

Terra-Sorb Radicular Symbiotic**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING.****1.1 Product identifier.**

Product Name: Terra-Sorb Radicular Symbiotic
Product Code: F2836 and other codes that are being added with the same composition.

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

Agricultural use
Professional use

1.3 Details of the supplier of the safety data sheet.

Company: **BIOIBERICA SAU**
Address: C/ Antic Camí de Tordera 109-119
City: 08389 - Palafolls
Province: Barcelona
Telephone: +34 937 650 390
Fax: +34 934 909 711
E-mail: reach@bioiberica.com
Web: www.bioiberica.com

1.4 Emergency telephone number:(Available 24h)

Bioiberica, SAU. *Palafolls* - ESPAÑA 34-93-765 03 90

SECTION 2: HAZARDS IDENTIFICATION.**2.1 Classification of the substance or mixture.**

The product is not classified as hazardous within the meaning of Regulation (EU) No 1272/2008.

2.2 Label elements.

P statements:

P102 Keep out of reach of children.
P270 Do not eat, drink or smoke when using this product.

EUH statements:

EUH210 Safety data sheet available on request.

2.3 Other hazards.

The mixture does not contain substances classified as PBT.
The mixture does not contain substances classified as vPvB.
The mixture does not contain any endocrine disrupting properties substances.

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In normal use conditions and in its original form, the product itself does not involve any other risk for health and the environment.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS.

3.1 Substances.

Not Applicable.

3.2 Mixtures.

Substances posing a danger to health or the environment in accordance with the Regulation (EC) No. 1272/2008, assigned a Community exposure limit in the workplace, and classified as PBT/vPvB or included in the Candidate List:

Identifiers	Name	Concentrate	(*)Classification - Regulation (EC) No 1272/2008	
			Classification	Specifics concentration limits and Acute toxicity estimate
Index No: 015-011-00-6 CAS No: 7664-38-2 EC No: 231-633-2 Registration No: 01-2119485924-24-XXXX	[1] [2] phosphoric acid . %, orthophosphoric acid. %	1 - 10 %	Skin Corr. 1B, H314	Skin Corr. 1B, H314: C ≥ 25 % Skin Irrit. 2, H315: 10 % ≤ C < 25 % Eye Irrit. 2, H319: 10 % ≤ C < 25 %
Index No: 016-064-00-8 CAS No: 7631-90-5 EC No: 231-548-0 Registration No: 01-2119524563-42-XXXX	[2] sodium hydrogensulphite, sodium bisulphite	1 - 2.5 %	Acute Tox. 4 *, H302	-

(*)The complete text of the H phrases is given in section 16 of this Safety Data Sheet.

* See Regulation (EC) No. 1272/2008, Annex VI, section 1.2.

[1] Substance with a European Union exposure limit in the workplace (see section 8.1).

[2] Substance with a national workplace exposure limit (see section 8.1).

SECTION 4: FIRST AID MEASURES.

4.1 Description of first aid measures.

Due to the composition and type of the substances present in the product, no particular warnings are necessary.

Inhalation.

If breathing stops, give artificial respiration and seek immediate medical attention. Take the victim into open air; keep them warm and calm. If breathing is irregular or stops, perform artificial respiration.

Eye contact.

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Remove contact lenses, if present and if it is easy to do. Wash eyes with plenty of clean and cool water for at least 10 minutes while pulling eyelids up, and seek medical assistance.

Skin contact.

Remove contaminated clothing.

Ingestion.

Keep calm. NEVER induce vomiting.

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

No known acute or delayed effects from exposure to the product.

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

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

SECTION 5: FIREFIGHTING MEASURES.**5.1 Extinguishing media.****Suitable extinguishing media:**

Extinguisher powder or CO₂. In case of more serious fires, also alcohol-resistant foam and water spray.

Unsuitable extinguishing media:

Do not use a direct stream of water to extinguish. In the presence of electrical voltage, you cannot use water or foam as extinguishing media.

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

Exposure to combustion or decomposition products can be harmful to your health.

5.3 Advice for firefighters.

Use water to cool tanks, cisterns, or containers close to the heat source or fire. Take wind direction into account.

Fire protection equipment.

According to the size of the fire, it may be necessary to use protective suits against the heat, individual breathing equipment, gloves, protective goggles or facemasks, and boots.

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

For exposure control and individual protection measures, see section 8.

