

16.08.2023

## Kit Components

Product code	Description
<b>P1010</b>	<b>VitaFast® Vitamin C</b>

Components:

P1010-MTT	VitaFast® Vitamin C MTT Buffer
P1010-A	VitaFast® Vitamin C Enzyme Ascorbatoxidase
P1010-PMS	VitaFast® Vitamin C PMS Solution
P1010-S	VitaFast® Vitamin C Standard

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 16.08.2023

Version number 8.0 (replaces version 7.0)

Revision: 16.08.2023

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

#### 1.1 Product identifier

**Trade name:** VitaFast® Vitamin C MTT Buffer

**Article number:** P1010-MTT

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

No further relevant information available.

**Application of the substance / the preparation:** In vitro

#### 1.3 Details of the supplier of the safety data sheet

**Manufacturer/Supplier:**

R-Biopharm AG

An der neuen Bergstraße 17

D-64297 Darmstadt

**Further information obtainable from:** e-mail: info@r-biopharm.de

#### 1.4 Emergency telephone number:

CHEMTREC (worldwide): +1 703-741-5970 / 1-800-424-9300

CHEMTREC (Ireland): 353-19014670

For additional worldwide local emergency numbers refer to section 16.

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008**

The product is not classified, according to the CLP regulation.

#### 2.2 Label elements

**Labelling according to Regulation (EC) No 1272/2008** Void

**Hazard pictograms** Void

**Signal word** Void

**Hazard statements** Void

#### 2.3 Other hazards

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

**Description:** Mixture of substances with nonhazardous additions.

#### Dangerous components:

CAS: 5949-29-1	1,2,3-Propanetricarboxylic acid, 2-hydroxy-, monohydrate	2.5 – 5%
EC number: 611-842-9	⚠ Eye Irrit. 2, H319	

**Additional information:** For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

**General information:** No special measures required.

**After inhalation:** Supply fresh air; consult doctor in case of complaints.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**After eye contact:** Rinse opened eye for several minutes under running water.

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### according to 1907/2006/EC, Article 31

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**Trade name: VitaFast® Vitamin C MTT Buffer**

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**After swallowing:** If symptoms persist consult doctor.**4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

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

No further relevant information available.

### SECTION 5: Firefighting measures

**5.1 Extinguishing media****Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.**5.2 Special hazards arising from the substance or mixture**

No further relevant information available.

**5.3 Advice for firefighters****Protective equipment:** No special measures required.

### SECTION 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective clothing.

**6.2 Environmental precautions:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

**6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

**6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

### SECTION 7: Handling and storage

**7.1 Precautions for safe handling** No special measures required.**Information about fire - and explosion protection:** No special measures required.**7.2 Conditions for safe storage, including any incompatibilities****Storage:****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** None.**7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

**8.1 Control parameters****Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:** The lists valid during the making were used as basis.**8.2 Exposure controls****Appropriate engineering controls** No further data; see item 7.

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**Individual protection measures, such as personal protective equipment****General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

**Respiratory protection:** Not required.

**Hand protection**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**For the permanent contact gloves made of the following materials are suitable:**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**As protection from splashes gloves made of the following materials are suitable:**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye/face protection** Goggles recommended during refilling

## SECTION 9: Physical and chemical properties

**9.1 Information on basic physical and chemical properties****General Information****Physical state**

Fluid

**Colour:**

Colourless

**Odour:**

Characteristic

**Odour threshold:**

Not determined.

**Melting point/freezing point:**

0 °C

**Boiling point or initial boiling point and boiling range**

100 °C (7732-18-5 water, distilled, conductivity or of similarpurity)

**Flammability**

Not applicable.

**Lower and upper explosion limit****Lower:**

Not determined.

**Upper:**

Not determined.

**Flash point:**

Not applicable.

**Decomposition temperature:**

Not determined.

**pH**

Not determined.

**Viscosity:****Kinematic viscosity**

Not determined.

**Dynamic at 20 °C:**

0.952 mPas

**Solubility****water:**

Fully miscible.

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**Partition coefficient n-octanol/water (log value)**

Not determined.

**Vapour pressure at 20 °C:**

23 hPa (7732-18-5 water, distilled, conductivity or of similarpurity)

**Density and/or relative density****Density at 20 °C:**1.02155 g/cm<sup>3</sup>**Relative density**

Not determined.

**Vapour density**

Not determined.

**9.2 Other information****Appearance:****Form:**

Fluid

**Important information on protection of health and environment, and on safety.****Auto-ignition temperature:**

Product is not selfigniting.

**Explosive properties:**

Product does not present an explosion hazard.

