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

1.1 Product identifier

Product name CASH SC

Other means of identification

Product code 50001192

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

Use of the Sub- : A fertilizer with micronutrients for use in agriculture

stance/Mixture

Recommended restrictions : Use as recommended by the label.

on use For professional users only.

1.3 Details of the supplier of the safety data sheet

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)

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Long-term (chronic) aquatic hazard, Cat-H411: Toxic to aquatic life with long lasting effects.

egory 2

#### 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

¥2>

Hazard statements : H411 Toxic to aquatic life with long lasting effects.

Supplemental Hazard

Statements

EUH401 To avoid risks to human health and the envi-

ronment, comply with the instructions for use.

Precautionary statements : Prevention:

P273 Avoid release to the environment.

Response:

P391 Collect spillage.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

**Additional Labelling** 

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.	Classification	Concentration
	EC-No.		(% w/w)
	Index-No.		
	Registration number		
Substances with a workplace exposure limit :			
Limestone	1317-65-3		>= 30 - < 50
	215-279-6		
Boron calcium oxide, hydrate	12291-65-5	Aquatic Chronic 2;	>= 2.5 - < 10
•		H411	

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zinc oxide	1314-13-2 215-222-5 030-013-00-7	Repr. 2; H361 STOT RE 2; H373 (Central nervous system, Reproductive organs) Aquatic Acute 1; H400 Aquatic Chronic 1; H410 ————————————————————————————————————	>= 1 - < 2.5
1,2-benzisothiazol-3(2H)-one	2634-33-5 220-120-9 613-088-00-6	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): 10  specific concentration limit Skin Sens. 1; H317 >= 0.05 %	>= 0.0025 - < 0.025

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.

Show this safety data sheet to the doctor in attendance.

Do not leave the victim unattended.

Protection of first-aiders : First Aid responders should pay attention to self-protection

and use the recommended protective clothing

Avoid inhalation, ingestion and contact with skin and eyes. If potential for exposure exists refer to Section 8 for specific

personal protective equipment.

If inhaled : If unconscious, place in recovery position and seek medical

advice.

If symptoms persist, call a physician.

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In case of skin contact : Take off all contaminated clothing immediately.

Wash contaminated clothing before re-use.

Wash off immediately with plenty of water for at least 15

minutes.

Get medical attention if irritation develops and persists.

In case of eye contact : Flush eyes with water as a precaution.

Remove contact lenses. Protect unharmed eye.

Keep eye wide open while rinsing.

If eye irritation persists, consult a specialist.

If swallowed : Do not induce vomiting without medical advice.

Keep respiratory tract clear.

Do not give milk or alcoholic beverages.

Never give anything by mouth to an unconscious person.

If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

Risks : None known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

#### **SECTION 5: Firefighting measures**

5.1 Extinguishing media

Suitable extinguishing media : Dry chemical, CO2, water spray or regular foam.

Unsuitable extinguishing

media

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 prod: :

ucts

Ammonia

Fire may produce irritating, corrosive and/or toxic gases.

5.3 Advice for firefighters

Special protective equipment :

for firefighters

Firefighters should wear protective clothing and self-contained

breathing apparatus.

Further information : 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.

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#### **SECTION 6: Accidental release measures**

#### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : 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.

For disposal considerations see section 13.

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 : Soak up with inert absorbent material (e.g. sand, silica gel,

acid binder, universal binder, sawdust).

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 : 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 ap-

plication area.

Dispose of rinse water in accordance with local and national

regulations.

Advice on protection against :

fire and explosion

Normal measures for preventive fire protection.

Hygiene measures : When using do not eat or drink. When using do not smoke.

Wash hands before breaks and at the end of workday.

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

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precautions. Electrical installations / working materials must

comply with the technological safety standards.

Recommended storage tem: :

perature

> 5 °C

Further information on stor-

age stability

: No decomposition if stored and applied as directed.

Do not freeze.