6.2 Environmental precautions.

Product not classified as hazardous for the environment, avoid spillage as much as possible.

Terra-Sorb Radicular Symbiotic**6.3 Methods and material for containment and cleaning up.**

Contain and collect spillage with inert absorbent material (earth, sand, vermiculite, Kieselguhr...) and clean the area immediately with a suitable decontaminant.

Deposit waste in closed and suitable containers for disposal, in compliance with local and national regulations (see section 13).

6.4 Reference to other sections.

For exposure control and individual protection measures, see section 8.

For later elimination of waste, follow the recommendations under section 13.

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

The product does not require special handling measures, the following general measures are recommended:

For personal protection, see section 8.

In the application area, smoking, eating, and drinking must be prohibited.

Follow legislation on occupational health and safety.

Never use pressure to empty the containers. They are not pressure-resistant containers. Keep the product in containers made of a material identical to the original.

7.2 Conditions for safe storage, including any incompatibilities.

Store according to local legislation. Observe indications on the label. Store the containers in a dry and well-ventilated place, far from sources of heat and direct solar light. Keep in its original packaging, avoiding extreme conditions of humidity and temperature. Keep far away from ignition points. Keep away from oxidising agents and from highly acidic or alkaline materials. Do not smoke. Prevent the entry of non-authorized persons. Once the containers are open, they must be carefully closed and placed vertically to prevent spills.

The product is not affected by Directive 2012/18/EU (SEVESO III).

7.3 Specific end use(s).

Agricultural use

Professional use

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION.**8.1 Control parameters.**

Work exposure limit for:

Name	CAS No.	Country	Limit value	ppm	mg/m ³
phosphoric acid . %, orthophosphoric acid. %	7664-38-2	European Union [1]	Eight hours		1
			Short term		2

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		United Kingdom [2]	Eight hours		1		
			Short term		2		
		Éire [3]	Eight hours		1		
			Short term		2		
		United States [4] (Cal/OSHA)	Eight hours		1		
			Short term		3		
		United States [5] (NIOSH)	Eight hours		1		
			Short term		3		
		United States [6] (OSHA)	Eight hours		1		
			Short term				
		sodium hydrogensulphite, sodium bisulphite	7631-90-5	United Kingdom [2]	Eight hours		5
					Short term		
Éire [3]	Eight hours				5		
	Short term						

[1] According both Binding Occupational Exposure Limits (BOELVs) and Indicative Occupational Exposure Limits (IOELVs) adopted by Scientific Committee for Occupational Exposure Limits to Chemical Agents (SCOEL).

[2] According Limit Value (IOELV) list in 2nd Indicative Occupational Exposure adopted by Health and Safety Executive.

[3] According Code of Practice for the Safety, Health and Welfare at Work (Chemicals Agents) Regulations adopted by Health and Safety Authority (HSA).

[4] California Division of Occupational Safety and Health (Cal/OSHA) Permissible Exposure Limits (PELs).

[5] National Institute for Occupational Safety and Health. NIOSH Recommendations for occupational safety and health, Compendium of Policy Documents and Statements, January, 1992, DHHS (NIOSH) Publication No. 92-100.

[6] Occupational Safety and Health Administration, United States Department of Labor. Permissible Exposure limits (PELs), California Division of Occupational Safety and Health (Cal/OSHA) Permissible Exposure Limits (PELs).

The product does NOT contain substances with Biological Limit Values.

Concentration levels DNEL/DMEL:

Name	DNEL/DMEL	Type	Value
phosphoric acid . %, orthophosphoric acid. % CAS No: 7664-38-2 EC No: 231-633-2	DNEL (Workers)	Inhalation, Chronic, Local effects	1 (mg/m ³)
	DNEL (Consumers)	Inhalation, Chronic, Local effects	0,73 (mg/m ³)
	DNEL (Workers)	Inhalation, Short term, Local effects	2 (mg/m ³)
sodium hydrogensulphite, sodium bisulphite CAS No: 7631-90-5 EC No: 231-548-0	DNEL (Workers)	Inhalation, Chronic, Systemic effects	246 (mg/m ³)

DNEL: Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.

DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum.

8.2 Exposure controls.

Measures of a technical nature:

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES.