**Solvent content:****Water:**

96.0 %

**Solids content:**

4.0 %

**Molecular weight**

18.02 g/mol

**Change in condition****Evaporation rate**

Not determined.

**Information with regard to physical hazard classes****Explosives**

Void

**Flammable gases**

Void

**Aerosols**

Void

**Oxidising gases**

Void

**Gases under pressure**

Void

**Flammable liquids**

Void

**Flammable solids**

Void

**Self-reactive substances and mixtures**

Void

**Pyrophoric liquids**

Void

**Pyrophoric solids**

Void

**Self-heating substances and mixtures**

Void

**Substances and mixtures, which emit flammable gases in contact with water**

Void

**Oxidising liquids**

Void

**Oxidising solids**

Void

**Organic peroxides**

Void

**Corrosive to metals**

Void

**Desensitised explosives**

Void

**SECTION 10: Stability and reactivity****10.1 Reactivity** No further relevant information available.**10.2 Chemical stability****Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

**10.3 Possibility of hazardous reactions** No dangerous reactions known.**10.4 Conditions to avoid** No further relevant information available.**10.5 Incompatible materials:** No further relevant information available.

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**10.6 Hazardous decomposition products:** No dangerous decomposition products known.

### SECTION 11: Toxicological information

#### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

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

##### LD/LC50 values relevant for classification:

##### 5949-29-1 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, monohydrate

Oral LD50 5,400 mg/kg (mouse)

Dermal LD50 &gt; 2,000 mg/kg (rat)

**Skin corrosion/irritation** Based on available data, the classification criteria are not met.**Serious eye damage/irritation** Based on available data, the classification criteria are not met.**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.**Germ cell mutagenicity** Based on available data, the classification criteria are not met.**Carcinogenicity** Based on available data, the classification criteria are not met.**Reproductive toxicity** Based on available data, the classification criteria are not met.**STOT-single exposure** Based on available data, the classification criteria are not met.**STOT-repeated exposure** Based on available data, the classification criteria are not met.**Aspiration hazard** Based on available data, the classification criteria are not met.

#### 11.2 Information on other hazards

##### Endocrine disrupting properties

None of the ingredients is listed.

### SECTION 12: Ecological information

#### 12.1 Toxicity

##### Aquatic toxicity:

##### 5949-29-1 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, monohydrate

LC50/48h 440 mg/l (Fish)

**12.2 Persistence and degradability** No further relevant information available.**12.3 Bioaccumulative potential** No further relevant information available.**12.4 Mobility in soil** No further relevant information available.

#### 12.5 Results of PBT and vPvB assessment

**PBT:** Not applicable.**vPvB:** Not applicable.

#### 12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

#### 12.7 Other adverse effects

##### Additional ecological information:

##### General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

**Recommendation** Disposal must be made according to official regulations.

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**Uncleaned packaging:****Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

**14.1 UN number or ID number****ADR, ADN, IMDG, IATA**

Void

**14.2 UN proper shipping name****ADR, ADN, IMDG, IATA**

Void

**14.3 Transport hazard class(es)****ADR, ADN, IMDG, IATA****Class**

Void

**14.4 Packing group****ADR, IMDG, IATA**

Void

**14.5 Environmental hazards:****Marine pollutant:**

No

**14.6 Special precautions for user**

Not applicable.

**14.7 Maritime transport in bulk according to IMO instruments**

Not applicable.

**Transport/Additional information:**

Not dangerous according to the above specifications.

**UN "Model Regulation":**

Void

### SECTION 15: Regulatory information

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Directive 2012/18/EU****Named dangerous substances - ANNEX I** None of the ingredients is listed.**DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

**REGULATION (EU) 2019/1148****Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

**Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

**Regulation (EC) No 273/2004 on drug precursors**

None of the ingredients is listed.

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**Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

None of the ingredients is listed.

**National regulations:**

**Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Relevant phrases**

H319 Causes serious eye irritation.

