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

1.1 Product identifier

Product name VERCAL

Other means of identification

Product code 50001161

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 and horti-

stance/Mixture culture

Recommended restrictions

on use

: Use as recommended by the label.

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)

Serious eye damage/eye irritation, Cate- H319: Causes serious eye irritation.

gory 2

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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 : H319 Causes serious eye irritation.

Precautionary statements : Prevention:

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/ protective clothing/ eye protec-

tion/ face protection.

Response:

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and

easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical advice/

attention.

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 :			
calcium chloride	10043-52-4	Eye Irrit. 2; H319	>= 10 - <= 40
	233-140-8		
	017-013-00-2		
ethane-1,2-diol	107-21-1	Acute Tox. 4; H302	>= 1 - < 10
	203-473-3	STOT RE 2; H373	
	603-027-00-1	(Kidney)	

For explanation of abbreviations see section 16.

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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.

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

advice.

If symptoms persist, call a physician.

In case of skin contact If on skin, rinse well with water.

If on clothes, remove clothes.

Immediately flush eye(s) with plenty of water. In case of eye contact

> Remove contact lenses. Protect unharmed eye.

Keep eye wide open while rinsing.

If eye irritation persists, consult a specialist.

If swallowed 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. Take victim immediately to hospital.

4.2 Most important symptoms and effects, both acute and delayed

: Causes serious eye irritation. Risks

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

Hazardous combustion prod: Carbon oxides

ucts

5.3 Advice for firefighters

Special protective equipment : Wear self-contained breathing apparatus for firefighting if nec-

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for firefighters essary.

Further information : For safety reasons in case of fire, cans should be stored sepa-

rately in closed containments.

Use a water spray to cool fully closed containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.

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 : Contain spillage, and then collect with non-combustible ab-

sorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local

/ national regulations (see section 13).

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 CONTAMINATE THE WATER WITH THE

PRODUCT OR YOUR PACKAGING. Do not clean the product application equipment near surface waters. Avoid contamination through the water evacuation systems of the farms or the

roads.

Avoid formation of aerosol.

Do not breathe vapours/dust.

Avoid contact with skin and eyes.

For personal protection see section 8.

Smoking, eating and drinking should be prohibited in the ap-

olication area.

Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national

regulations.

Advice on protection against : Do not spray on a naked flame or any incandescent material.

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fire and explosion Keep away from open flames, hot surfaces and sources of

ignition.

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

No smoking. Keep in a well-ventilated place. Observe label precautions. Electrical installations / working materials must

comply with the technological safety standards.

Further information on stor-

age stability

No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : Fertilizers

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Personal protective equipment

Eye protection : Eye wash bottle with pure water

Tightly fitting safety goggles

Wear face-shield and protective suit for abnormal processing

problems.

Hand protection

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-

tration of the dangerous substance at the work place.

Respiratory protection : No personal respiratory protective equipment normally re-

quired.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : liquid

Colour : brown

Odour : strong

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Odour Threshold : No data available

pH : 5.6 - 6.6

Melting point/freezing point : No data available

Initial boiling point and boiling

range

No data available

Flash point : > 93 °C

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 : 1.32 - 1.35

Solubility(ies)

Water solubility : No data available

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

Oxidizing properties : Non-oxidizing

9.2 Other information

Particle size : No data available

Particle Size Distribution : No data available

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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.

Vapours may form explosive mixture with air.

10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid : Strong oxidizing agents

Strong acids

Strong bases

10.6 Hazardous decomposition products

Toxic fumes

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Not classified based on available information.

Components:

calcium chloride:

Acute oral toxicity : LD50 (Rat, male): 2,120 mg/kg

Method: OECD Test Guideline 401

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

ethane-1,2-diol:

Acute inhalation toxicity : LC0 (Rat, male and female): > 2.5 mg/l

Exposure time: 6 h

Test atmosphere: dust/mist Remarks: no mortality

Acute dermal toxicity : LD50 (Mouse, male and female): > 3,500 mg/kg

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Skin corrosion/irritation

Not classified based on available information.

Product:

Remarks : May cause skin irritation in susceptible persons.

Components:

calcium chloride:

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation

ethane-1,2-diol:

Species : Rabbit

Result : No skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Remarks : May cause irreversible eye damage.