7.3 Specific end use(s)

Specific use(s) : Fertilizers

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

#### 8.1 Control parameters

## **Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis	
Limestone	1317-65-3	TWA (inhalable dust)	10 mg/m3	GB EH40	
	halable dust a sampling is up MDHS14/4 Goble, thoracic a hazardous to in air equal to mg.m-3 8-hou ject to COSHI have been as the appropriation of sizes. The entry into the depend on the fractions for lible dust appropriation of the gas except and mouth durespiratory trates to the gas except material are gotheir own assist where no specific to the gas except and mouth durespiratory trates a	Further information: For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/4 General methods for sampling and gravimetric analysis or respirable, thoracic and inhalable aerosols., The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m-3 8-hour TWA of inhalable dust or 4 mg.m-3 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed to dust above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limits., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system, and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'., Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/4., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.			
		TWA (Respirable	4 mg/m3	GB EH40	
	Frontle and in Control	dust)	and of the condition in the condition in		
	halable dust a sampling is up	Further information: For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/4 General methods for sampling and gravimetric analysis or respira-			

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ble, thoracic and inhalable aerosols., The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m-3 8-hour TWA of inhalable dust or 4 mg.m-3 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed to dust above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limits., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system, and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'., Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/4., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.

## **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
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

#### 8.2 Exposure controls

#### Personal protective equipment

Eye/face protection : Eye wash bottle with pure water

Tightly fitting safety goggles

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 concen-

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tration of the dangerous substance at the work place.

Respiratory protection : No personal respiratory protective equipment normally re-

quired.

Protective measures : Plan first aid action before beginning work with this product.

Always have on hand a first-aid kit, together with proper in-

structions.

Ensure that eye flushing systems and safety showers are

located close to the working place. Wear suitable protective equipment.

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

#### 9.1 Information on basic physical and chemical properties

Physical state : liquid

Colour : white

Odour : odourless

Odour Threshold : No data available

pH : 8.0 - 11.0

Concentration: 100 %

Melting point/freezing point : No data available

Initial boiling point and boiling

range

No data available

Flash point : No data available

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : 1.76 - 1.79

Density : No data available

Bulk density : No data available

Solubility(ies)

Water solubility : dispersible

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Solubility in other solvents : No data available

Partition coefficient: n-

octanol/water

No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Explosive properties : No data available

Oxidizing properties : Non-oxidizing

9.2 Other information

Particle size : No data available

Particle Size Distribution : No data available

## **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

Protect from frost, heat and sunlight.

10.5 Incompatible materials

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

10.6 Hazardous decomposition products

Carbon monoxide Carbon dioxide (CO2)

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# **SECTION 11: Toxicological information**

#### 11.1 Information on toxicological effects

#### **Acute toxicity**

Based on available data, the classification criteria are not met.

**Product:** 

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

Acute inhalation toxicity : Remarks: No data is available on the product itself.

Acute dermal toxicity : Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

**Components:** 

Limestone:

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

zinc oxide:

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

Method: OECD Test Guideline 423

LD50 (Mouse, male and female): > 2,000 mg/kg

Method: OECD Test Guideline 401

Target Organs: Liver, Heart, spleen, Stomach, Pancreas

Symptoms: Damage Remarks: mortality

Acute inhalation toxicity : LC0 (Rat, male and female): > 1.79 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: EPA OPP 81 - 3 Remarks: no mortality

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

Method: OECD Test Guideline 402

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

Acute oral toxicity : LD50 (Rat, male and female): 490 mg/kg

Method: OECD Test Guideline 401

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

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#### Skin corrosion/irritation

Based on available data, the classification criteria are not met.

**Product:** 

Remarks : No data is available on the product itself.

Components:

Limestone:

Result : No skin irritation

zinc oxide:

Species : reconstructed human epidermis (RhE)

Method : OECD Test Guideline 431

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

Based on available data, the classification criteria are not met.

**Product:** 

Remarks : No data is available on the product itself.

**Components:** 

Limestone:

Result : No eye irritation

zinc oxide:

Species : Rabbit

Method : OECD Test Guideline 405

Result : No eye irritation

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

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#### Respiratory or skin sensitisation

#### Skin sensitisation

Based on available data, the classification criteria are not met.

#### Respiratory sensitisation

Based on available data, the classification criteria are not met.

**Product:** 

Remarks : No data is available on the product itself.

#### **Components:**

zinc oxide:

Test Type : Maximisation Test

Species : Guinea pig

Method : OECD Test Guideline 406

Result : Does not cause skin sensitisation.

Test Type : Maximisation Test

Species : Guinea pig

Method : OECD Test Guideline 406

Result : Substance is not considered to be potential skin sensitiser.

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

Test Type : Maximisation Test

Species : Guinea pig

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

Based on available data, the classification criteria are not met.