**Department issuing SDS:** QS 0049-6151-8102-0

**Contact:** QS 0049-6151-8102-0

**Worldwide local emergency numbers**

Argentina Spanish Local (City) Buenos Aires Americas 54-1159839431  
 Australia English Local (City) Sydney Oceania 61-290372994  
 Austria German Local (City) Vienna Europe 43-13649237  
 Belgium French Local (City) Brussels Europe 32-28083237  
 Brazil Portuguese Local (City) Rio De Janeiro Americas 55-2139581449  
 Brazil Portuguese Local (City) Sao Paulo Americas 55-1143491359  
 Brazil - Toll Free Portuguese Toll free Mobile-Enabled Americas 0800 892 0479  
 Bulgaria Bulgarian Local (City) Plovdiv Europe 359-32570104  
 Cayman Islands English Local (National) Americas 345-749-8392  
 Chile Spanish Local (City) Santiago Americas 56 2 2581 4934  
 China Mandarin Local (National) Asia 4001-204937  
 Colombia Spanish Toll Free Americas 01800-710-2151  
 Costa Rica Spanish Local (National) Americas 506-40003869  
 Croatia Croatian Local (City) Zagreb Europe 385-17776920  
 Czech Republic Czech Local (City) Prague Europe 420-228880039  
 Denmark Danish Local (National) Europe 45-69918573  
 Dominican Republic Spanish Local (City) Santo Domingo Americas (829) 956-7588  
 El Salvador Spanish Local (City) San Salvador Americas 503 2136 7633  
 Estonia Estonian Local (National) Europe 372-6681294  
 Finland Finnish Local (City) Helsinki Europe 358-942419014  
 France French National Europe 33-975181407  
 Germany German Local (City) Frankfurt Europe 49-69643508409 0800-181-7059  
 Greece Greek Local (City) Athens Europe 30-2111768478  
 Grenada English Local (City) St George Americas 1 (473) 230-0165  
 Guinea French Americas 224 660 71 03 00  
 Hong Kong Toll Free Asia 800-968-793  
 Hungary Hungarian Local (City) Budapest Europe 36-18088425  
 Iceland Icelandic Local (City) Reykjavik Europe 354 539 0655  
 India Hindi, Bengali, English Asia 000-800-100-7141  
 Indonesia Indonesian Toll Free Asia 001-803-017-9114  
 Ireland English Local (City) Dublin Europe 353-19014670  
 Israel Hebrew Local (City) Tel Aviv Asia 972-37630639  
 Italy Italian Local (City) Milan Europe 39-0245557031 800-789-767  
 Japan Japanese Local (City) Tokyo Asia 81-345209637  
 Latvia Latvian Lettish Local (City) Riga Europe 371-66165504  
 Lithuania Lithuanian Local (City) Vilnius Europe 370-52140238  
 Luxembourg French and German Europe 352-20202416

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Macedonia Macedonian Local (City) Skopje Europe 389 2 551 7456  
 Malaysia Malay Local (City) Kuala Lumpur Asia 60-39212579 41-800-815-308  
 Mexico Spanish Americas 01-800-681-9531  
 Netherlands Dutch Europe 31-858880596  
 New Zealand English Local (City) Auckland Oceania 64-98010034  
 Nigeria Hausa Local (City) Lagos Europe 234 1 227 8883  
 Panama Spanish Local (National) Americas 507-8322475  
 Peru Spanish Local (City) Lima Americas 51-17071295  
 Philippines Tagalog Local (City) Manila Asia 1-800-1-116-1020  
 Poland Polish Local (City) Warsaw Europe 48-223988029  
 Portugal Portuguese Local (National) Europe 351-308801773  
 Romania Romanian Local (National) Europe 40-37-6300026  
 Russia RussianToll Free Mobile-Enabled Asia 8-800-100-6346  
 Saudi Arabia Arabic and English CHEMTREC DID Only Asia 966-8111095861  
 Singapore English and Mandarin Asia 65-31581349 or 800-101-2201  
 Slovakia Slovak Local (City) Bratislava Europe 421-233057972  
 Slovenia Slovenian Local (City) Ljubljana Europe 38-618888016  
 South Africa English Toll Free Africa 0-800-983-611  
 South Korea Korean Toll Free Asia 003-0813-2549 and 080-822-1374  
 Spain Spanish Local (City) Barcelona Europe 34-931768545 and 900-868538  
 Sweden Swedish Local (City) Stockholm Europe 46-852503403  
 Switzerland German and French and Italian Zurich Europe 41-435082011  
 Taiwan Mandarin Local (City) Taipei Asia 886-2-7741-4207 and 00801-14-8954  
 Thailand Thai Toll Free Asia 01-800-13-203-9987  
 Trinidad and Tobago English Local (National) Americas 1-868-224-5716  
 Turkey Turkish Local (City) Istanbul Europe 90-212-7055340  
 Ukraine Ukrainian Europe 380-947101374  
 United Kingdom English Local (City) London Europe 44-870-8200418 and 44-2038073798

**Version number of previous version: 7.0**
**Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
 EINECS: European Inventory of Existing Commercial Chemical Substances  
 ELINCS: European List of Notified Chemical Substances  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 PBT: Persistent, Bioaccumulative and Toxic  
 vPvB: very Persistent and very Bioaccumulative  
 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 16.08.2023

Version number 7.0 (replaces version 6.0)

Revision: 16.08.2023

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

#### 1.1 Product identifier

**Trade name:** VitaFast® Vitamin C Enzyme Ascorbatoxidase

**Article number:** P1010-A

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

No further relevant information available.

