)	79622-59-6 612-287-00-5	Acute Tox. 4; H332 Eye Dam. 1; H318 Skin Sens. 1A; H317 Repr. 2; H361d Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10	>= 30 - < 50
Residues (petroleum), catalytic re-former fractionator, sulfonated, polymers with formaldehyde, sodium salts	68425-94-5	Eye Irrit. 2; H319 Aquatic Chronic 3; H412	>= 1 - < 2.5
Alcohols, C13-15, branched and linear, ethoxylated	157627-86-6	Acute Tox. 4; H302 Eye Dam. 1; H318 Aquatic Chronic 3; H412	>= 1 - < 2.5
1,2-benzisothiazol-3(2H)-one	2634-33-5 220-120-9 613-088-00-6	Acute Tox. 4; H302 Acute Tox. 2; H330 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1A; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 0.0025 - < 0.025

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		<div>M-Factor (Acute aquatic toxicity): 1</div> <div>M-Factor (Chronic aquatic toxicity): 1</div> <div>specific concentration limit</div> <div>Skin Sens. 1A;</div> <div>H317</div> <div>$\geq 0.036\%$</div>	
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For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- Protection of first-aiders : Avoid inhalation, ingestion and contact with skin and eyes.
- If inhaled : Remove to fresh air.
If unconscious, place in recovery position and seek medical advice.
If experiencing any discomfort, immediately remove from exposure. Light cases: Keep person under surveillance. Get medical attention immediately if symptoms develop. Serious cases: Get medical attention immediately or call for an ambulance.
- In case of skin contact : If on clothes, remove clothes.
If on skin, rinse well with water.
Wash off with soap and plenty of water.
Get medical attention immediately if irritation develops and persists.
Wash contaminated clothing before re-use.
- In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.

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If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.
Do NOT induce vomiting.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Exposure to skin may result in mild symptoms include itching, hives or rash, and skin redness. More severe symptoms include sneezing, itchy watery eyes, and difficulty breathing.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.
Immediate medical attention is required in case of ingestion.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Dry chemical, CO₂, water spray or regular foam.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : Do not spread spilled material with high-pressure water streams.
High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Fire may produce irritating, corrosive and/or toxic gases.
Halogenated compounds
Nitrogen oxides (NO_x)
Carbon oxides
Ammonia

5.3 Advice for firefighters

Special protective equipment for firefighters : Firefighters should wear protective clothing and self-contained breathing apparatus.

Specific extinguishing methods : Remove undamaged containers from fire area if it is safe to do so.
Use a water spray to cool fully closed containers.

Further information : Use extinguishing measures that are appropriate to local cir-

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cumstances and the surrounding environment.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Evacuate personnel to safe areas.
Do not touch or walk through the spilled material.
If it can be safely done, stop the leak.
Use personal protective equipment.
Never return spills in original containers for re-use.
Mark the contaminated area with signs and prevent access to unauthorized personnel.
Only qualified personnel equipped with suitable protective equipment may intervene.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
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 : Never return spills in original containers for re-use.
Collect as much of the spill as possible with a suitable absorbent material.
Pick up and transfer to properly labelled containers.
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid formation of aerosol.
Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Provide sufficient air exchange and/or exhaust in work rooms.

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To avoid spills during handling keep bottle on a metal tray.
Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : Avoid contact with skin, eyes and clothing. Do not inhale aerosol. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully re-sealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

Further information on storage conditions : The product is stable under normal conditions of warehouse storage. Protect from heat and direct sunlight. Store in closed, labelled containers. The storage room should be constructed of incombustible material, closed, dry, ventilated and with impermeable floor, without access of unauthorised persons or children. A warning sign reading "POISON" is recommended. The room should only be used for storage of chemicals. Food, drink, feed and seed should not be present. A hand wash station should be available.

Recommended storage temperature : 5 - 30 °C

Further information on storage stability : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : Registered pesticide to be used in accordance with a label approved by country-specific regulatory authorities.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL)

Substance name	End Use	Exposure routes	Potential health effects	Value
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

Predicted No Effect Concentration (PNEC)

Substance name	Environmental Compartment	Value
urea	Fresh water	0.47 mg/l
	Marine water	0.047 mg/l
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/l
	Marine sediment	0.00499 mg/l

8.2 Exposure controls

Personal protective equipment

- Eye/face protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.
- Hand protection
Material : Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber.
- Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Respiratory protection : In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

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Protective measures : Plan first aid action before beginning work with this product.
Always have on hand a first-aid kit, together with proper instructions.
Wear suitable protective equipment.
When using do not eat, drink or smoke.