Terra-Sorb Radicular Symbiotic**9.1 Information on basic physical and chemical properties.**

Physical state: Liquid

Colour: Yellowish

Odour: Not applicable/Not available due to the nature/properties of the product

Odour threshold: Not applicable/Not available due to the nature/properties of the product

Melting point: Not applicable/Not available due to the nature/properties of the product

Freezing point: Not applicable/Not available due to the nature/properties of the product

Boiling point or initial boiling point and boiling range: Not applicable/Not available due to the nature/properties of the product

Flammability: Not applicable/Not available due to the nature/properties of the product

Lower explosion limit: Not applicable/Not available due to the nature/properties of the product

Upper explosion limit: Not applicable/Not available due to the nature/properties of the product

Flash point: > 60 °C

Auto-ignition temperature: Not applicable/Not available due to the nature/properties of the product

Decomposition temperature: Not applicable/Not available due to the nature/properties of the product

pH: 5.05 (100%)

Kinematic viscosity: Not applicable/Not available due to the nature/properties of the product

Solubility: Soluble

Hydrosolubility: Hydrosoluble

Liposolubility: Not applicable/Not available due to the nature/properties of the product

Partition coefficient n-octanol/water (log value): Not applicable/Not available due to the nature/properties of the product

Vapour pressure: Not applicable/Not available due to the nature/properties of the product

Absolute density: Not applicable/Not available due to the nature/properties of the product

Relative density: 1.16 g/mL

Relative vapour density: Not applicable/Not available due to the nature/properties of the product

Particle characteristics: Not applicable/Not available due to the nature/properties of the product

9.2 Other information

Viscosity: Not applicable/Not available due to the nature/properties of the product

Explosive properties: Not applicable/Not available due to the nature/properties of the product

Oxidizing properties: Not applicable/Not available due to the nature/properties of the product

Dropping point: Not applicable/Not available due to the nature/properties of the product

Blink: Not applicable/Not available due to the nature/properties of the product

SECTION 10: STABILITY AND REACTIVITY.**10.1 Reactivity.**

The product does not present hazards by their reactivity.

10.2 Chemical stability.

Unstable in contact with:

- Bases.

10.3 Possibility of hazardous reactions.

Neutralization can occur on contact with bases.

10.4 Conditions to avoid.

- Avoid contact with bases.

10.5 Incompatible materials.

Avoid the following materials:

- Bases.

10.6 Hazardous decomposition products.

Depending on conditions of use, can be generated the following products:

- Corrosive vapors or gases.

SECTION 11: TOXICOLOGICAL INFORMATION.
11.1 Information on hazard classes as defined in Regulation (EC) N° 1272/2008.
Toxicological information about the substances present in the composition.

Name	Acute toxicity			
	Type	Test	Kind	Value
phosphoric acid . %, orthophosphoric acid. % CAS No: 7664-38-2 EC No: 231-633-2	Oral	LD50	Rat	1530 mg/kg bw [1]
		[1] BIOFAX IndustrialBio-Test Laboratories, Inc., Data Sheets. Vol. 17-4/1970		
	Dermal	LD50	Rabbit	2740 mg/kg bw [1]
[1] BIOFAX Industrial Bio-Test Laboratories, Inc., Data Sheets. Vol. 17-4/1970				
Inhalation	LC50	mouse	25.5 mg/m ³ air [1]	
	[1] Toxicological Characteristics of Phosphoric Acid and Some of Its Chromium Salts Used as Binding Agents in the Production of Refractory Materials, 1983.			

a) acute toxicity;

Not conclusive data for classification.

Acute Toxicity Estimate (ATE):

Mixtures:

ATE (Oral) = 50.000 mg/kg

b) skin corrosion/irritation;

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

c) serious eye damage/irritation;

Not conclusive data for classification.

d) respiratory or skin sensitisation;

Not conclusive data for classification.

e) germ cell mutagenicity;

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Not conclusive data for classification.

f) carcinogenicity;

Not conclusive data for classification.

g) reproductive toxicity;

Not conclusive data for classification.

h) STOT-single exposure;

Not conclusive data for classification.

i) STOT-repeated exposure;

Not conclusive data for classification.

j) aspiration hazard;

Not conclusive data for classification.

11.2 Information on other hazards.**Endocrine disrupting properties**

This product does not contain components with endocrine-disrupting properties with effects on human health.

Other information

There is no information available on other adverse health effects.