**Application of the substance / the preparation:** In vitro

#### 1.3 Details of the supplier of the safety data sheet

**Manufacturer/Supplier:**

R-Biopharm AG

An der neuen Bergstraße 17

D-64297 Darmstadt

**Further information obtainable from:** e-mail: info@r-biopharm.de

#### 1.4 Emergency telephone number:

CHEMTREC (worldwide): +1 703-741-5970 / 1-800-424-9300

CHEMTREC (Ireland): 353-19014670

For additional worldwide local emergency numbers refer to section 16.

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008**

The substance is not classified, according to the CLP regulation.

#### 2.2 Label elements

**Labelling according to Regulation (EC) No 1272/2008** Void

**Hazard pictograms** Void

**Signal word** Void

**Hazard statements** Void

#### 2.3 Other hazards

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

**CAS No. Description**

Ascorbat oxidase

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

**General information:** No special measures required.

**After inhalation:** Supply fresh air; consult doctor in case of complaints.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**After eye contact:** Rinse opened eye for several minutes under running water.

**After swallowing:** If symptoms persist consult doctor.

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

No further relevant information available.

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

No further relevant information available.

**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.**5.2 Special hazards arising from the substance or mixture**

No further relevant information available.

**5.3 Advice for firefighters****Protective equipment:** No special measures required.**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective clothing.

**6.2 Environmental precautions:** No special measures required.**6.3 Methods and material for containment and cleaning up:** Pick up mechanically.**6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling** No special measures required.**Information about fire - and explosion protection:** No special measures required.**7.2 Conditions for safe storage, including any incompatibilities****Storage:****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** None.**7.3 Specific end use(s)** No further relevant information available.**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Ingredients with limit values that require monitoring at the workplace:** Not required.**Additional information:** The lists valid during the making were used as basis.**8.2 Exposure controls****Appropriate engineering controls** No further data; see item 7.**Individual protection measures, such as personal protective equipment****General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

**Respiratory protection:** Not required.**Hand protection**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**For the permanent contact gloves made of the following materials are suitable:**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**As protection from splashes gloves made of the following materials are suitable:**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye/face protection** Safety glasses

## SECTION 9: Physical and chemical properties

**9.1 Information on basic physical and chemical properties**
**General Information**
**Physical state**

Solid

**Colour:**

Blue

**Odour:**

Characteristic

**Odour threshold:**

Not determined.

**Melting point/freezing point:**

Undetermined.

**Boiling point or initial boiling point and boiling range**

Undetermined.

**Flammability**

Product is not flammable.

**Lower and upper explosion limit**
**Lower:**

Not determined.

**Upper:**

Not determined.

**Flash point:**

Not applicable.

**Decomposition temperature:**

Not determined.

**pH**

Not applicable.

**Viscosity:**
**Kinematic viscosity**

Not applicable.

**Dynamic:**

Not applicable.

**Solubility**
**water:**

Soluble.

**Partition coefficient n-octanol/water (log value)**

Not determined.

**Vapour pressure:**

Not applicable.

**Density and/or relative density**
**Density at 20 °C:**
0.4 g/cm<sup>3</sup>
**Relative density**

Not determined.

**Vapour density**

Not applicable.

**Particle characteristics**

See item 3.

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**9.2 Other information****Appearance:****Form:** Solid**Important information on protection of health and environment, and on safety.****Auto-ignition temperature:** Not determined.**Explosive properties:** Product does not present an explosion hazard.**Solids content:** 100.0 %**Change in condition****Evaporation rate** Not applicable.**Information with regard to physical hazard classes****Explosives** Void**Flammable gases** Void**Aerosols** Void**Oxidising gases** Void**Gases under pressure** Void**Flammable liquids** Void**Flammable solids** Void**Self-reactive substances and mixtures** Void**Pyrophoric liquids** Void**Pyrophoric solids** Void**Self-heating substances and mixtures** Void**Substances and mixtures, which emit flammable gases in contact with water** Void**Oxidising liquids** Void**Oxidising solids** Void**Organic peroxides** Void**Corrosive to metals** Void**Desensitised explosives** Void**SECTION 10: Stability and reactivity****10.1 Reactivity** No further relevant information available.**10.2 Chemical stability****Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

