

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

1.1. Product identifier

Product form : Mixture
Trade name : Shirlan
Product code : IKF1216 500 SC; IBE3876
Type of product : SC (Suspension Concentrate)

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

1.2.1. Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Fungicide

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Belchim Crop Protection NV/SA
Technologielaan 7
1840 Londerzeel - Belgium
T +32 (0)52 30 09 06 - F +32 (0)52 30 11 35
info@belchim.com - www.belchim.com

1.4. Emergency telephone number

Emergency number : +32(0)14584545
24 H/7 days/English/French/German/Dutch

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin sensitisation, Category 1 H317
Reproductive toxicity, Category 2 H361d
Hazardous to the aquatic environment — Acute Hazard, Category 1 H400
Hazardous to the aquatic environment — Chronic Hazard, Category 1 H410
Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Harmful if inhaled. May cause an allergic skin reaction. Suspected of damaging fertility or the unborn child. Very toxic to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

GHS08

GHS09

Signal word (CLP) : Warning
Hazardous ingredients : Fluazinam (ISO); 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one
Hazard statements (CLP) : 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 (CLP) : P101 - If medical advice is needed, have product container or label to hand.
P102 - Keep out of reach of children.
P261 - Avoid breathing mist/vapours/spray.
P264 - Wash hands thoroughly after handling.
P280 - Wear protective gloves/protective clothing.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P501 - Dispose of contents /container to a licensed hazardous-waste disposal contractor or collection site except for empty clean triple-rinsed containers which can be disposed of as non-hazardous waste.
EUH-statements : EUH401 - To avoid risks to human health and the environment, comply with the instructions for use.

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Extra phrases

: Spe3: To protect aquatic organisms respect an unsprayed buffer zone of 5m to surface water bodies.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	Conc. (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Fluazinam (ISO)	(CAS-No.) 79622-59-6 (EC-No.) 612-287-00-5	25 - 50	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1A, H317 Repr. 2, H361d Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)
Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-[2,4,6-tris(1-p henylethyl)phenoxy]-, ammonium salt	(CAS-No.) 119432-41-6	1 - 5	Eye Irrit. 2, H319 Aquatic Chronic 3, H412
Quarz (SiO2)	(CAS-No.) 14808-60-7 (EC-No.) 238-878-4	< 0.1	Not classified
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	(CAS-No.) 2634-33-5 (EC-No.) 220-120-9 (EC Index-No.) 613-088-00-6	< 0.05	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400

Specific concentration limits:

Name	Product identifier	Specific concentration limits
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	(CAS-No.) 2634-33-5 (EC-No.) 220-120-9 (EC Index-No.) 613-088-00-6	(0.05 =<C < 100) Skin Sens. 1, H317

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general

: Consult a doctor/medical service if you feel unwell.

First-aid measures after inhalation

: Remove person to fresh air and keep comfortable for breathing. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact

: Wash skin with mild soap and water. If case of redness or irritation, call a doctor.

First-aid measures after eye contact

: Rinse immediately with plenty of water. Do not apply (chemical) neutralizing agents. Consult an ophthalmologist if irritation persists.

First-aid measures after ingestion

: Do not induce vomiting. Do not give an unconscious person anything to drink. Consult a doctor/medical service if you feel unwell. Rinse mouth out with water.

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

Symptoms/effects after skin contact

: May cause an allergic skin reaction.

Symptoms/effects after eye contact

: May cause slight irritation.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

: All extinguishing agents can be used.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire

: Toxic and corrosive vapours may be released. Nitrous fumes. hydrogenchloride. Hydrofluoric Acid. Carbon oxides (CO, CO2). Sulphur oxides.

5.3. Advice for firefighters

Firefighting instructions

: Dilute toxic gases with water spray. Contain the extinguishing fluids by bunding (the product is hazardous for the environment).

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Protection during firefighting	: Gloves. Full protective flameproof clothing. Heat/fire exposure: compressed air/oxygen apparatus. Gas-tight suit.
Other information	: Do not dispose of fire-fighting water in the environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area.

6.1.1. For non-emergency personnel

Protective equipment : Concerning personal protective equipment to use, see section 8.
Emergency procedures : Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Protective clothing. Protective gloves.

6.2. Environmental precautions

Stop leak if safe to do so. Contain leaking substance, pump over in suitable containers. Do not allow uncontrolled discharge of product into the environment. Do not flush into surface water or sewer system. Contain the spilled material by bunding.

6.3. Methods and material for containment and cleaning up

For containment : Take up liquid spill into absorbent material, e.g.: sand/earth. Shovel into suitable and closed container for disposal. Carefully collect remainder.
Methods for cleaning up : Clean contaminated surfaces with an excess of water.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not get in eyes, on skin, or on clothing. Do not discharge into drains or the environment.
Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Separate working clothes from town clothes. Launder separately.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : The floor of the depot should be impermeable and designed to form a water-tight basin.
Storage conditions : Store in a dry, cool area. Protect from heat and direct sunlight. Keep the container hermetically sealed. Keep out of the reach of children. Keep away from food, drink and animal feeding stuffs.
Special rules on packaging : Store in original container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls:

Provide local exhaust or general room ventilation.

Personal protective equipment:

Gloves. Protective clothing. Protective goggles.

