

# SAFETY DATA SHEET

## ZINC FL

This safety data sheet complies with the requirements of:  
Regulation (EC) No. 453/2010 and Regulation (EC) No. 1272/2008



SDS #: NP-0053-1-A  
Revision date: 2020-03-20  
Format: EU  
Version 1.02

### Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Code(s) NP-0053-1-A

Product Name ZINC FL

Pure substance/preparation Mixture

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

Recommended Use: A fertilizer with micronutrients for use in agriculture and horticulture

Restrictions on use Use as recommended by the label.

#### 1.3. Details of the supplier of the safety data sheet

Manufacturer  
FMC Agro Limited  
Rectors Lane  
Pentre  
Flintshire  
CH5 2DH  
United Kingdom  
Tel: + 44 1244 537370  
E-mail: fmc.agro.uk@fmc.com

For further information, please contact:

Contact point  
Tel: +44(0) 1244 537370  
Email: fmc.agro.uk@fmc.com

#### 1.4. Emergency telephone number

Emergency telephone Medical emergencies:

Austria: +43 1 406 43 43  
Belgium: +32 70 245 245  
Bulgaria: +359 2 9154 409  
Cyprus: 1401  
Czech Republic: +420 224 919 293, +420 224 915 402  
Denmark: +45 82 12 12 12  
France: +33 (0) 1 45 42 59 59  
Finland: +358 9 471 977  
Greece: 30 210 77 93 777  
Hungary: +36 80 20 11 99  
Ireland (Republic): +352 1 809 2166  
Italy: +39 02 6610 1029  
Lithuania: +370 523 62052, +370 687 53378  
Luxembourg: +352 8002 5500  
Netherlands: +31 30 274 88 88  
Norway: +47 22 591300  
Poland: +48 22 619 66 54, +48 22 619 08 97

Portugal: 800 250 250 (in Portugal only), +351 21 330 3284  
Romania: +40 21318 3606  
Slovakia: +421 2 54 77 4 166  
Slovenia: +386 41 650 500  
Spain: +34 91 562 04 20  
Sweden: +46 08-331231112  
Switzerland: 145  
United Kingdom: 0870 600 6266 (in the UK only)  
U.S.A. & Canada: +1 800 / 331-3148  
All other countries: +1 651 / 632-6793 (Collect)

For leak, fire, spill, or accident emergencies, call:  
1 800 / 424-9300 (CHEMTREC - U.S.A. & Canada)  
1 703 / 527 3887 (CHEMTREC - All Other Countries - Collect)

## Section 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture Regulation (EC) No 1272/2008

Chronic aquatic toxicity	Category 1 (H410)
EUH208: Contains 1,2-Benzisothiazolin-3-one. May produce an allergic reaction.	

### 2.2. Label elements

#### Hazard pictograms



#### Signal Word

Warning

#### Hazard Statements

H410 - Very toxic to aquatic life with long lasting effects

EUH208: Contains 1,2-Benzisothiazolin-3-one. May produce an allergic reaction.

#### Precautionary Statements

P273 - Avoid release to the environment

P391 - Collect spillage

P501: Dispose of contents/container as hazardous waste in accordance with local regulations.

### 2.3. Other hazards

This product is not identified as a PBT/vPvB substance.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

The product is a mixture, not a substance.

### 3.2 Mixtures

Chemical name	EC-No	CAS-No	Weight percent	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
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Zinc oxide	215-222-5	1314-13-2	45-55	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	01-2119463881-32-XXXX
ethane-1,2-diol	203-473-3	107-21-1	1-5	Acute Tox. 4 (H302) STOT RE 2: (H373)	01-2119456816-28-XXXX

**Additional Information**

Contains 1,2-Benzisothiazolin-3-one (CAS number 2634-33-5) at a level below the concentration limit for classification of the mixture as sensitising.