**10.3 Possibility of hazardous reactions** No dangerous reactions known.**10.4 Conditions to avoid** No further relevant information available.**10.5 Incompatible materials:** No further relevant information available.**10.6 Hazardous decomposition products:** No dangerous decomposition products known.**SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity** Based on available data, the classification criteria are not met.**Skin corrosion/irritation** Based on available data, the classification criteria are not met.**Serious eye damage/irritation** Based on available data, the classification criteria are not met.**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

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**Trade name: VitaFast® Vitamin C Enzyme Ascorbatoxidase**

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**Carcinogenicity** Based on available data, the classification criteria are not met.**Reproductive toxicity** Based on available data, the classification criteria are not met.**STOT-single exposure** Based on available data, the classification criteria are not met.**STOT-repeated exposure** Based on available data, the classification criteria are not met.**Aspiration hazard** Based on available data, the classification criteria are not met.**11.2 Information on other hazards****Endocrine disrupting properties**

Substance is not listed.

## SECTION 12: Ecological information

**12.1 Toxicity****Aquatic toxicity:** No further relevant information available.**12.2 Persistence and degradability** No further relevant information available.**12.3 Bioaccumulative potential** No further relevant information available.**12.4 Mobility in soil** No further relevant information available.**12.5 Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Endocrine disrupting properties**

The product does not contain substances with endocrine disrupting properties.

**12.7 Other adverse effects****Additional ecological information:****General notes:** Not hazardous for water.

## SECTION 13: Disposal considerations

**13.1 Waste treatment methods****Recommendation** Disposal must be made according to official regulations.**Uncleaned packaging:****Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## SECTION 14: Transport information

**14.1 UN number or ID number****ADR, ADN, IMDG, IATA** Void**14.2 UN proper shipping name****ADR, ADN, IMDG, IATA** Void**14.3 Transport hazard class(es)****ADR, ADN, IMDG, IATA****Class** Void**14.4 Packing group****ADR, IMDG, IATA** Void**14.5 Environmental hazards:****Marine pollutant:** No

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## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 16.08.2023

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**Trade name: VitaFast® Vitamin C Enzyme Ascorbatoxidase**

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<b>14.6 Special precautions for user</b>	Not applicable.
<b>14.7 Maritime transport in bulk according to IMO instruments</b>	Not applicable.
<b>Transport/Additional information:</b>	Not dangerous according to the above specifications.
<b>UN "Model Regulation":</b>	Void

### SECTION 15: Regulatory information

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

**Directive 2012/18/EU**

**Named dangerous substances - ANNEX I** Substance is not listed.

**DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

Substance is not listed.

**REGULATION (EU) 2019/1148**

**Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

Substance is not listed.

**Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

Substance is not listed.

**Regulation (EC) No 273/2004 on drug precursors**

Substance is not listed.

**Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

Substance is not listed.

**National regulations:**

**Waterhazard class:** Generally not hazardous for water.

**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Department issuing SDS:** QS 0049-6151-8102-0

**Contact:** QS 0049-6151-8102-0

**Worldwide local emergency numbers**

Argentina Spanish Local (City) Buenos Aires Americas 54-1159839431

Australia English Local (City) Sydney Oceania 61-290372994

Austria German Local (City) Vienna Europe 43-13649237

Belgium French Local (City) Brussels Europe 32-28083237

Brazil Portuguese Local (City) Rio De Janeiro Americas 55-2139581449

Brazil Portuguese Local (City) Sao Paulo Americas 55-1143491359

Brazil - Toll Free Portuguese Toll free Mobile-Enabled Americas 0800 892 0479

Bulgaria Bulgarian Local (City) Plovdiv Europe 359-32570104

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## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 16.08.2023

Version number 7.0 (replaces version 6.0)

