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

1.1 Product identifier

Trade name : Basfoliar Zn flo

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

Use of the Sub-
stance/Mixture : Fertilizer

1.3 Details of the supplier of the safety data sheet

Company : COMPO EXPERT GmbH
Kroegerweg 10
D-48155 Münster

Telephone : +49 (0) 251 29 79 81 – 000

Telefax : +49 (0) 251 29 79 81 - 111

E-mail address of person
responsible for the SDS : info@compo-expert.com

1.4 Emergency telephone number

Quality / Safety / Environment
Telephone: +49 (0) 2151 - 579 - 0

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute aquatic toxicity, Category 1 H400: Very toxic to aquatic life.

Chronic aquatic toxicity, Category 1 H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Warning

Hazard statements : H410 Very toxic to aquatic life with long lasting effects.
H400 Very toxic to aquatic life.

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Supplemental Hazard Statements	: EUH208	Contains 1,2-Benzisothiazol-3(2H)-one. May produce an allergic reaction.
Precautionary statements	: Response: P391 Disposal: P501	Collect spillage. Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Liquid mixture of organic and inorganic salts of fertilizers.

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification	Concentration (% w/w)
zinc oxide	1314-13-2 215-222-5 01-2119463881-32-XXXX	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 40 - < 55
Ethylene glycol	107-21-1 203-473-3	Acute Tox. 4; H302	>= 1 - < 5
1,2-benzisothiazol-3(2H)-one	2634-33-5 220-120-9	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H317 Skin Sens. 1; H317 Aquatic Acute 1; H400	<= 0,1

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

If inhaled	: If breathed in, move person into fresh air.
In case of skin contact	: Wash off with soap and water.
In case of eye contact	: Immediately flush eye(s) with plenty of water. If symptoms persist, seek medical advice.
If swallowed	: Rinse mouth with water. Drink 1 or 2 glasses of water.

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If symptoms persist, seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No information available.

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 : In case of fire, use water/water spray/water jet/carbon dioxide/sand/foam/alcohol resistant foam/chemical powder for extinction.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : Not relevant

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : In case of combustion evolution of dangerous gases possible.
nitrogen oxides
ammonia

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Further information : The product is not flammable.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Avoid contact with skin, eyes and clothing.

6.2 Environmental precautions

Environmental precautions : Do not let product enter drains, surface water or subsoil water.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Allow to solidify, use mechanical handling equipment.
Shovel into suitable container for disposal.

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6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Advice on safe handling : Do not eat, drink or smoke when using this product.
Wash hands before breaks and at the end of workday.
- Hygiene measures : Avoid contact with skin, eyes and clothing. 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 away from direct sunlight. Keep in a cool, well ventilated place away from reducing agents.
- Advice on common storage : Keep away from food, drink and animal feedingstuffs.
- Storage class (TRGS 510) : 12, Non Combustible Liquids
- Recommended storage temperature : 20 - 25 °C
- Other data : Protect from frost, heat and sunlight.

7.3 Specific end use(s)

- Specific use(s) : Always read the label and product information before use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
zinc oxide	1314-13-2		2 mg/m ³	
Ethylene glycol	107-21-1		10 ppm 26 mg/m ³	DE TRGS 900
Peak-limit: excursion factor (category)	2;(I)			
		STEL	40 ppm 104 mg/m ³	
		TWA	20 ppm 52 mg/m ³	
			10 ml/m ³ 26 mg/m ³	TRGS 900 (DE)

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

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Substance name	End Use	Exposure routes	Potential health effects	Value
zinc oxide	Workers	Inhalation	Long-term exposure	5 mg/m ³
	Workers	Ingestion	Long-term exposure, Systemic effects	0,8 mg/kg
	Workers	Skin contact	Long-term exposure, Systemic effects	83 mg/kg

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
zinc oxide	Fresh water	0,0206 mg/l
	Marine water	0,0061 mg/l
Remarks:	Derivation of the PNEC, Zinc	
	Fresh water sediment	235,6 mg/l
	Derivation of the PNEC, Zinc	
	Marine sediment	113 mg/l
	Derivation of the PNEC, Zinc	
	Soil	106,8 mg/l
	Derivation of the PNEC, Zinc	
	Behaviour in waste water treatment plants	0,052 mg/l
	Derivation of the PNEC, Zinc	

8.2 Exposure controls

Engineering measures

Ensure thorough ventilation of stores and work areas.

Personal protective equipment

Eye protection : Safety glasses

Hand protection
Remarks : Protective gloves

Skin and body protection : Wearing of closed work clothing is recommended.

Respiratory protection : No personal respiratory protective equipment normally required.
respiratory protection only if aerosol or dust is formed.

Environmental exposure controls

General advice : Do not let product enter drains, surface water or subsoil water.

SECTION 9: Physical and chemical properties

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9.1 Information on basic physical and chemical properties

Appearance	: liquid
Colour	: white
Odour	: odourless
Odour Threshold	: No data available
pH	: 8 - 9
Melting point/range	: No data available
Boiling point/boiling range	: > 100 °C
Flash point	: Not applicable
Evaporation rate	: No data available
Flammability (solid, gas)	: does not ignite
Upper explosion limit	: not determined
Lower explosion limit	: not determined
Vapour pressure	: No data available
Relative vapour density	: No data available
Density	: 1,84 g/cm ³
Solubility(ies)	
Water solubility	: soluble
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Explosive properties	: Not explosive
Oxidizing properties	: Not considered an oxidizing substance

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9.2 Other information

Surface tension : No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.
No decomposition if stored and applied as directed.