In the context of professional plant protection use as recommended, the end user must refer to the label and the instructions for use.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	: liquid
Colour	: light yellow, yellowish-brown, beige
Odour	: odourless, aromatic
Odour Threshold	: No data available
pH	: 7.5 - 8.3
	Concentration: 1 %
Melting point/ range	: not determined
Boiling point/boiling range	: No data available
Flash point	: > 103 °C
	Method: Pensky-Martens closed cup - PMCC
Evaporation rate	: No data available
Upper explosion limit / Upper flammability limit	: not determined
Lower explosion limit / Lower flammability limit	: not determined
Vapour pressure	: 0.0011 Pa (20 °C)
Relative vapour density	: not determined
Relative density	: 1.28 (20 °C)
Density	: 1.28 g/cm ³ (20 °C)
Solubility(ies)	
Water solubility	: No data available
Partition coefficient: n-octanol/water	: Not available for this mixture.
Auto-ignition temperature	: No data available
Decomposition temperature	: not determined
Viscosity	
Viscosity, dynamic	: 15.5 mPa.s (20 °C)
Viscosity, kinematic	: 1094 - 1406 mm ² /s
Explosive properties	: Not explosive

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Oxidizing properties : Non-oxidizing

9.2 Other information

Flammability (liquids)	:	The product may be combustible.
Molecular weight	:	Not applicable
Particle size	:	Not applicable
Particle Size Distribution	:	Not applicable
Self-ignition	:	> 400 °C

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : No decomposition if stored and applied as directed.

10.4 Conditions to avoid

Conditions to avoid : Avoid extreme temperatures
Avoid formation of aerosol.
Heat, flames and sparks.
Heating of the mixture may evolve harmful and irritant vapours.

10.5 Incompatible materials

Materials to avoid : Avoid strong acids, bases, and oxidizers

10.6 Hazardous decomposition products

Stable under recommended storage conditions.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity	:	LD50 Oral (Rat, female): > 2,000 mg/kg Method: OECD Test Guideline 425 Symptoms: Diarrhoea GLP: yes Assessment: The component/mixture is minimally toxic after single ingestion. Remarks: no mortality
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Acute inhalation toxicity : LC50 (Rat, male and female): > 3.56 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Symptoms: Breathing difficulties, piloerection, sneezing
GLP: yes
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: no mortality
Highest attainable concentration.

Acute dermal toxicity : LD50 Dermal (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The component/mixture is minimally toxic after single contact with skin.
Remarks: no mortality

Components:

fluazinam (ISO):

Acute oral toxicity : LD50 (Rat, female): > 2,000 mg/kg
Method: OECD Test Guideline 425
Symptoms: Diarrhoea
GLP: yes
Assessment: The component/mixture is minimally toxic after single ingestion.
Remarks: no mortality

Acute inhalation toxicity : LC50 (Rat, male): 1.32 - 2.13 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Symptoms: Fatality, Breathing difficulties, ataxia
GLP: yes

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Assessment: The component/mixture is minimally toxic after single contact with skin.
Remarks: no mortality

Residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Alcohols, C13-15, branched and linear, ethoxylated:

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

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

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Product:

Species : Rabbit
Assessment : Not classified as irritant
Method : OECD Test Guideline 404
GLP : yes
Remarks : Minimal effects that do not meet the threshold for classification.

Components:

fluazinam (ISO):

Species : Rabbit
Assessment : No skin irritation
Method : OECD Test Guideline 404
GLP : yes
Remarks : Minimal effects that do not meet the threshold for classification.

Residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:

Remarks : No data available

Alcohols, C13-15, branched and linear, ethoxylated:

Result : No skin irritation

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

Species : Rabbit
Exposure time : 72 h
Method : OECD Test Guideline 404
Result : No skin irritation

Serious eye damage/eye irritation

Product:

Species : Rabbit
Assessment : No eye irritation
Method : OECD Test Guideline 405
Remarks : Minimal effects that do not meet the threshold for classification.