Revision: 16.08.2023

**Trade name: VitaFast® Vitamin C Enzyme Ascorbatoxidase**

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Cayman Islands English Local (National) Americas 345-749-8392  
 Chile Spanish Local (City) Santiago Americas 56 2 2581 4934  
 China Mandarin Local (National) Asia 4001-204937  
 Colombia Spanish Toll Free Americas 01800-710-2151  
 Costa Rica Spanish Local (National) Americas 506-40003869  
 Croatia Croatian Local (City) Zagreb Europe 385-17776920  
 Czech Republic Czech Local (City) Prague Europe 420-228880039  
 Denmark Danish Local (National) Europe 45-69918573  
 Dominican Republic Spanish Local (City) Santo Domingo Americas (829) 956-7588  
 El Salvador Spanish Local (City) San Salvador Americas 503 2136 7633  
 Estonia Estonian Local (National) Europe 372-6681294  
 Finland Finnish Local (City) Helsinki Europe 358-942419014  
 France French National Europe 33-975181407  
 Germany German Local (City) Frankfurt Europe 49-69643508409 0800-181-7059  
 Greece Greek Local (City) Athens Europe 30-2111768478  
 Grenada English Local (City) St George Americas 1 (473) 230-0165  
 Guinea French Americas 224 660 71 03 00  
 Hong Kong Toll Free Asia 800-968-793  
 Hungary Hungarian Local (City) Budapest Europe 36-18088425  
 Iceland Icelandic Local (City) Reykjavik Europe 354 539 0655  
 India Hindi, Bengali, English Asia 000-800-100-7141  
 Indonesia Indonesian Toll Free Asia 001-803-017-9114  
 Ireland English Local (City) Dublin Europe 353-19014670  
 Israel Hebrew Local (City) Tel Aviv Asia 972-37630639  
 Italy Italian Local (City) Milan Europe 39-0245557031 800-789-767  
 Japan Japanese Local (City) Tokyo Asia 81-345209637  
 Latvia Latvian Lettish Local (City) Riga Europe 371-66165504  
 Lithuania Lithuanian Local (City) Vilnius Europe 370-52140238  
 Luxembourg French and German Europe 352-20202416  
 Macedonia Macedonian Local (City) Skopje Europe 389 2 551 7456  
 Malaysia Malay Local (City) Kuala Lumpur Asia 60-39212579 41-800-815-308  
 Mexico Spanish Americas 01-800-681-9531  
 Netherlands Dutch Europe 31-858880596  
 New Zealand English Local (City) Auckland Oceania 64-98010034  
 Nigeria Hausa Local (City) Lagos Europe 234 1 227 8883  
 Panama Spanish Local (National) Americas 507-8322475  
 Peru Spanish Local (City) Lima Americas 51-17071295  
 Philippines Tagalog Local (City) Manila Asia 1-800-1-116-1020  
 Poland Polish Local (City) Warsaw Europe 48-223988029  
 Portugal Portuguese Local (National) Europe 351-308801773  
 Romania Romanian Local (National) Europe 40-37-6300026  
 Russia Russian Toll Free Mobile-Enabled Asia 8-800-100-6346  
 Saudi Arabia Arabic and English CHEMTREC DID Only Asia 966-8111095861  
 Singapore English and Mandarin Asia 65-31581349 or 800-101-2201  
 Slovakia Slovak Local (City) Bratislava Europe 421-233057972  
 Slovenia Slovenian Local (City) Ljubljana Europe 38-618888016  
 South Africa English Toll Free Africa 0-800-983-611  
 South Korea Korean Toll Free Asia 003-0813-2549 and 080-822-1374  
 Spain Spanish Local (City) Barcelona Europe 34-931768545 and 900-868538  
 Sweden Swedish Local (City) Stockholm Europe 46-852503403  
 Switzerland German and French and Italian Zurich Europe 41-435082011  
 Taiwan Mandarin Local (City) Taipei Asia 886-2-7741-4207 and 00801-14-8954  
 Thailand Thai Toll Free Asia 01-800-13-203-9987  
 Trinidad and Tobago English Local (National) Americas 1-868-224-5716  
 Turkey Turkish Local (City) Istanbul Europe 90-212-7055340  
 Ukraine Ukrainian Europe 380-947101374  
 United Kingdom English Local (City) London Europe 44-870-8200418 and 44-2038073798

(Contd. on page 8)



**Safety data sheet**  
**according to 1907/2006/EC, Article 31**

Printing date 16.08.2023

Version number 7.0 (replaces version 6.0)

Revision: 16.08.2023

**Trade name: VitaFast® Vitamin C Enzyme Ascorbatoxidase**

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**Version number of previous version: 6.0**

**Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

IE

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 16.08.2023

Version number 7.0 (replaces version 6.0)

Revision: 16.08.2023

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

#### 1.1 Product identifier

Trade name: VitaFast® Vitamin C PMS Solution

Article number: P1010-PMS

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

No further relevant information available.

Application of the substance / the preparation: In vitro

#### 1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

R-Biopharm AG

An der neuen Bergstraße 17

D-64297 Darmstadt

Further information obtainable from: e-mail: [info@r-biopharm.de](mailto:info@r-biopharm.de)

#### 1.4 Emergency telephone number:

CHEMTREC (worldwide): +1 703-741-5970 / 1-800-424-9300

CHEMTREC (Ireland): 353-19014670

For additional worldwide local emergency numbers refer to section 16.

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

The substance is not classified, according to the CLP regulation.

#### 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 Void

Hazard pictograms Void

Signal word Void

Hazard statements Void

#### 2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

CAS No. Description

Ascorbat oxidase

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

General information: No special measures required.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing: If symptoms persist consult doctor.

