

SAFETY DATA SHEET

ZINC PLUS

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



SDS #: NP-0209-A
Revision date: 2018-07-20
Format: EU
Version 1.02

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

Product Code(s) NP-0209-A

Product Name ZINC PLUS

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

Recommended Use: A micronutrient suspension concentrate for use in agriculture

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 (0) 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 Tel: +44(0)1244 537370 (Office hours only)

Section 2: HAZARDS IDENTIFICATION

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

| | |
|--|-------------------|
| Acute aquatic toxicity | Category 1 (H400) |
| Chronic aquatic toxicity | Category 1 (H411) |
| EUH208: Contains 1,2-Benzisothiazolin-3-one. May produce an allergic reaction. | |

2.2. Label elements

Hazard pictograms



Signal Word
WARNING

Hazard Statements

H400 - Very toxic to aquatic life

H411 - 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.

2.3. Other hazards

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

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

The product is a mixture, not a substance.

3.2 Mixture containing the following hazardous ingredients:

| Chemical name | EC-No | CAS-No | Weight percent | Classification according to Regulation (EC) No. 1272/2008 [CLP] | REACH registration number |
|-----------------|-----------|-----------|----------------|---|---------------------------|
| Zinc oxide | 215-222-5 | 1314-13-2 | 30-50 | 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

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

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.

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

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

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

| | |
|--|---|
| Most important symptoms and effects, both acute and delayed | 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.

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

| | |
|---|------------------------|
| Indication of immediate medical attention and special treatment needed, if necessary | Treat symptomatically. |
|---|------------------------|

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.

Unsuitable extinguishing media

No information available

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. Keep in a dry, cool and well-ventilated place. 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)

No data available.

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 52 mg/m ³ (vapour) STEL 104 mg/m ³ (vapour) | TWA 5 mg/m ³ TWA 10 mg/m ³ | TWA 2 mg/m ³ STEL 10 mg/m ³ | - |
| ethane-1,2-diol 107-21-1 | TWA 20 ppm TWA 52 mg/m ³ STEL 40 ppm STEL 104 mg/m ³ S* | STEL 40 ppm STEL 104 mg/m ³ STEL 30 mg/m ³ TWA 10 mg/m ³ TWA 20 ppm TWA 52 mg/m ³ Skin | TWA 20 ppm TWA 52 mg/m ³ STEL 40 ppm STEL 104 mg/m ³ P* | TWA 20 ppm TWA 52 mg/m ³ STEL 40 ppm STEL 104 mg/m ³ S* | - |
| Chemical name | Italy | Portugal | The Netherlands | Finland | Denmark |
| Zinc oxide 1314-13-2 | - | TWA 2 mg/m ³ STEL 10 mg/m ³ | - | TWA 2 mg/m ³ STEL 10 mg/m ³ | TWA 4 mg/m ³ |
| ethane-1,2-diol 107-21-1 | TWA 20 ppm TWA 52 mg/m ³ STEL 40 ppm STEL 104 mg/m ³ Pelle* | TWA 20 ppm TWA 52 mg/m ³ STEL 40 ppm STEL 104 mg/m ³ Ceiling 100 mg/m ³ C(A4) P* | Huid* STEL 104 mg/m ³ TWA 52 mg/m ³ TWA 10 mg/m ³ | TWA 20 ppm TWA 50 mg/m ³ STEL 40 ppm STEL 100 mg/m ³ iho* | TWA 10 ppm TWA 26 mg/m ³ TWA 10 mg/m ³ H* |
| Chemical name | Austria | Switzerland | Poland | Norway | Ireland |
| Zinc oxide 1314-13-2 | TWA 5 mg/m ³ | TWA 3 mg/m ³ STEL 3 mg/m ³ | TWA 5 mg/m ³ STEL 10 mg/m ³ | TWA 5 mg/m ³ STEL 10 mg/m ³ | TWA 2 mg/m ³ STEL 10 mg/m ³ |
| ethane-1,2-diol 107-21-1 | H* STEL 20 ppm STEL 52 mg/m ³ TWA 10 ppm TWA 26 mg/m ³ | SS-C** H* TWA 10 ppm TWA 26 mg/m ³ STEL 20 ppm STEL 52 mg/m ³ | TWA 15 mg/m ³ STEL 50 mg/m ³ | TWA 20 mg/m ³ TWA 52 ppm TWA 52 mg/m ³ S* STEL 104 mg/m ³ STEL 40 ppm | TWA 10 mg/m ³ TWA 20 ppm TWA 52 mg/m ³ STEL 40 ppm STEL 104 mg/m ³ 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 with side-shields. Provide emergency on-site eyewash.

Hand Protection Protective gloves. Impervious butyl rubber gloves. Wear chemical protective gloves made of materials such as nitrile or neoprene.

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 | No information available |
| Odour | Barely perceptible |
| Colour | Brown, Purple, Grey |
| Odour threshold | No information available |
| pH | 8.5 - 9.5 |
| 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) | No information available |
| 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 | 1.56 - 1.58 |
| 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 (by EC criteria) |

9.2. Other information

| | |
|-------------------------|--------------------------|
| 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_{st} | No information available |

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

None under normal use 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

None under normal processing. 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**

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LD50 Oral > 7000 mg/kg (rat) (Calculated Estimated Acute Toxicity - EAT)

| | |
|--|---------------------------|
| Skin corrosion/irritation | No information available. |
| Serious eye damage/eye irritation | No information available. |
| Sensitisation | No information available. |
| Mutagenicity | No information available. |
| Carcinogenicity | No information available. |

| | |
|---------------------------------|---------------------------|
| Reproductive toxicity | No information available. |
| STOT - single exposure | No information available. |
| STOT - repeated exposure | No information available. |

Symptoms

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****Ecotoxicity**

ZEBRAFISH (*Danio rerio*): 96H LC50 = 4.68 mg/L (calculated)

DAPHNIDS (*Daphnia magna*): 48H EC50 = 9.84 mg/L (calculated)

ALGAE (*Pseudokirchneriella subcapitata*): 72H IC50 = 0.442 mg/L (calculated)

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.

12.5. Results of PBT and vPvB assessment

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

12.6. Other adverse effects

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 sent for water treatment. Diluted product and washings should also be sent for water treatment.

Contaminated Packaging

Clean container with water. Dispose of rinse water in accordance with local and national guidelines. Empty containers should be taken to an approved waste handling site for recycling or disposal.

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 | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ZINC OXIDE) |
| 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 | The product is not transported in bulk tankers. |

RID

| | |
|---------------------------|--|
| 14.1 UN/ID no | UN3082 |
| 14.2 Proper Shipping Name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ZINC OXIDE) |
| 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 | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ZINC OXIDE) |
| 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 | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ZINC OXIDE) |
| 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

National regulations Not applicable

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 been carried out for the substance or the mixture by the supplier.

Section 16: OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of R-phrases referred to under sections 2 and 3

Not applicable

Full text of H-Statements referred to under sections 2 and 3

EUH208 - May produce an allergic reaction

H302 - Harmful if swallowed

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

Legend

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

| | |
|--------------|--|
| TWA: | time weighted average |
| vPvB: | very Persistent and very Bioaccumulative |

Revision date: 2018-07-20

Reason for revision: Format Change.

Disclaimer

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

Prepared By

FMC Corporation

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End of Safety Data Sheet