For the full text of the H- and EUH- phrases mentioned in this Section, see Section 16

## Section 4: FIRST AID MEASURES

**4.1. Description of first aid measures**

<b>Eye Contact</b>	Hold eyes open and rinse slowly and gently with water for 15-20 minutes.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water. If symptoms persist, call a doctor.
<b>Inhalation</b>	Remove person from exposure ensuring one's own safety while doing so.
<b>Ingestion</b>	Rinse mouth. Do NOT induce vomiting. Get medical attention immediately if symptoms occur.

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

<b>Most important symptoms and effects, both acute and delayed</b>	<p>Skin contact: May see mild irritation at the site of contact.</p> <p>Eye contact: Possible irritation and redness.</p> <p>Ingestion: Possible irritation of the throat.</p> <p>Inhalation: May experience irritation of the throat with a feeling of tightness in the chest.</p> <p>Delayed/Immediate effects: Immediate effects can be expected after short-term exposure. May cause an allergic reaction in individuals already sensitised to 1,2-Benzisothiazolin-3-one.</p>
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**4.3. Indication of any immediate medical attention and special treatment needed**

<b>Indication of immediate medical attention and special treatment needed, if necessary</b>	Treat symptomatically.
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## Section 5: FIREFIGHTING MEASURES

**5.1. Extinguishing media****Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Cool containers / tanks with water spray.

**Small Fire** Dry chemical. Carbon dioxide (CO2).

**Large Fire** Water spray. Foam.

**Unsuitable extinguishing media**

Avoid heavy hose streams.

**5.2. Special hazards arising from the substance or mixture**

Toxic fumes may be released in fire situations.

**5.3. Advice for firefighters**

As in any fire, wear self-contained breathing apparatus and full protective gear. Wear protective clothing to prevent contact with skin and eyes. Contaminated fire extinguishing water should not be discharged into drains, if preventable.

**Section 6: ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures****Personal Precautions**

For personal protection see section 8. Stop leak if you can do it without risk. In case of spill, avoid contact. Isolate area and keep out animals and unprotected persons. In the case of large spills (1 ton or more), alert the appropriate authorities.

For further clean-up instructions, call Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

**For emergency responders**

Use personal protection recommended in Section 8.

**6.2. Environmental precautions**

Do not discharge into drains or rivers. Contain the spillage using bunding. Accidental release into water courses must be alerted to the appropriate regulatory body.

**6.3. Methods and material for containment and cleaning up****Methods for Containment**

Surface drains within close vicinity of the spill should be covered. Dike to confine spill and absorb with non-combustible absorbent such as clay, sand or soil.

**Methods for cleaning up**

Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations (see Section 13).

**6.4. Reference to other sections**

See section 8 for more information. See section 13 for more information.

**Section 7: HANDLING AND STORAGE****7.1. Precautions for safe handling****Handling**

Use only in area provided with appropriate exhaust ventilation.

**Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice.

**7.2. Conditions for safe storage, including any incompatibilities****Storage**

Protect from freezing. Store above 5°C. Store in a well-ventilated place. Keep cool. Keep away from direct sunlight. Keep away from heat. Keep out of reach of children and animals. Keep away from food, drink and animal feedingstuffs.

**7.3. Specific end use(s)****Specific Use(s)**

Refer to Section 1 and the Annex.

**Risk Management Methods (RMM)**

The information required is contained in this Safety Data Sheet.

**Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1. Control parameters**

Chemical name	European Union	The United Kingdom	France	Spain	Germany
Zinc oxide 1314-13-2	-	-	TWA 5 mg/m <sup>3</sup> TWA 10 mg/m <sup>3</sup>	TWA 2 mg/m <sup>3</sup> STEL 10 mg/m <sup>3</sup>	-
ethane-1,2-diol 107-21-1	TWA 20 ppm TWA 52 mg/m <sup>3</sup> STEL 40 ppm STEL 104 mg/m <sup>3</sup> S*	STEL 40 ppm STEL 104 mg/m <sup>3</sup> STEL 30 mg/m <sup>3</sup> TWA 10 mg/m <sup>3</sup> TWA 20 ppm TWA 52 mg/m <sup>3</sup> Skin	TWA 20 ppm TWA 52 mg/m <sup>3</sup> STEL 40 ppm STEL 104 mg/m <sup>3</sup> P*	TWA 20 ppm TWA 52 mg/m <sup>3</sup> STEL 40 ppm STEL 104 mg/m <sup>3</sup> S*	-
Chemical name	Italy	Portugal	The Netherlands	Finland	Denmark
Zinc oxide 1314-13-2	-	TWA 2 mg/m <sup>3</sup> STEL 10 mg/m <sup>3</sup>	-	TWA 2 mg/m <sup>3</sup> STEL 10 mg/m <sup>3</sup>	TWA 4 mg/m <sup>3</sup>
ethane-1,2-diol 107-21-1	TWA 20 ppm TWA 52 mg/m <sup>3</sup> STEL 40 ppm STEL 104 mg/m <sup>3</sup> Pelle*	TWA 20 ppm TWA 52 mg/m <sup>3</sup> STEL 40 ppm STEL 104 mg/m <sup>3</sup> Ceiling 100 mg/m <sup>3</sup> C(A4) P*	Huid* STEL 104 mg/m <sup>3</sup> TWA 52 mg/m <sup>3</sup> TWA 10 mg/m <sup>3</sup>	TWA 20 ppm TWA 50 mg/m <sup>3</sup> STEL 40 ppm STEL 100 mg/m <sup>3</sup> iho*	TWA 10 ppm TWA 26 mg/m <sup>3</sup> TWA 10 mg/m <sup>3</sup> H*
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Zinc oxide 1314-13-2	TWA 5 mg/m <sup>3</sup>	TWA 3 mg/m <sup>3</sup> STEL 3 mg/m <sup>3</sup>	TWA 5 mg/m <sup>3</sup> STEL 10 mg/m <sup>3</sup>	TWA 5 mg/m <sup>3</sup> STEL 10 mg/m <sup>3</sup>	TWA 2 mg/m <sup>3</sup> STEL 10 mg/m <sup>3</sup>
ethane-1,2-diol 107-21-1	H* STEL 20 ppm STEL 52 mg/m <sup>3</sup> TWA 10 ppm TWA 26 mg/m <sup>3</sup>	SS-C** H* TWA 10 ppm TWA 26 mg/m <sup>3</sup> STEL 20 ppm STEL 52 mg/m <sup>3</sup>	TWA 15 mg/m <sup>3</sup> STEL 50 mg/m <sup>3</sup>	TWA 20 ppm TWA 52 mg/m <sup>3</sup> S* STEL 104 mg/m <sup>3</sup> STEL 40 ppm	TWA 10 mg/m <sup>3</sup> TWA 20 ppm TWA 52 mg/m <sup>3</sup> STEL 40 ppm STEL 30 mg/m <sup>3</sup> STEL 104 mg/m <sup>3</sup> Skin

**Derived No Effect Level (DNEL)** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

**8.2. Exposure controls**

**Engineering measures** Ensure adequate ventilation, especially in confined areas. The floor of the storage room must be impermeable to prevent the escape of liquids.

**Personal protective equipment**

**Eye/Face Protection** Safety Glasses. Eye wash bottle with pure water.

**Hand Protection** Use protective gloves made of chemical materials such as nitrile or neoprene. Wash the outside of gloves with soap and water before reuse. Check regularly for leaks.