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Components:

fluazinam (ISO):

Species	:	Rabbit
Assessment	:	Irritating to eyes.
Method	:	OECD Test Guideline 405
GLP	:	yes

Residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:

Result	:	Eye irritation
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Alcohols, C13-15, branched and linear, ethoxylated:

Result	:	Irreversible effects on the eye
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1,2-benzisothiazol-3(2H)-one:

Species	:	Bovine cornea
Method	:	OECD Test Guideline 437
Result	:	No eye irritation

Species	:	Rabbit
Method	:	EPA OPP 81-4
Result	:	Irreversible effects on the eye

Respiratory or skin sensitisation

Product:

Test Type	:	Local lymph node assay (LLNA)
Assessment	:	The product is a skin sensitiser, sub-category 1B.
Method	:	OECD Test Guideline 429
Result	:	Causes skin sensitization.
GLP	:	yes

Components:

fluazinam (ISO):

Test Type	:	Local lymph node assay (LLNA)
Exposure routes	:	Skin contact
Species	:	Mouse
Assessment	:	The product is a skin sensitiser, sub-category 1A.
Method	:	OECD Test Guideline 429
Result	:	May cause sensitisation by skin contact.
GLP	:	yes

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

Test Type	:	Maximisation Test
Species	:	Guinea pig

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Method : OECD Test Guideline 406
Result : May cause sensitisation by skin contact.

Species : Guinea pig
Method : FIFRA 81.06
Result : May cause sensitisation by skin contact.

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Test Type: Ames test
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Result: negative

Components:

fluazinam (ISO):

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Result: negative

Germ cell mutagenicity- Assessment : No genotoxic potential

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

Genotoxicity in vitro : Test Type: gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

Test Type: Ames test
Method: OECD Test Guideline 471
Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: positive

Genotoxicity in vivo : Test Type: unscheduled DNA synthesis assay
Species: Rat (male)
Cell type: Liver cells

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Application Route: Ingestion
Exposure time: 4 h
Method: OECD Test Guideline 486
Result: negative

Test Type: Micronucleus test
Species: Mouse
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative

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

Carcinogenicity

Components:

fluazinam (ISO):

Carcinogenicity - Assessment : Did not show carcinogenic effects in animal experiments.

Reproductive toxicity

Product:

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

Components:

fluazinam (ISO):

Effects on foetal development : Species: Rat
Symptoms: Fetal effects, placental abnormalities, fused or incompletely ossified sternebrae, abnormalities of the head bones, not developed renal papillae and distended ureter
Result: Embryotoxic effects and adverse effects on the offspring were detected.

Species: Rat
Symptoms: Fetal effects, Skeletal and visceral variations
Result: Embryotoxic effects and adverse effects on the offspring were detected.

Reproductive toxicity - Assessment : Animal testing did not show any effects on fertility., Some evidence of adverse effects on development, based on animal experiments.

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

Effects on fertility : Species: Rat, male
Application Route: Ingestion

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General Toxicity - Parent: NOAEL: 18.5 mg/kg body weight
General Toxicity F1: NOAEL: 48 mg/kg body weight
Fertility: NOAEL: 112 mg/kg bw/day
Symptoms: No effects on reproduction parameters
Method: OPPTS 870.3800
Result: negative

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

STOT - single exposure

Components:

fluazinam (ISO):

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Components:

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

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Components:

fluazinam (ISO):

Species : Rat
LOAEL : 41 mg/kg, 500 ppm
Application Route : Ingestion
Exposure time : 90 days
Target Organs : Liver
Symptoms : Reduced body weight, increased liver weight

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

Species : Rat, male and female
NOAEL : 15 mg/kg
Application Route : Ingestion
Exposure time : 28 d
Method : OECD Test Guideline 407
Symptoms : Irritation

Species : Rat, male and female
NOAEL : 69 mg/kg
Application Route : Ingestion
Exposure time : 90 d

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Symptoms : Irritation, Reduced body weight

Aspiration toxicity

Components:

fluazinam (ISO):

The substance does not have properties associated with aspiration hazard potential.

