

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

1.1. Product identifier

Product form : Mixture
Trade name : SOLDEFEND
Product code : AFE00044
Type of product : Biostimulant.

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

1.2.1. Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Sunscreen for foliar spray

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

AZUFRERA Y FERTILIZANTES PALLARES, S.A.
Av. Europa Parcela 1 – 7 (Pol.Ind. Constantí)
43120 Constantí (Tarragona) - España
T + 34 977 524 650 - F + 34 977 524 651
afepasa@afepasa.com - www.afepasa.com

1.4. Emergency telephone number

Emergency number : +34 977 524 650
Office hours, Monday to Friday (08:00-17:00)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Aquatic Chronic 2 H411
Full text of hazard classes and H-statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS09

Signal word (CLP) : -
Hazard statements (CLP) : H411 - Toxic to aquatic life with long lasting effects.
Precautionary statements (CLP) : P273 - Avoid release to the environment.
P391 - Collect spillage.
P501 - Dispose of contents and container to an authorised waste collection point.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
zinc oxide	(CAS-No.) 1314-13-2 (EC-No.) 215-222-5 (EC Index-No.) 030-013-00-7 (REACH-no) 01-2119463881-32	3 - 5	Aquatic Acute 1, H400 Aquatic Chronic 1, H410

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boric acid substance listed as REACH Candidate	(CAS-No.) 10043-35-3 (EC-No.) 233-139-2 (EC Index-No.) 005-007-00-2 (REACH-no) 01-2119486683-25	2 - 3	Repr. 1B, H360FD
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Specific concentration limits:

Name	Product identifier	Specific concentration limits
boric acid	(CAS-No.) 10043-35-3 (EC-No.) 233-139-2 (EC Index-No.) 005-007-00-2 (REACH-no) 01-2119486683-25	(5.5 =<C < 100) Repr. 1B, H360FD

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Assure fresh air breathing. Allow the victim to rest.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

Symptoms/effects	: Not expected to present a significant hazard under anticipated conditions of normal use.
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4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
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6.4. Reference to other sections

See Heading 8. Exposure controls/personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.
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7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Keep only in the original container in a cool, well ventilated place away from: Keep container closed when not in use.
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Incompatible products : Strong bases. Strong acids.
Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

zinc oxide (1314-13-2)

EU - Occupational Exposure Limits

Local name	Zinc oxide
Notes	(Ongoing)
Regulatory reference	SCOEL Recommendations

8.2. Exposure controls

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear protective gloves.

Eye protection:

Chemical goggles or safety glasses

Respiratory protection:

Wear appropriate mask

Personal protective equipment symbol(s):



Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: White.
Odour	: Characteristic.
Odour threshold	: No data available
pH	: 6.5 - 7.5
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour Pressure 20°C	: No data available
Vapour density	: No data available
Relative density	: 1.2 - 1.3
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

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Explosive limits : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Fumes. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

boric acid (10043-35-3)

LD50 oral rat	2660 mg/kg bodyweight
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zinc oxide (1314-13-2)

LD50 oral rat	> 5000 mg/kg bodyweight
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LD50 dermal rat	> 2000 mg/kg
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LC50 inhalation rat (mg/l)	> 5700 g/m ³
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Skin corrosion/irritation : Not classified
pH: 6.5 - 7.5

Additional information : Based on available data, the classification criteria are not met.

Serious eye damage/irritation : Not classified
pH: 6.5 - 7.5

Additional information : Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation : Not classified

Additional information : Based on available data, the classification criteria are not met.

Germ cell mutagenicity : Not classified

Additional information : Based on available data, the classification criteria are not met.

Carcinogenicity : Not classified

Additional information : Based on available data, the classification criteria are not met.

Reproductive toxicity : Not classified

Additional information : Based on available data, the classification criteria are not met.

STOT-single exposure : Not classified

Additional information : Based on available data, the classification criteria are not met.

STOT-repeated exposure : Not classified

Additional information : Based on available data, the classification criteria are not met.

Aspiration hazard : Not classified

Additional information : Based on available data, the classification criteria are not met.

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Toxic to aquatic life with long lasting effects.

Acute aquatic toxicity : Not classified

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Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

boric acid (10043-35-3)	
LC50 fishes	74 mg/l (96 h)
EC50 Daphnia	133 mg/l (48 h - Daphnia magna)
ErC50 (algae)	24 mg/l (96 h - Scenedesmus subspicatus)
NOEC chronic crustacea	6 mg/l (21 days)

12.2. Persistence and degradability

SOLDEFEND	
Persistence and degradability	May cause long-term adverse effects in the environment.