#### **Components:**

#### zinc oxide:

Genotoxicity in vitro : Test Type: reverse mutation assay

Method: Mutagenicity (Salmonella typhimurium - reverse mu-

tation assay) Result: negative

Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 476

Result: equivocal

Test Type: Chromosome aberration test in vitro Test system: Chinese hamster fibroblasts Method: OECD Test Guideline 473

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Result: negative

Test Type: Chromosome aberration test in vitro

Test system: Human lymphocytes

Result: positive

Test Type: Micronucleus test

Test system: Human epithelioid cells Method: OECD Test Guideline 487

Result: negative

Test Type: Micronucleus test Test system: Human lymphocytes

Result: positive

Genotoxicity in vivo : Test Type: In vivo micronucleus test

Species: Mouse (male)

Application Route: Intraperitoneal injection

Method: OECD Test Guideline 474

Result: negative

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

**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- As-

sessment

Weight of evidence does not support classification as a germ

cell mutagen.

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# Carcinogenicity

Based on available data, the classification criteria are not met.

#### **Components:**

#### zinc oxide:

Species : Mouse, male and female

Application Route : Oral Exposure time : 1 year

Dose : 4400, 22000 mg/l
NOAEL : > 22,000 mg/l
Result : negative

Remarks : Based on data from similar materials

Carcinogenicity - Assess-

ment

: Animal testing did not show any carcinogenic effects.

#### Reproductive toxicity

Based on available data, the classification criteria are not met.

### **Components:**

#### zinc oxide:

Effects on fertility : Test Type: Two-generation study

Species: Rat, male and female

**Application Route: Oral** 

Dose: 7.5, 15, 30mg/kg bw/day

Frequency of Treatment: 7 days/week

General Toxicity - Parent: LOAEL: 7.5 mg/kg body weight General Toxicity F1: LOAEL: 30 mg/kg body weight

Method: OECD Test Guideline 416

Result: negative

Remarks: Based on data from similar materials

Test Type: one-generation reproductive toxicity

Species: Rat, male Application Route: Oral Dose: 4,000 milligram per liter Frequency of Treatment: 32 daily

General Toxicity - Parent: LOAEL: 4,000 mg/l General Toxicity F1: LOAEL: 4,000 mg/l

Symptoms: Reduced fertility

Target Organs: male reproductive organs

Result: positive

Remarks: Based on data from similar materials

Effects on foetal develop-

ment

Species: Rat

Application Route: inhalation (dust/mist/fume)
Dose: .0003, 0.002, 0.008 milligram per liter

Duration of Single Treatment: 14 d

General Toxicity Maternal: LOAEC: 0.008 mg/L

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Developmental Toxicity: NOAEC: 0.008 mg/L

Embryo-foetal toxicity: NOAEC Mating/Fertility: 0.008 mg/L

Method: OECD Test Guideline 414

Result: negative

Reproductive toxicity - As-

sessment

Some evidence of adverse effects on sexual function and

fertility, and/or on development, based on animal experiments.

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

Effects on fertility : Species: Rat, male

Application Route: Ingestion

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 - As-

sessment

Weight of evidence does not support classification for repro-

ductive toxicity

STOT - single exposure

Based on available data, the classification criteria are not met.

Components:

Limestone:

Assessment : The substance or mixture is not classified as specific target

organ toxicant, single exposure.

STOT - repeated exposure

Based on available data, the classification criteria are not met.

**Components:** 

Limestone:

Assessment : The substance or mixture is not classified as specific target

organ toxicant, repeated exposure.

zinc oxide:

Exposure routes : Oral

Target Organs : Central nervous system, Reproductive organs

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

toxicant, repeated exposure, category 2.

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

Assessment : The substance or mixture is not classified as specific target

organ toxicant, repeated exposure.

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#### Repeated dose toxicity

#### **Components:**

#### zinc oxide:

Species : Rat, male and female

NOAEL : 31.52 mg/kg LOAEL : 127.52 mg/kg

Application Route : Oral Exposure time : 13 weeks

Dose : 0, 31.52, 127.52 mg/kg
Method : OECD Test Guideline 408

Target Organs : Pancreas Symptoms : Necrosis

Remarks : Based on data from similar materials

Species : Mouse, male and female

NOEL : 3000 ppm Application Route : Oral Exposure time : 13 weeks

Dose : 0, 300, 3000, 30000 ppm Method : OECD Test Guideline 408

Remarks : Based on data from similar materials

Species : Rat, male LOAEL : 0.0045 mg/l

Application Route : inhalation (dust/mist/fume)

Exposure time : 3 months

Dose : 0.0003, 0.0015, 0.004mg/l Method : OECD Test Guideline 413

Target Organs : Lungs Remarks : mortality

Species : Rat, male and female LOAEL : 75 mg/kg bw/day

Application Route : Dermal Exposure time : 28d

Dose : 0, 75, 180, 360 mg/kg bw/day Method : OECD Test Guideline 410

#### 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

Symptoms : Irritation, Reduced body weight

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# **Aspiration toxicity**

Based on available data, the classification criteria are not met.