Experience with human exposure

Components:

fluazinam (ISO):

Skin contact : Symptoms: irritant effects, sensitising effects

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): 0.11 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 0.23 mg/l Exposure time: 48 h EC50 (Daphnia similis (water flea)): 179.09 mg/l Exposure time: 48 h Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	: EC50 (Desmodesmus subspicatus (green algae)): 0.13 mg/l Exposure time: 96 h ErC50 (Lemna gibba (duckweed)): 0.57 mg/l Exposure time: 7 d NOEC (Lemna gibba (duckweed)): 0.094 mg/l Exposure time: 7 d EC50 (Selenastrum capricornutum (green algae)): > 0.2 mg/l Exposure time: 96 h
Toxicity to soil dwelling organisms	: LC50: > 1,000 mg/kg Exposure time: 14 d Species: Eisenia fetida (earthworms)
Toxicity to terrestrial organisms	: LD50: > 100 µg/bee Exposure time: 48 h End point: Acute oral toxicity

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Species: *Apis mellifera* (bees)

LD50: > 100 µg/bee

Exposure time: 48 h

End point: Acute contact toxicity

Species: *Apis mellifera* (bees)

LD50: > 2,000 mg/kg

Species: *Coturnix japonica* (Japanese quail)

LD50: > 4.190 mg/kg

Species: *Anas platyrhynchos* (Mallard duck)

LD50: > 1.782 mg/kg

Species: *Colinus virginianus* (Bobwhite quail)

Components:

fluazinam (ISO):

Toxicity to fish	:	LC50 (<i>Oncorhynchus mykiss</i> (rainbow trout)): 0.11 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (<i>Daphnia magna</i> (Water flea)): 0.19 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	IC50 (<i>Selenastrum capricornutum</i> (green algae)): > 0.2 mg/l Exposure time: 96 h
M-Factor (Acute aquatic toxicity)	:	10
Toxicity to microorganisms	:	EC50 (activated sludge): 75 mg/l Exposure time: 3 h
Toxicity to fish (Chronic toxicity)	:	NOEC: 0.012 mg/l Exposure time: 28 d Species: <i>Oncorhynchus mykiss</i> (rainbow trout)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: < 0.0125 mg/l Exposure time: 21 d Species: <i>Daphnia magna</i> (Water flea)
M-Factor (Chronic aquatic toxicity)	:	10
Toxicity to soil dwelling organisms	:	LC50: > 1,000 mg/kg Exposure time: 28 d Species: <i>Eisenia fetida</i> (earthworms)
Toxicity to terrestrial organisms	:	LD50: > 4,190 mg/kg Species: <i>Anas platyrhynchos</i> (Mallard duck)

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LD50: 1,782 mg/kg
Species: *Colinus virginianus* (Bobwhite quail)

Residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:

Toxicity to fish	:	LC50 (Zebra fish): > 10 - 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (<i>Daphnia magna</i> (Water flea)): > 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	:	EC50 (<i>Pseudokirchneriella subcapitata</i> (green algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials
		EC10 (<i>Pseudokirchneriella subcapitata</i> (green algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	EC10: > 10 - 100 mg/l Exposure time: 21 d Species: <i>Daphnia magna</i> (Water flea) Method: OECD Test Guideline 211 Remarks: Based on data from similar materials

Alcohols, C13-15, branched and linear, ethoxylated:

Toxicity to fish	:	LC50 (<i>Oncorhynchus mykiss</i> (rainbow trout)): > 1 - 10 mg/l Exposure time: 48 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (<i>Daphnia magna</i> (Water flea)): > 1 - 10 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (<i>Scenedesmus subspicatus</i>): > 1 - 10 mg/l Exposure time: 72 h
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: > 0.1 - 1 mg/l

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

Toxicity to fish	:	LC50 (<i>Cyprinodon variegatus</i> (sheepshead minnow)): 16.7
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mg/l
Exposure time: 96 h
Test Type: static test

LC50 (Oncorhynchus mykiss (rainbow trout)): 2.15 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2.9 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 0.070 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 0.04 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 1

Toxicity to microorganisms : EC50 (activated sludge): 24 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209

EC50 (activated sludge): 12.8 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209

M-Factor (Chronic aquatic toxicity) : 1

12.2 Persistence and degradability

Product:

Biodegradability : Result: Not biodegradable

Components:

fluazinam (ISO):

Biodegradability : Result: Not readily biodegradable.

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Residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts:

Biodegradability : Result: Not readily biodegradable.
Remarks: Based on data from similar materials

Alcohols, C13-15, branched and linear, ethoxylated:

Biodegradability : Result: Readily biodegradable.