10.2 Chemical stability

Stable under normal conditions.
No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : Keep away from oxidizing agents, and acidic or alkaline products.

10.4 Conditions to avoid

Conditions to avoid : No dangerous reaction known under conditions of normal use.

10.5 Incompatible materials

Materials to avoid : Incompatible with strong acids and oxidizing agents.
Incompatible with bases.

10.6 Hazardous decomposition products

Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : Remarks: This information is not available.

Components:

zinc oxide:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5,7 mg/l
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : Remarks: No data available

Ethylene glycol:

Acute oral toxicity : Acute toxicity estimate: 500 mg/kg

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Acute inhalation toxicity : LC50 (Rat): 2 ppm
Acute dermal toxicity : LD50 (mouse): > 3.500 mg/kg
1,2-benzisothiazol-3(2H)-one:
Acute oral toxicity : Acute toxicity estimate: 500 mg/kg

Skin corrosion/irritation

Product:

Result: No skin irritation

Components:

zinc oxide:

Remarks: non-irritant

Serious eye damage/eye irritation

Product:

Remarks: No data available

Components:

zinc oxide:

Method: OECD Test Guideline 405

Remarks: non-irritant

Respiratory or skin sensitisation

Product:

Result: No data available

Components:

zinc oxide:

Method: OECD Test Guideline 406

Remarks: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Remarks: No data available

Components:

zinc oxide:

Germ cell mutagenicity- Assessment : In vivo tests did not show mutagenic effects

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Carcinogenicity

Product:

Remarks: Contains no ingredient listed as a carcinogen

Components:

zinc oxide:

Carcinogenicity - Assessment : According to experience not expected

Reproductive toxicity

Product:

Effects on fertility :
Remarks: Contains no ingredient listed as toxic to reproduction

Effects on foetal development : Remarks: Contains no ingredient listed as toxic to reproduction

Components:

zinc oxide:

Reproductive toxicity - Assessment : No toxicity to reproduction
No experimental indication of genotoxic effects.

STOT - single exposure

Product:

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

Components:

zinc oxide:

Remarks: This information is not available.

STOT - repeated exposure

Product:

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Components:

zinc oxide:

Remarks: No known effect.

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SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : Remarks: Toxic effects on fish and plankton

Components:

zinc oxide:

Toxicity to fish : LC50 (Fish): 0,14 mg/l
Exposure time: 96 h
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2,2 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 0,17 mg/l
Exposure time: 72 h
Test Type: static test

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

Toxicity to fish : LC50 (Salmo trutta (brown trout)): = 2,18 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): = 2,18 mg/l
Exposure time: 48 h

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): = 0,11 mg/l
Exposure time: 72 h

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Components:

zinc oxide:

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: The product has not been tested.

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12.4 Mobility in soil

Product:

Mobility : Remarks: No data available

Distribution among environmental compartments : Remarks: No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : Remarks: Not applicable

Components:

zinc oxide:

Assessment : Non-classified PBT substance.

12.6 Other adverse effects

Product:

Additional ecological information : May contribute to eutrophication in static waters, therefore should not be released into surface waters.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Disposal together with normal waste is not allowed. Special disposal required according to local regulations.
Do not flush into surface water or sanitary sewer system.

Contaminated packaging : If recycling is not practicable, dispose of in compliance with local regulations.

SECTION 14: Transport information

14.1 UN number

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.

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	(zinc oxide)
ADR	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (zinc oxide)
RID	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (zinc oxide)
IMDG	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (zinc oxide)
IATA	: Environmentally hazardous substance, liquid, n.o.s. (zinc oxide)

14.3 Transport hazard class(es)

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
RID	
Packing group	: III
Classification Code	: M6
Hazard Identification Number	: 90
Labels	: 9
IMDG	
Packing group	: III
Labels	: 9
EmS Code	: F-A, S-F
IATA	
Packing instruction (cargo aircraft)	: 964
Packing instruction (passen-	: 964

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ger aircraft)
Packing instruction (LQ) : Y964
Packing group : III
Labels : 9

14.5 Environmental hazards

ADN

Environmentally hazardous : yes

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Remarks : Not relevant

SECTION 15: Regulatory information

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

Water contaminating class : WGK 2 water endangering
(Germany)

15.2 Chemical Safety Assessment

No data available

SECTION 16: Other information

Full text of H-Statements

H302 : Harmful if swallowed.
H315 : Causes skin irritation.
H317 : May cause an allergic skin reaction.
H400 : Very toxic to aquatic life.
H410 : Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Aquatic Acute : Acute aquatic toxicity
Aquatic Chronic : Chronic aquatic toxicity
Eye Dam. : Serious eye damage
Skin Irrit. : Skin irritation
Skin Sens. : Skin sensitisation

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(Q)SAR - (Quantitative) Structure Activity Relationship; ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; DIN - Standard of the German Institute for Standardization; 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; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; 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; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; 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; TRGS - Technical Rule for Hazardous Substances; UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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