12.3. Bioaccumulative potential

SOLDEFEND	
Bioaccumulative potential	Not established.

boric acid (10043-35-3)	
Log Pow	-0.76

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component	
boric acid (10043-35-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

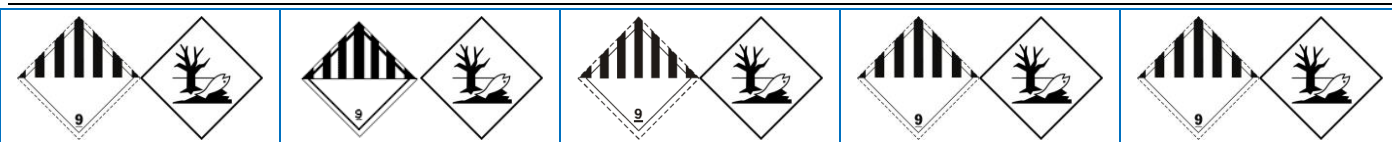
In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
UN 3082	UN 3082	UN 3082	UN 3082	UN 3082
14.2. UN proper shipping name				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	Environmentally hazardous substance, liquid, n.o.s.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Transport document description				
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (zinc oxide), 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (zinc oxide), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (zinc oxide), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (zinc oxide), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (zinc oxide), 9, III
14.3. Transport hazard class(es)				
9	9	9	9	9

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14.4. Packing group

III	III	III	III	III
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14.5. Environmental hazards

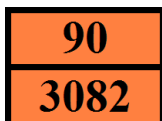
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
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No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: M6
Special provisions (ADR)	: 274, 335, 375, 601
Limited quantities (ADR)	: 5I
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Special packing provisions (ADR)	: PP1
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T4
Portable tank and bulk container special provisions (ADR)	: TP1, TP29
Tank code (ADR)	: LGBV
Vehicle for tank carriage	: AT
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV13
Hazard identification number (Kemler No.)	: 90
Orange plates	:



Tunnel restriction code (ADR)	: -
EAC code	: •3Z

Transport by sea

Special provisions (IMDG)	: 274, 335, 969
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: LP01, P001
Special packing provisions (IMDG)	: PP1
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP2, TP29
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-F
Stowage category (IMDG)	: A

Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y964
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 964
PCA max net quantity (IATA)	: 450L
CAO packing instructions (IATA)	: 964
CAO max net quantity (IATA)	: 450L

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Special provisions (IATA) : A97, A158, A197

ERG code (IATA) : 9L

Inland waterway transport

Classification code (ADN) : M6

Special provisions (ADN) : 274, 335, 375, 601

Limited quantities (ADN) : 5 L

Excepted quantities (ADN) : E1

Carriage permitted (ADN) : T

Equipment required (ADN) : PP

Number of blue cones/lights (ADN) : 0

Rail transport

Classification code (RID) : M6

Special provisions (RID) : 274, 335, 375, 601

Excepted quantities (RID) : E1

Packing instructions (RID) : P001, IBC03, LP01, R001

Special packing provisions (RID) : PP1

Mixed packing provisions (RID) : MP19

Portable tank and bulk container instructions (RID) : T4

Portable tank and bulk container special provisions (RID) : TP1, TP29

Tank codes for RID tanks (RID) : LGBV

Transport category (RID) : 3

Special provisions for carriage – Packages (RID) : W12

Special provisions for carriage - Loading, unloading and handling (RID) : CW13, CW31

Colis express (express parcels) (RID) : CE8

Hazard identification number (RID) : 90

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains a substance on the REACH candidate list in concentration $\geq 0.1\%$ or with a lower specific limit: boric acid (EC 233-139-2, CAS 10043-35-3)

Contains no REACH Annex XIV substances

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

For the following substances of this mixture a chemical safety assessment has been carried out

boric acid
zinc oxide

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H- and EUH-statements:

Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
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according to Regulation (EC) No. 1907/2006 (REACH)

Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1	
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2	
Repr. 1B	Reproductive toxicity, Category 1B	
H360FD	May damage fertility. May damage the unborn child.	
H400	Very toxic to aquatic life.	
H410	Very toxic to aquatic life with long lasting effects.	
H411	Toxic to aquatic life with long lasting effects.	
Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Aquatic Chronic 2	H411	Calculation method

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product