SECTION 12: ECOLOGICAL INFORMATION.**12.1 Toxicity.**

Name	Ecotoxicity			
	Type	Test	Kind	Value
phosphoric acid . %, orthophosphoric acid. % CAS No: 7664-38-2 EC No: 231-633-2	Fish	LC50	Oryzias latipes	75.1 mg/L (96 h) [1]
			[1] summary of study report, 2005	
	Aquatic invertebrates	EC50	Daphnia magna	>100 mg/L (48 h) [1]
		[1] study report, 2010		
	Aquatic plants	EC50	Desmodesmus subspicatus	>100 mg/L (72 h) [1]
		[1] study report, 2010		

12.2 Persistence and degradability.

No information is available regarding the biodegradability of the substances present.

No information is available on the degradability of the substances present.

No information is available about persistence and degradability of the product.

Terra-Sorb Radicular Symbiotic**12.3 Bioaccumulative potential.**

No information is available regarding the bioaccumulation of the substances present.

12.4 Mobility in soil.

No information is available about the mobility in soil.

The product must not be allowed to go into sewers or waterways.

Prevent penetration into the ground.

12.5 Results of PBT and vPvB assessment.

No information is available about the results of PBT and vPvB assessment of the product.

12.6 Endocrine disrupting properties.

This product doesn't contain components with environmental endocrine disrupting properties.

12.7 Other adverse effects.

No information is available about other adverse effects for the environment.

SECTION 13: DISPOSAL CONSIDERATIONS.**13.1 Waste treatment methods.**

Do not dump into sewers or waterways. Waste and empty containers must be handled and eliminated according to current, local/national legislation.

Follow the provisions of Directive 2008/98/EC regarding waste management.

SECTION 14: TRANSPORT INFORMATION.

Transportation is not dangerous. In case of road accident causing the product's spillage, proceed in accordance with point 6.

14.1 UN number or ID number.

Transportation is not dangerous.

14.2 UN proper shipping name.

Description:

ADR/RID: Not classified as hazardous for transport.

IMDG: Not classified as hazardous for transport.

ICAO/IATA: Not classified as hazardous for transport.

14.3 Transport hazard class(es).

Transportation is not dangerous.

14.4 Packing group.

Transportation is not dangerous.

Terra-Sorb Radicular Symbiotic**14.5 Environmental hazards.**

Transportation is not dangerous.

Transport by ship, FEm – Emergency sheets (F – Fire, S - Spills): Not applicable.

14.6 Special precautions for user.

Transportation is not dangerous.

14.7 Maritime transport in bulk according to IMO instruments.

Transportation is not dangerous.

SECTION 15: REGULATORY INFORMATION.**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture.**

The product is not affected by the Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer.

The product is not affected by Directive 2012/18/EU (SEVESO III).

The product is not affected by Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products.

The product is not affected by the procedure established Regulation (EU) No 649/2012, concerning the export and import of dangerous chemicals.

15.2 Chemical safety assessment.

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16: OTHER INFORMATION.

Complete text of the H phrases that appear in section 3:

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

Classification codes:

Acute Tox. 4 : Acute toxicity (Oral), Category 4

Skin Corr. 1B : Skin Corrosive, Category 1B

Changes regarding to the previous version:

Terra-Sorb Radicular Symbiotic**Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:**

Physical hazards	On basis of test data
Health hazards	Calculation method
Environmental hazards	Calculation method

It is recommended that the product only be employed for the purposes advised.

Abbreviations and acronyms used:

DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum.

DNEL: Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.

EC50: Half maximal effective concentration.

LC50: Lethal concentration, 50%.

LD50: Lethal dose, 50%.

Key literature references and sources for data:

<http://eur-lex.europa.eu/homepage.html>

<http://echa.europa.eu/>

Regulation (EU) 2020/878.

Regulation (EC) No 1907/2006.

Regulation (EU) No 1272/2008.

The information given in this Safety Data Sheet has been drafted in accordance with COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemical substances and mixtures (REACH).

The information in this Safety Data Sheet on the Preparation is based on current knowledge and on current EC and national laws, as far as the working conditions of the users is beyond our knowledge and control. The product must not be used for purposes other than those that are specified without first having written instructions on how to handle. It is always the responsibility of the user to take the appropriate measures in order to comply with the requirements established by current legislation. The information contained in this Safety Sheet only states a description of the safety requirements for the preparation, and it must not be considered as a guarantee of its properties.