**Skin and Body Protection** Wear protective gloves/clothing.

**Respiratory Protection** Not required under normal use.

**Environmental exposure controls** Refer to specific Member State legislation for requirements under Community environmental legislation.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

**9.1. Information on basic physical and chemical properties**

**Physical State** Liquid  
**Appearance** Liquid  
**Odour** Barely perceptible

Colour	White
Odour threshold	No information available
pH	8.5 - 10.5
Melting point/freezing point	No information available
Boiling point/boiling range	No information available
Flash point	No information available
Evaporation Rate	No information available
Flammability (solid, gas)	
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit	No information available
Vapour pressure	No information available
Vapour density	No information available
Specific gravity	1.71 - 1.75
Water solubility	Dispersible in water
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Viscosity, kinematic	No information available
Viscosity, dynamic	No information available
Explosive properties	No information available
Oxidising properties	Non-oxidizing
<b>9.2. Other information</b>	
Softening point	No information available
Molecular weight	No information available
VOC content (%)	No information available
Density	No information available
Bulk density	No information available
K <sub>st</sub>	No information available

## Section 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

Stable under recommended storage conditions

### 10.2. Chemical stability

Stable under recommended storage conditions.

#### Explosion data

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

### 10.3. Possibility of hazardous reactions

#### Hazardous polymerisation

Hazardous polymerization does not occur.

#### Hazardous reactions

Decomposition may occur on exposure to conditions or materials listed below.

### 10.4. Conditions to avoid

Heat.

### 10.5. Incompatible materials

Strong oxidising agents. Strong acids.

### 10.6. Hazardous decomposition products

May emit toxic fumes under fire conditions.

## Section 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

#### Acute toxicity

##### Product Information

Product does not present an acute toxicity hazard based on known or supplied information.

**LD50 Oral** > 8000 (rat) (Calculated Estimated Acute Toxicity - EAT)

<b>Skin corrosion/irritation</b>	No information available.
<b>Serious eye damage/eye irritation</b>	No information available.
<b>Sensitisation</b>	No information available.
<b>Mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.

<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Symptoms</b>	Skin contact: May see mild irritation at the site of contact.

Eye contact: Possible irritation and redness.

Ingestion: Possible irritation of the throat.

Inhalation: May experience irritation of the throat with a feeling of tightness in the chest.

Delayed/Immediate effects: Immediate effects can be expected after short-term exposure.  
May cause an allergic reaction in individuals already sensitised to  
1,2-Benzisothiazolin-3-one.

**Aspiration hazard** No information available.

## Section 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

ZEBRAFISH (Danio rerio): 96H LC50 = 3.09 (calculated) mg/L

DAPHNIDS (Daphnia magna): 48H EC50 = 9.98 (calculated) mg/L

ALGAE (Raphidocelis subcapitata): 72H IC50 = 0.337 (calculated) mg/L.

### 12.2. Persistence and degradability

No information available.

### 12.3. Bioaccumulative potential

No information available.

### 12.4. Mobility in soil

**Mobility in soil**

No information available.

**Mobility**

No information available.

**12.5. Results of PBT and vPvB assessment**

This product is not identified as a PBT/vPvB substance.

**12.6. Other adverse effects**

Very toxic to aquatic organisms

## Section 13: DISPOSAL CONSIDERATIONS

**13.1. Waste treatment methods****Waste from residues / unused products**

Transfer to a suitable container and arrange for collection by specialised disposal company. Alternatively, the product can be incinerated, in accordance with local regulations. The diluted product and washings should be sent to a water treatment facility. Do not contaminate ponds, waterways or ditches with chemical or used containers. Do not discharge to sewer systems.

**Contaminated Packaging**

Clean container with water. Dispose of rinse water in accordance with local and national guidelines. Dispose of in accordance with local regulations.

**EWC Waste Disposal No**

02 01 08

**OTHER INFORMATION**

NOTE : The user's attention is drawn to the possible existence of specific European, national or local regulations regarding disposal.

## Section 14: TRANSPORT INFORMATION

**IMDG/IMO****14.1 UN/ID no**

UN3082

**14.2 Proper Shipping Name**

SUBSTANCE DANGEREUSE POUR L'ENVIRONNEMENT, LIQUIDE, N.O.S. (OXYDE DE ZINC)

**14.3 Hazard class**

9

**14.4 Packing Group**

III

**14.5 Marine Pollutant**

Yes

**Environmental Hazard**

Yes

**14.6 Special Provisions**

No special precautions.