#### **Experience with human exposure**

#### Components:

zinc oxide:

Inhalation : Symptoms: Fatigue, Sweating, bitter taste, chills, dry mouth,

flu-like symptoms

Ingestion : Symptoms: Gastrointestinal discomfort

**Further information** 

**Product:** 

Remarks : No data available

## **SECTION 12: Ecological information**

#### 12.1 Toxicity

#### **Components:**

Limestone:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 10,000 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 1,000 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

EC50 (Desmodesmus subspicatus (green algae)): > 200 mg/l

Exposure time: 72 h

Boron calcium oxide, hydrate:

Toxicity to fish : LC50 (Carassius auratus (goldfish)): 178 mg/l

Exposure time: 72 h

Remarks: Based on data from similar materials

Toxicity to daphnia and other :

aquatic invertebrates

LC50 (Daphnia magna (Water flea)): 133 mg/l

Exposure time: 48 h

Remarks: Based on data from similar materials

Toxicity to fish (Chronic tox-

icity)

NOEC: 26.5 mg/l

Exposure time: 7 d

Species: Carassius auratus (goldfish)

Remarks: Based on data from similar materials

NOEC: 0.75 - 1 mg/l

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



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Exposure time: 36 d

Species: Oncorhynchus mykiss (rainbow trout) Remarks: Based on data from similar materials

EC50: 150 mg/l Exposure time: 24 d Species: Salmo gairdneri

Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chron-

ic toxicity)

NOEC: 6 - 13 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea)

Remarks: Based on data from similar materials

zinc oxide:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 1.55 mg/l

Exposure time: 96 h Test Type: static test

Toxicity to daphnia and other :

aquatic invertebrates

LC50 (Daphnia magna (Water flea)): 0.76 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

LC50 : 0.37 mg/l Exposure time: 96 h Test Type: static test

EC50 : 0.14 mg/l Exposure time: 24 h Test Type: static test

EC50 : 0.072 mg/l Exposure time: 96 h Test Type: static test

Toxicity to algae/aquatic

plants

IC50 (Pseudokirchneriella subcapitata (algae)): 0.044 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (algae)): 0.024 mg/l

Exposure time: 3 d

Method: OECD Test Guideline 201

IC50 (Skeletonema costatum (marine diatom)): 1.23 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 201

IC50: 3.28 mg/l Exposure time: 96 h

Method: OECD Test Guideline 201

NOEC (Dunaliella tertiolecta (marine algae)): 0.01 mg/l

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Exposure time: 4 d Test Type: static test

EC50 (Dunaliella tertiolecta (marine algae)): 0.65 mg/l

Exposure time: 4 d Test Type: static test

(Chlorella vulgaris (Fresh water algae)): 1.16 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

EC50 (Anabaena flos-aquae (cyanobacterium)): 0.3 mg/l

Exposure time: 96 h Test Type: static test

EC50: 0.69 mg/l Exposure time: 3 d Test Type: static test

EC50 (Phaeodactylum tricornutum): 1.12 mg/l

Exposure time: 24 h Test Type: static test

M-Factor (Acute aquatic tox-

icity)

: 1

Toxicity to microorganisms : EC50 (activated sludge): > 1,000 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

EC50 (Tetrahymena pyriformis): 7.1 mg/l

Exposure time: 24 h

Test Type: Growth inhibition

Toxicity to fish (Chronic tox-

icity)

NOEC: 0.440 mg/l Exposure time: 72 d

Species: Oncorhynchus mykiss (rainbow trout)

Test Type: flow-through test

Remarks: Based on data from similar materials

NOEC: 0.026 mg/l Exposure time: 30 d

Species: Jordanella floridae (flagfish) Method: OECD Test Guideline 210

Remarks: Based on data from similar materials

NOEC: 0.530 mg/l Exposure time: 1,095 d

Species: Salvelinus fontinalis (Brook trout)