Materials for protective clothing:

PVC or other plastic material or natural rubber gloves

Hand protection:

Protective gloves. Breakthrough time : refer to the recommendations of the supplier

Eye protection:

Safety glasses. Face shield

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection. High gas/vapour concentration: gas mask with filter type A

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Personal protective equipment symbol(s):



Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: SC (Suspension Concentrate).
Colour	: light yellow.
Odour	: odourless.
Odour threshold	: No data available
pH	: No data available
pH solution	: 5.4 - 6.56 (1% w/v)
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: Not applicable.
Auto-ignition temperature	: Not self-igniting
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 1.228 - 1.29 (20 °C - ambient temperature)
Density	: 1.228 - 1.29 g/cm ³ (20 °C - ambient temperature)
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 43.8 - 92.8 mPa·s (40 °C; 258 - 64.5/s)
Explosive properties	: Not explosive.
Oxidising properties	: Non oxidizing.
Explosive limits	: No data available

9.2. Other information

Additional information : Surface tension : 53,1 mN/m

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid formation of vapours.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)

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LD50 oral rat	> 2000 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg bodyweight
LC50 inhalation rat (mg/l)	> 1.15 mg/l/4h (OECD 403)

1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)	
LD50 dermal rat	> 2000 mg/kg bodyweight
Skin corrosion/irritation	: Not classified
Additional information	: Based on available data, the classification criteria are not met Not irritating to rabbits on cutaneous application
Serious eye damage/irritation	: Not classified
Additional information	: Based on available data, the classification criteria are not met Slightly irritating to rabbits on ocular application
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Additional information	: Guinea pig
Germ cell mutagenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met

Fluazinam (ISO) (79622-59-6)	
NOAEL (chronic, oral, animal/male, 2 years)	1.9 mg/kg bodyweight

Reproductive toxicity : Suspected of damaging the unborn child.

Fluazinam (ISO) (79622-59-6)	
NOAEL (animal/male, F0/P)	1.5 mg/kg bodyweight (day; rat)
NOAEL (animal/male, F1)	7.26 mg/kg (day; rat)

STOT-single exposure : Not classified
Additional information : Based on available data, the classification criteria are not met
STOT-repeated exposure : Not classified
Additional information : Based on available data, the classification criteria are not met

Fluazinam (ISO) (79622-59-6)	
NOAEL (oral, rat, 90 days)	4.1 mg/kg bodyweight/day

Aspiration hazard : Not classified
Additional information : Based on available data, the classification criteria are not met

SECTION 12: Ecological information

12.1. Toxicity

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

Shirlan	
LC50 fish 1	0.16 mg/l (96 H; Oncorhynchus mykiss; OECD 203)
EC50 Daphnia 1	0.31 mg/l (48 H; Daphnia magna; OECD 202)
ErC50 (algae)	> 5.7 mg/l (72 H; Pseudokirchneriella subcapitata; OECD 201)

Fluazinam (ISO) (79622-59-6)	
NOEC chronic fish	0.0029 mg/l (278d - Pimephales promelas)
NOEC chronic crustacea	0.0125 mg/l (21d - Daphnia magna)

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12.2. Persistence and degradability

Fluazinam (ISO) (79622-59-6)	
Persistence and degradability	Not readily biodegradable.

1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)

Persistence and degradability	Inherently biodegradable.
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12.3. Bioaccumulative potential

Fluazinam (ISO) (79622-59-6)	
BCF fish 1	1090 (Lepomis macrochirus)
Log Pow	4.03 (25 °C; pH 5.5-7)

12.4. Mobility in soil

Fluazinam (ISO) (79622-59-6)	
Log Koc	3.29

12.5. Results of PBT and vPvB assessment

Shirlan	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Do not dispose of with domestic waste.
Product/Packaging disposal recommendations	: Incinerate at a licensed installation. Dispose of in accordance with relevant local regulations.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
Special provision(s) applied : 375	Special provision(s) applied : 969	Special provision(s) applied : A197	Special provision(s) applied : 375	Special provision(s) applied : 375
14.1. UN number				
UN 3082	UN 3082	UN 3082	UN 3082	UN 3082
14.2. UN proper shipping name				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Fluazinam)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Fluazinam)	Environmentally hazardous substance, liquid, n.o.s. (Fluazinam)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Fluazinam)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Fluazinam)
Transport document description				
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Fluazinam), 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Fluazinam), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Fluazinam), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Fluazinam), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Fluazinam), 9, III
14.3. Transport hazard class(es)				
9	9	9	9	9

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14.4. Packing group				
III	III	III	III	III

14.5. Environmental hazards				
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes

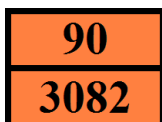
No supplementary information available

14.6. Special precautions for user

Overland transport

Special provisions (ADR) : 274, 335, 375, 601

Orange plates :



Transport by sea

No data available

Air transport

No data available

Inland waterway transport

Classification code (ADN) : M6

Number of blue cones/lights (ADN) : 0

Rail transport

No data available

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:			
Section	Changed item	Change	Comments
2.1	Additional information	Added	
14	Additional information	Added	

Abbreviations and acronyms:	
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods

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LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOEC	No-Observed Effect Concentration
PBT	Persistent Bioaccumulative Toxic
OECD	Organisation for Economic Co-operation and Development
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
vPvB	Very Persistent and Very Bioaccumulative

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. SDS of suppliers. ECHA (European Chemicals Agency).

Full text of H- and EUH-statements:	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1A	Skin sensitisation, category 1A
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.
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.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.