Tunnel code: E

Transport category: 3

**14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code**

This product is not transported in bulk containers.

**RID****14.1 UN/ID no**

UN3082

**14.2 Proper Shipping Name**

SUBSTANCE DANGEREUSE POUR L'ENVIRONNEMENT, LIQUIDE, N.O.S. (OXYDE DE ZINC)

**14.3 Hazard class**

9

**14.4 Packing Group**

III

**14.5 Environmental Hazard**

Yes

**14.6 Special Provisions**

No special precautions.



Tunnel code: E  
Transport category: 3

**ADR/RID**

14.1 UN/ID no UN3082  
14.2 Proper Shipping Name SUBSTANCE DANGEREUSE POUR L'ENVIRONNEMENT, LIQUIDE, N.O.S. (OXYDE DE ZINC)  
14.3 Hazard class 9  
14.4 Packing Group III  
14.5 Environmental Hazard Yes  
14.6 Special Provisions No special precautions.  
Tunnel code: E  
Transport category: 3

**ICAO/IATA**

14.1 UN/ID no UN3082  
14.2 Proper Shipping Name SUBSTANCE DANGEREUSE POUR L'ENVIRONNEMENT, LIQUIDE, N.O.S. (OXYDE DE ZINC)  
14.3 Hazard class 9  
14.4 Packing Group III  
14.5 Environmental Hazard Yes  
14.6 Special Provisions No special precautions.  
Tunnel code: E  
Transport category: 3

## Section 15: REGULATORY INFORMATION

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

#### European Union

##### Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)  
This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

##### Persistent Organic Pollutants

Not Applicable

##### Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not Applicable

#### International Inventories

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELINCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Zinc oxide 1314-13-2	X	X	X	X	X	X	X	X
ethane-1,2-diol 107-21-1	X	X	X	X	X	X	X	X

### 15.2. Chemical safety assessment

A Chemical Safety Assessment has not yet been completed for this substance

## Section 16: OTHER INFORMATION

**Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under sections 2 and 3**

EUH208: Contains 1,2-Benzisothiazolin-3-one. May produce an allergic reaction.

H302 - Harmful if swallowed

H373 - May cause damage to organs through prolonged or repeated exposure

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

**Legend**

<b>ADR:</b>	European Agreement concerning the International Carriage of Dangerous Goods by Road
<b>CAS:</b>	CAS (Chemical Abstracts Service)
<b>Ceiling:</b>	Maximum limit value:
<b>DNEL:</b>	Derived No Effect Level (DNEL)
<b>EINECS:</b>	EINECS (European Inventory of Existing Chemical Substances)
<b>GHS:</b>	Globally Harmonised System (GHS)
<b>IATA:</b>	International Air Transport Association (IATA)
<b>ICAO:</b>	International Civil Aviation Organization
<b>IMDG:</b>	International Maritime Dangerous Goods (IMDG)
<b>LC50:</b>	LC50 (lethal concentration)
<b>LD50:</b>	LD50 (lethal dose)
<b>PBT:</b>	Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
<b>RID:</b>	Regulations Concerning the International Transport of Dangerous Goods by Rail
<b>STEL:</b>	Short term exposure limit
<b>SVHC</b>	SVHC: Substances of Very High Concern for Authorisation:
<b>TWA:</b>	time weighted average
<b>vPvB:</b>	very Persistent and very Bioaccumulative

**Key literature references and sources for data**

Data measured on the product are unpublished company data. Data on ingredients are available from published literature and can be found several places.

**Revision date:** 2020-03-20**Reason for revision:** SDS sections updated.**Training Advice** This material should only be used by persons who are made aware of its hazardous properties and have been instructed in the required safety precautions.**Disclaimer**

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**End of Safety Data Sheet**