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

No further relevant information available.

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Printing date 16.08.2023

Version number 7.0 (replaces version 6.0)

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**Trade name: VitaFast® Vitamin C PMS Solution**

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

No further relevant information available.

**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.**5.2 Special hazards arising from the substance or mixture**

No further relevant information available.

**5.3 Advice for firefighters****Protective equipment:** No special measures required.**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective clothing.

**6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.**6.3 Methods and material for containment and cleaning up:** Pick up mechanically.**6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling** No special measures required.**Information about fire - and explosion protection:** No special measures required.**7.2 Conditions for safe storage, including any incompatibilities****Storage:****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** None.**7.3 Specific end use(s)** No further relevant information available.**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Ingredients with limit values that require monitoring at the workplace:** Not required.**Additional information:** The lists valid during the making were used as basis.**8.2 Exposure controls****Appropriate engineering controls** No further data; see item 7.**Individual protection measures, such as personal protective equipment****General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

**Respiratory protection:** Not required.**Hand protection**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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**Trade name: VitaFast® Vitamin C PMS Solution**

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Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**For the permanent contact gloves made of the following materials are suitable:**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**As protection from splashes gloves made of the following materials are suitable:**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye/face protection** Safety glasses

## SECTION 9: Physical and chemical properties

**9.1 Information on basic physical and chemical properties****General Information****Physical state**

Solid

**Colour:**

Yellow

**Odour:**

Characteristic

**Odour threshold:**

Not determined.

**Melting point/freezing point:**

Undetermined.

**Boiling point or initial boiling point and boiling range**

Undetermined.

**Flammability**

Product is not flammable.

**Lower and upper explosion limit****Lower:**

Not determined.

**Upper:**

Not determined.

**Flash point:**

Not applicable.

**Decomposition temperature:**

Not determined.

**pH**

Not applicable.

**Viscosity:****Kinematic viscosity**

Not applicable.

**Dynamic:**

Not applicable.

**Solubility****water:**

Soluble.

**Partition coefficient n-octanol/water (log value)**

Not determined.

**Vapour pressure:**

Not applicable.

**Density and/or relative density****Density:**

Not determined.

**Relative density**

Not determined.

**Vapour density**

Not applicable.

**Particle characteristics**

See item 3.

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### according to 1907/2006/EC, Article 31

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Trade name: VitaFast® Vitamin C PMS Solution

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**9.2 Other information****Appearance:****Form:** Solid**Important information on protection of health and environment, and on safety.****Auto-ignition temperature:** Not determined.**Explosive properties:** Product does not present an explosion hazard.**Solids content:** 100.0 %**Change in condition****Evaporation rate** Not applicable.**Information with regard to physical hazard classes****Explosives** Void**Flammable gases** Void**Aerosols** Void**Oxidising gases** Void**Gases under pressure** Void**Flammable liquids** Void**Flammable solids** Void**Self-reactive substances and mixtures** Void**Pyrophoric liquids** Void**Pyrophoric solids** Void**Self-heating substances and mixtures** Void**Substances and mixtures, which emit flammable gases in contact with water** Void**Oxidising liquids** Void**Oxidising solids** Void**Organic peroxides** Void**Corrosive to metals** Void**Desensitised explosives** Void**SECTION 10: Stability and reactivity****10.1 Reactivity** No further relevant information available.**10.2 Chemical stability****Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

**10.3 Possibility of hazardous reactions** No dangerous reactions known.**10.4 Conditions to avoid** No further relevant information available.**10.5 Incompatible materials:** No further relevant information available.**10.6 Hazardous decomposition products:** No dangerous decomposition products known.**SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity** Based on available data, the classification criteria are not met.**Skin corrosion/irritation** Based on available data, the classification criteria are not met.**Serious eye damage/irritation** Based on available data, the classification criteria are not met.**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

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Revision: 16.08.2023

**Trade name: VitaFast® Vitamin C PMS Solution**

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

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

**STOT-single exposure** Based on available data, the classification criteria are not met.

**STOT-repeated exposure** Based on available data, the classification criteria are not met.

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

## 11.2 Information on other hazards

## Endocrine disrupting properties

Substance is not listed.

