

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

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|-------|---|---|
| 1.1 | Product identifier: | RhizoVital® 42 TB |
| 1.2.1 | Relevant identified uses of the substance or mixture: | Biostimulant, soil conditioner |
| 1.2.2 | Uses advised against: | No Information. |
| 1.3 | Details of the supplier: | ABiTEP GmbH
Glienicke Weg 185
12489 Berlin
Germany
Tel.: +49-(0)30-670570
info@abitep.de |
| 1.4 | Emergency Number: | +49(0)30 19 240 (German Toxicology Center) |

2. HAZARDS IDENTIFICATION

- | | | |
|-----|---|--|
| 2.1 | Classification of the substance or mixture: | Classification in compliance with Regulation 1272/2008 (CLP): not determined
Classification in compliance with Regulation 67/548/EWG and 1999/45/EG: The mixture is non hazardous within the meaning of the Regulation 1999/45/EG |
| 2.2 | Label elements: | Labeling in compliance with regulation 1272/2008 (CLP): not determined
Labeling in compliance with regulation 67/548/EWG and 1999/45/EG: not applicable |
| 2.3 | Other hazards: | None anticipated. |

3. COMPOSITION/INFORMATION ON INGREDIENTS

No hazardous components according to the regulation (EC) No. 1272/2008
(*Bacillus amyloliquefaciens* ssp. *plantarum*, strain FZB42)

4. FIRST AID MEASURES

- | | | |
|-----|---|--|
| 4.1 | description of First-Aid Measures | |
| | Generally advices: | Remove contaminated clothing immediately.
Appearance of health disorders: consult a doctor. |
| | Exposure by Inhalation: | Care for fresh air. |
| | Exposure by skin: | Immediately wash affected area thoroughly with soap and water.
Seek medical attention if irritation develops. |
| | Exposure by eyes contact: | Immediately flush eyes with plenty of water and seek medical advice. |
| | Exposure by Ingestion: | Do not induce vomiting. Drink water to dilute. Seek medical advice. |
| 4.2 | Most important symptoms and effects, both acute and delayed: | No information. |
| 4.3 | Indication of any immediate medical attention and special treatment needed: | No information. |

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5. FIRE-FIGHTING MEASURES

- 5.1 Extinguishing media:
Appropriate extinguishing Media: CO₂, Water, foam, dry powder.
Inappropriate extinguishing Media: No information.
- 5.2 Special hazards arising from substance or mixture: If the substance is involved in fire, oxides of carbon and nitrogen may be evolved.
- 5.3 Advice for fire fighters
Self-contained breathing apparatus should be worn.
Do not inhale explosion- and combustion gases.
- Wear suitable protective clothing to avoid skin exposure. Observe a safety distance.

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures: The usual precautions for handling chemicals should be observed.
- 6.2 Environmental Precautions: Avoid direct discharge into food or feed stuff. In case of spillage, contain.
- 6.3 Methods and material for containment and cleaning up: Do **NOT** spray water with high pressure into packaging which has been damaged or overturned.
Recover the product by filling it into containers.
- For personal protection see chapter 8.
No exposition of hazardous substances.
- 6.4 link to other chapters: See chapters 7, 8 and 13.

7. HANDLING AND STORAGE

- 7.1 Precautions for safe handling: The substance should be handled under conditions of good industrial hygiene and in conformity with any local regulations in order to avoid unnecessary exposure. The product is formulated using a range of micro-organisms specially selected from the natural environment and that are known to be non-pathogenic to humans, animals or plants. It is advised to cover open wounds when in use
Do not eat, drink and smoke during the work
Consider operating instruction.
The floor of the depot should be impermeable
- 7.2 Conditions for safe storage, including any incompatibilities: Product should only be kept in the original packaging. Product should be kept cool, dry and protected of insolation.
Keep containers tightly closed when not in use.
Recommended storage temperature: 0°C-30°C (32°F – 86 °F)
- 7.3 specific end-application: No information.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Control parameters: No substance with maximum allowable concentration. The usual precautionary measures for handling chemicals should be observed.
- 8.2 Exposure control: No exposure limit has been established.
Appropriate engineering controls: Sufficient ventilation.
Individual protection measures, such: The substance should be handled under conditions of good

as personal protective equipment:	industrial hygiene in dealing with chemicals. See chapter 7.
Eye/face Protection:	Use suitable safety glasses (EN 166).
Skin Protection:	In case of prolonged/frequent direct handling of the material it is recommended to wear chemical protective clothing.
Hand Protection:	Chemical protective gloves should be provided.
Body Protection	Protective work wear.
Respiratory Protection:	Respirator mask.
Exposure and control of environment:	See chapter 6 and 7.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1	Information on basic physical and chemical properties:	
	Appearance	Powder
	Colour	Light-grey
	Odour	None
	Boiling point / boiling range	Not determined
	Melting point / melting range	>1300 °C
	Flash point	Not determined
	Flammability (solid, gas)	Not determined
	Explosive properties LEL	Not determined
	Explosive properties EL	Not determined
	Vapour pressure	< 0.1 Pa (20°C)
	Vapor density	Not determined
	Specific gravity	approx. 2700 kg/m ³ (20°C)
	Bulk density	Not determined
	Relative vapor density (air=1)	Not determined
	Solubility in water	<1 %
	pH-value	9 – 9,5 (10% suspension)
	Partition coefficient	Not determined
	Viscosity	Not determined
	Explosion properties	None known
	refraction index	Not determined
9.2	Other information	