Test Type: flow-through test

Remarks: Based on data from similar materials

NOEC: 0.056 mg/l

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



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Exposure time: 116 d

Species: Salmo trutta (brown trout) Method: OECD Test Guideline 210

Remarks: Based on data from similar materials

NOEC: 0.025 mg/l Exposure time: 27 d Species: Fish

Test Type: semi-static test

Remarks: Based on data from similar materials

NOEC: 0.078 mg/l Exposure time: 248 d

Species: Pimephales promelas (fathead minnow)

Test Type: flow-through test

Remarks: Based on data from similar materials

NOEC: 0.050 mg/l Exposure time: 155 d

Species: Fish

Test Type: flow-through test

Remarks: Based on data from similar materials

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

LOEC: 0.125 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211

M-Factor (Chronic aquatic

toxicity)

1

Toxicity to soil dwelling or-

ganisms

NOEC: 750 mg/kg Exposure time: 21 d

Species: Eisenia fetida (earthworms)

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

Toxicity to fish : LC50 (Cyprinodon variegatus (sheepshead minnow)): 16.7

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

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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 tox-

icity)

10

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

#### 12.2 Persistence and degradability

# **Components:**

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

Biodegradability : Result: rapidly biodegradable

Method: OECD Test Guideline 301C

#### 12.3 Bioaccumulative potential

#### **Components:**

zinc oxide:

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)

Exposure time: 14 d

Bioconcentration factor (BCF): 2,060

#### 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

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



# CASH SC

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## 12.4 Mobility in soil

## **Components:**

# 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 poten-

tial

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.

Additional ecological infor-

mation

An environmental hazard cannot be excluded in the event of

unprofessional handling or disposal.

Harmful to aquatic life.

Toxic to aquatic life with long lasting effects.

## **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 chemi-

cal or used container.

Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.

Dispose of as unused product. Do not re-use empty containers.

#### **SECTION 14: Transport information**

#### 14.1 UN number

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



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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.

(Zinc oxide, Boron calcium oxide, hydrate)

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(Zinc oxide, Boron calcium oxide, hydrate)

RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(Zinc oxide, Boron calcium oxide, hydrate)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(Zinc oxide, Boron calcium oxide, hydrate)

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

(Zinc oxide, Boron calcium oxide, hydrate)

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
Hazard Identification Number : 90
Labels : 9
Tunnel restriction code : (-)

**RID** 

Packing group : III

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Classification Code : M6 Hazard Identification Number : 90 Labels : 9

**IMDG** 

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

IATA (Cargo)

Packing instruction (cargo : 964

aircraft)

Packing instruction (LQ) : Y964
Packing group : III

Labels : Miscellaneous

IATA (Passenger)

Packing instruction (passen: 964

ger aircraft)

Packing instruction (LQ) : Y964
Packing group : III

Labels : Miscellaneous

14.5 Environmental hazards

**ADN** 

Environmentally hazardous : yes

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

**IMDG** 

Marine pollutant : yes

IATA (Passenger)

Environmentally hazardous : yes

IATA (Cargo)

Environmentally hazardous : yes

#### 14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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

Not applicable for product as supplied.

#### **SECTION 15: Regulatory information**

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

Relevant EU provisions transposed through retained EU law

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



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UK REACH List of restrictions (Annex 17) : Conditions of restriction for the fol-

lowing 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 Brit-

ain)

Not applicable

Regulation (EC) No 1005/2009 on substances that de-

plete the ozone layer

Not applicable

UK REACH List of substances subject to authorisation

(Annex XIV)

Not applicable

Control of Major Accident Hazards Regulations E2

2015 (COMAH)

**ENVIRONMENTAL HAZARDS** 

E2

E1

#### 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.

Boron calcium oxide, hydrate Sodium Polyacrylate Homopolymer

emulsion of silicone

**COCOAMIDOPROPYL BETAINE** 

Limestone dolomite

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

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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.

H361 : Suspected of damaging fertility or the unborn child.

H373 : Suspected of damaging fertility of the unborn child.

H373 : May cause damage to organs through prolonged or repeated

exposure if swallowed.

H400 : Very toxic to aquatic life.

H410 : Very toxic to aquatic life with long lasting effects.H411 : Toxic to aquatic life with long lasting effects.

#### Full text of other abbreviations

Acute Tox. : Acute toxicity

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

Eye Dam. : Serious eye damage Repr. : Reproductive toxicity Skin Irrit. : Skin irritation Skin Sens. : Skin sensitisation

STOT RE : Specific target organ toxicity - repeated exposure 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: AIIC - 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;

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



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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: Classification procedure:

Aquatic Chronic 2 H411 Calculation method

#### **Disclaimer**

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