SAFETY DATA SHEET

Foly-ZnMn

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

SDS # : NP-0046-2-A
Revision date: 2019-12-09
Format: EU
Version 1.02

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

Product Code(s) NP-0046-2-A

Product Name Foly-ZnMn

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 1244 537370
E-mail: fmc.agro.uk@fmc.com

For further information, please contact:

Contact point

E-Mail: SDS-Info@fmc.com
Phone: +1 215-299-6000 (General Information)

1.4. Emergency telephone number

Emergency telephone

UNITED KINGDOM: For medical emergencies, please call: 111

For leaks, fire, spills or accidents, please call:
CHEMTREC UK (London) +(44)-870-8200418 English

0870 243 2241 or +44 (0)20 7771 5310
(United Kingdom Poisons Information Centre)

Section 2: HAZARDS IDENTIFICATION

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

Chronic aquatic toxicity	Category 2

2.2. Label elements

Hazard pictograms

Signal Word
None

Hazard Statements
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 to an approved waste disposal plant in accordance with local, regional, and national regulations.

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 Mixtures

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	10-30	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	01-2119463881-32-XXXX
ethane-1,2-diol	203-473-3	107-21-1	1-10	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

Eye Contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin Contact Wash off immediately with soap and plenty of water. Call a poison control centre or doctor for treatment advice.

Inhalation Remove person from exposure ensuring one's own safety while doing so.

Ingestion Rinse mouth. Do NOT induce vomiting.

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

Most important symptoms and effects, both acute and delayed

May cause an allergic reaction in individuals already sensitised to 1,2-Benzisothiazolin-3-one.
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.

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
Wear self-contained breathing apparatus and protective suit. 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. Isolate and post spill area. In case of spill, avoid contact. Isolate area and keep out animals and unprotected persons. Stop leak if you can do it without risk. 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. 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).

Methods for cleaning up Pick up and transfer to properly labelled containers.

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
Ensure adequate 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)
See subsection 1.2. Relevant identified uses of the substance or mixture and uses advised against.

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 ^{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 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 30 mg/m ^{3} 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	The floor of the storage room must be impermeable to prevent the escape of liquids.

Personal protective equipment

Eye/Face Protection	Safety Glasses. Maintain eye wash fountain and quick-drench facilities in work area.
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	Light brown
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)	
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	1.75 - 1.80
Water solubility	Soluble 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

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
None under normal processing. Decomposition can occur on exposure to heat or moisture.

10.4. Conditions to avoid

Excessive 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	> 4000 (rat) Acute Toxicity Estimate (ATE)
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

The ecotoxicity of the product is measured as:

ZEBRAFISH (Brachydanio rerio): 96H LC50 = 7.29 (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

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

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 Environmental Hazards	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	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

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 - May produce an allergic reaction
H302 - Harmful if swallowed
H373 - May cause damage to organs through prolonged or repeated exposure
H410 - Very toxic to aquatic life with long lasting effects
H411 - 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

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: 2019-12-09

Reason for revision: Format Change.

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.

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Prepared By

FMC Corporation

End of Safety Data Sheet