10. STABILITY AND REACTIVITY

10.1	REACTIVITY:	The mixture was not tested.
10.2	Chemical stability:	No decomposition if stored and handled properly
10.3	Possibility of hazardous reactions:	No decomposition if stored and handled properly.
10.4	Conditions to avoid:	See chapter 7.
10.5	Incompatible materials:	Strong acids or alkali compounds may inactivate biological cultures. Temperature > 45 °C.
10.6	Hazardous decomposition products:	See chapter 5.3
10.1	REACTIVITY:	The mixture was not tested.

11. TOXICOLOGICAL INFORMATION

11.1	Data to toxicological effects:	
	Acute toxicity:	Oral LD50 (rat) > 25 ml (of 1,5% suspension)/kg – no effects
	Irritation:	Based on available data, non-irritating.
	Sensitisation:	Based on available data, non-sensitizing.
	Grave effects after repeated or longer exposition:	Based on available data, not classified.



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Carcinogenicity:	Based on available data, not classified.
Germ cell mutagenicity:	Based on available data, not classified.
Reproductive toxicity:	Based on available data, not classified.
Specific effects in animal experimentation:	Based on available data, not existing.
Other information:	Based on available data, not existing.
Aspiration hazard:	Not relevant.

12. ECOLOGICAL INFORMATION

12.1 Toxicity:	
Fish (<i>Oncorhynchus mykiss</i>):	96h LC50: > 100 mg product/l
Invertebrate species(<i>Daphnia magna</i>):	48h EC50: > 100 mg product/l
Algae (<i>Desmodesmus subspicatus</i>):	72h EC50: > 100 mg product/l
Aquatic plant (Lemnagibba):	07d EC50: > 100 mg product/l
12.2 Persistence and Degradability:	Readily biodegradable in compliance with regulation DIN EN 29 408.
12.3 Bioaccumulative potential:	Not bio-accumulated.
12.4 Mobility in soil:	Potential absorptiveness in the top organic soil layers and very little capacity to leach to lower layers.
12.5 Results of PBT- and vPvB-evaluation:	No information available.
12.6 Other adverse effects:	No information available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:	See chapter 6.3. In compliance with administrative regulations.
Disposal code of the product:	Not relevant.
Disposal code of contaminated packaging:	150102 packaging disposal

14. TRANSPORT INFORMATION

Land transport

ADR class	Not restricted	ADR item number	Not relevant
RID class	Not restricted	RID item number	Not relevant
Hazard identification no.	Not relevant	Substance identification no.	Not relevant
TREM – Card	Not relevant	UN Number	Not relevant
Proper shipping name	Not relevant	National regulations	

Sea transport

IMO/IMDG code	Not restricted	Class	Not restricted
Packing group	Not relevant	UN number	None
EMS	Not relevant	MFAG	Not relevant
Marine pollutant	No	Proper shipping name	Not relevant

Air transport

ICAO-TI/IATA-DGR		UN number	None
Class	Not restricted	Packing group	Not relevant
Proper shipping name	Not relevant		

15. REGULATORY INFORMATION

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



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H – 317 - Can cause allergic skin reaction.

H – 319 - Can cause eye irritation.

P – 234 - Keep in original packaging.

P – 280 - Wear protective gloves.

P – 301 - If swallowed do not induce vomiting: seek medical advice immediately and show this container or label.

P – 303 - In case of touch with skin wash the concerned part with water.

P – 305 - In case of touch with the eyes purge with water and consult a doctor.

P – 391 - Wipe up spilled material.

All the bacteria contained in this formulation are of group 1 according to Directive 2000/54/EC (on the protection of workers from risks related to exposure to biological agents at work). Microorganisms from group 1 are unlikely to cause a human disease.

When handling the product, precautions described in Annex VI of Directive 2000/54/EC have to be taken into consideration in order to make a risk assessment.

Without risks for health of animals, plants and environment.

Water hazard classification 1 (self-evaluation)

16. OTHER INFORMATION

The information are based on our current knowledge and are no assurance of features.

The recipients of our products have to consider current laws and determinations on own responsibility.

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Author:

ABiTEP GmbH