Components:

calcium chloride:

Species : Rabbit

Method : OECD Test Guideline 405

Result : Irritation to eyes, reversing within 21 days

ethane-1,2-diol:

Species : Rabbit

Result : No eye irritation

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

ethane-1,2-diol:

Test Type : Maximisation Test Species : Guinea pig

Result : Does not cause skin sensitisation.

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Germ cell mutagenicity

Not classified based on available information.

Components:

calcium chloride:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 471

Result: negative

ethane-1,2-diol:

Genotoxicity in vitro : Test Type: reverse mutation assay

Method: OPPTS 870.5100

Result: negative

Genotoxicity in vivo : Test Type: dominant lethal test

Species: Rat

Application Route: Oral Result: negative

Carcinogenicity

Not classified based on available information.

Components:

ethane-1,2-diol:

Species : Mouse
Application Route : Oral
Exposure time : 24 mor

Exposure time : 24 month(s)
Result : negative

Reproductive toxicity

Not classified based on available information.

Components:

calcium chloride:

Effects on foetal development Test Type: reproductive and developmental toxicity study

Species: Rat

Application Route: Oral

Method: OECD Test Guideline 414

Remarks: No significant adverse effects were reported

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

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Components:

ethane-1,2-diol:

Exposure routes : Oral Target Organs : Kidney

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

toxicant, repeated exposure, category 2.

Repeated dose toxicity

Components:

ethane-1,2-diol:

Species : Rat

NOAEL : 150 mg/kg Application Route : Oral Exposure time : 12 months

Species : Dog

NOAEL : > 2,200 - < 4,400 mg/kg

Application Route : Dermal Exposure time : 4 weeks

Method : OECD Test Guideline 410

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks : No data available

SECTION 12: Ecological information

12.1 Toxicity

Components:

calcium chloride:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 4,630 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 2,400 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

EC50 (Chlorella vulgaris (Fresh water algae)): 2,900 mg/l Exposure time: 72 h

EC10 (Chlorella vulgaris (Fresh water algae)): 1,000 mg/l

Exposure time: 72 h

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Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

EC10: 320 mg/l Exposure time: 21 d

ethane-1,2-diol:

Toxicity to fish LC50 (Pimephales promelas (fathead minnow)): > 72,860 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae/aquatic

plants

IC50 (Pseudokirchneriella subcapitata (green algae)): 10,940

mg/l

Exposure time: 96 h

Toxicity to microorganisms (activated sludge): > 1,995 mg/l

> Exposure time: 30 min Method: ISO 8192

Toxicity to fish (Chronic tox-

icity)

1,500 mg/l

33,911 mg/l

Exposure time: 28 d

Species: Menidia peninsulae (tidewater silverside)

Toxicity to daphnia and other :

aquatic invertebrates (Chron-

Exposure time: 21 d

Species: Daphnia magna (Water flea) ic toxicity)

12.2 Persistence and degradability

Components:

ethane-1,2-diol:

Biodegradability Result: Readily biodegradable.

Biodegradation: 90 - 100 %

Exposure time: 10 d

Method: OECD Test Guideline 301A

12.3 Bioaccumulative potential

Components:

ethane-1,2-diol:

Partition coefficient: n-

: log Pow: -1.36

octanol/water

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

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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

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Do not dispose of waste into sewer.

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.

Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

14.1 UN number

ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.2 UN proper shipping name

ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good

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IATA : Not regulated as a dangerous good

14.3 Transport hazard class(es)

ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.4 Packing group

ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA (Cargo) : Not regulated as a dangerous good
IATA (Passenger) : Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regu-

lations.

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

Regulation (EC) No 1005/2009 on substances that de- : Not applicable

plete the ozone layer

UK REACH List of substances subject to authorisation : Not applicable

(Annex XIV)

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

TCSI : On the inventory, or in compliance with the inventory

TSCA : All substances listed as active on the TSCA inventory

AIIC : Not in compliance with the inventory

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DSL : All components of this product are on the Canadian DSL

ENCS : On the inventory, or in compliance with the inventory

ISHL : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or 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.

H319 : Causes serious eye irritation.

H373 : May cause damage to organs through prolonged or repeated

exposure if swallowed.

Full text of other abbreviations

Acute Tox. : Acute toxicity Eye Irrit. : Eye irritation

STOT RE : Specific target organ toxicity - repeated exposure

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 - Interna-

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tional 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

Other information

Classification of the mixture:

Classification procedure:

2 H319 Calculation method

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