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

Biodegradability : Result: rapidly biodegradable
Method: OECD Test Guideline 301C

12.3 Bioaccumulative potential

Components:

fluazinam (ISO):

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Bioconcentration factor (BCF): 500 - 800
Remarks: Low potential for bioaccumulation

Partition coefficient: n-octanol/water : log Pow: 4.67 (21 °C)
pH: 7

log Pow: 3.34 (22 °C)
pH: 9

Alcohols, C13-15, branched and linear, ethoxylated:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

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

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Exposure time: 56 d
Bioconcentration factor (BCF): 6.62
Method: OECD Test Guideline 305
Remarks: Substance is not persistent, bioaccumulative, and toxic (PBT).

Partition coefficient: n-octanol/water : log Pow: 0.7 (20 °C)
pH: 7

log Pow: 0.99 (20 °C)
pH: 5

12.4 Mobility in soil

Product:

Distribution among environ- : Remarks: immobile

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mental compartments

Components:

fluazinam (ISO):

Distribution among environmental compartments : Remarks: Low mobility in soil

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

Distribution among environmental compartments : Koc: 9.33 ml/g, log Koc: 0.97
Method: OECD Test Guideline 121
Remarks: Highly mobile in soils

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.

12.6 Other adverse effects

Product:

Endocrine disrupting potential : This substance/mixture does not contain components considered to have endocrine disrupting properties for environment according to UK REACH Article 57(f).

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	: The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	: Empty remaining contents. Triple rinse containers. Do not re-use empty containers. Packaging that is not properly emptied must be disposed of as the unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal.

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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. (Fluazinam)
ADR	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Fluazinam)
RID	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Fluazinam)
IMDG	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Fluazinam)
IATA	:	Environmentally hazardous substance, liquid, n.o.s. (Fluazinam)

14.3 Transport hazard class(es)

	Class	Subsidiary risks
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

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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

ADN

Environmentally hazardous : yes

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

IMDG

Marine pollutant : 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.

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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

UK REACH List of restrictions (Annex 17)	:	Conditions of restriction for the following entries should be considered: Number on list 3
UK REACH Candidate list of substances of very high concern (SVHC) for Authorisation	:	Not applicable
The Persistent Organic Pollutants Regulations (retained Regulation (EU) 2019/1021 as amended for Great Britain)	:	Not applicable
Regulation (EU) No 2024/590 on substances that deplete the ozone layer	:	Not applicable
UK REACH List of substances subject to authorisation (Annex XIV)	:	Not applicable
Control of Major Accident Hazards Regulations 2015 (COMAH)	E1	ENVIRONMENTAL HAZARDS

Other regulations:

Take note of The Management of Health and Safety at Work Regulations 1999 (requirements relating to new and expectant mothers at work contained in Regulation 16 to 18) and of the Pregnant Workers Directive 92/85/EEC.

Take note of The Management of Health and Safety at Work Regulations 1999 (requirements relating to protection of young people at work contained in Regulation 19) and of Directive 94/33/EC on the protection of young people at work.

The components of this product are reported in the following inventories:

TCSI	:	Not in compliance with the inventory
TSCA	:	Product contains substance(s) not listed on TSCA inventory.
AIIC	:	Not in compliance with the inventory
DSL	:	This product contains the following components that are not on the Canadian DSL nor NDSL. fluazinam (ISO) mixture of polyorganosiloxanes and fillers Alcohols, C13-15, branched and linear, ethoxylated

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ENCS	:	Not in compliance with the inventory
ISHL	:	Not in compliance with the inventory
KECI	:	Not in compliance with the inventory
PICCS	:	Not in compliance with the inventory
IECSC	:	Not in compliance with the inventory
NZIoC	:	Not in compliance with the inventory
TECI	:	Not in compliance with the inventory

15.2 Chemical safety assessment

A chemical safety assessment is not required for this product (mixture).

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.
H330	:	Fatal if inhaled.
H332	:	Harmful if inhaled.
H361d	:	Suspected of damaging the unborn child.
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
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Repr.	:	Reproductive toxicity
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - 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 - Emergen-

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cy 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:

Skin Sens. 1B	H317
Repr. 2	H361d
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Classification procedure:

Based on product data or assessment
Based on product data or assessment
Based on product data or assessment
Based on product data or assessment

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