## SECTION 12: Ecological information

## 12.1 Toxicity

**Aquatic toxicity:** No further relevant information available.

**12.2 Persistence and degradability** No further relevant information available.

**12.3 Bioaccumulative potential** No further relevant information available.

**12.4 Mobility in soil** No further relevant information available.

## 12.5 Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

## 12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

## 12.7 Other adverse effects

**Additional ecological information:**

**General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

**Recommendation** Disposal must be made according to official regulations.

**Uncleaned packaging:**

**Recommendation:** Disposal must be made according to official regulations.

**Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## SECTION 14: Transport information

14.1 UN number or ID number ADR, ADN, IMDG, IATA	Void
---	------

14.2 UN proper shipping name	ADR, ADN, IMDG, IATA	Void
------------------------------	----------------------	------

14.3 Transport hazard class(es)	
ADR, ADN, IMDG, IATA	
Class	Void

<b>14.4 Packing group</b>	
<b>ADR, IMDG, IATA</b>	Void

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## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 16.08.2023

Version number 7.0 (replaces version 6.0)

Revision: 16.08.2023

**Trade name: VitaFast® Vitamin C PMS Solution**

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**14.5 Environmental hazards:****Marine pollutant:** No**14.6 Special precautions for user** Not applicable.**14.7 Maritime transport in bulk according to IMO instruments** Not applicable.**Transport/Additional information:** Not dangerous according to the above specifications.**UN "Model Regulation":** Void**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Directive 2012/18/EU****Named dangerous substances - ANNEX I** Substance is not listed.**DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

Substance is not listed.

**REGULATION (EU) 2019/1148****Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

Substance is not listed.

**Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

Substance is not listed.

**Regulation (EC) No 273/2004 on drug precursors**

Substance is not listed.

**Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

Substance is not listed.

**National regulations:****Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Department issuing SDS:** QS 0049-6151-8102-0**Contact:** QS 0049-6151-8102-0**Worldwide local emergency numbers**

Argentina Spanish Local (City) Buenos Aires Americas 54-1159839431

Australia English Local (City) Sydney Oceania 61-290372994

Austria German Local (City) Vienna Europe 43-13649237

Belgium French Local (City) Brussels Europe 32-28083237

Brazil Portuguese Local (City) Rio De Janeiro Americas 55-2139581449

Brazil Portuguese Local (City) Sao Paulo Americas 55-1143491359

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## Safety data sheet

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Printing date 16.08.2023

Version number 7.0 (replaces version 6.0)

Revision: 16.08.2023

**Trade name: VitaFast® Vitamin C PMS Solution**

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Brazil - Toll Free Portuguese Toll free Mobile-Enabled Americas 0800 892 0479  
 Bulgaria Bulgarian Local (City) Plovdiv Europe 359-32570104  
 Cayman Islands English Local (National) Americas 345-749-8392  
 Chile Spanish Local (City) Santiago Americas 56 2 2581 4934  
 China Mandarin Local (National) Asia 4001-204937  
 Colombia Spanish Toll Free Americas 01800-710-2151  
 Costa Rica Spanish Local (National) Americas 506-40003869  
 Croatia Croatian Local (City) Zagreb Europe 385-17776920  
 Czech Republic Czech Local (City) Prague Europe 420-228880039  
 Denmark Danish Local (National) Europe 45-69918573  
 Dominican Republic Spanish Local (City) Santo Domingo Americas (829) 956-7588  
 El Salvador Spanish Local (City) San Salvador Americas 503 2136 7633  
 Estonia Estonian Local (National) Europe 372-6681294  
 Finland Finnish Local (City) Helsinki Europe 358-942419014  
 France French National Europe 33-975181407  
 Germany German Local (City) Frankfurt Europe 49-69643508409 0800-181-7059  
 Greece Greek Local (City) Athens Europe 30-2111768478  
 Grenada English Local (City) St George Americas 1 (473) 230-0165  
 Guinea French Americas 224 660 71 03 00  
 Hong Kong Toll Free Asia 800-968-793  
 Hungary Hungarian Local (City) Budapest Europe 36-18088425  
 Iceland Icelandic Local (City) Reykjavik Europe 354 539 0655  
 India Hindi, Bengali, English Asia 000-800-100-7141  
 Indonesia Indonesian Toll Free Asia 001-803-017-9114  
 Ireland English Local (City) Dublin Europe 353-19014670  
 Israel Hebrew Local (City) Tel Aviv Asia 972-37630639  
 Italy Italian Local (City) Milan Europe 39-0245557031 800-789-767  
 Japan Japanese Local (City) Tokyo Asia 81-345209637  
 Latvia Latvian Lettish Local (City) Riga Europe 371-66165504  
 Lithuania Lithuanian Local (City) Vilnius Europe 370-52140238  
 Luxembourg French and German Europe 352-20202416  
 Macedonia Macedonian Local (City) Skopje Europe 389 2 551 7456  
 Malaysia Malay Local (City) Kuala Lumpur Asia 60-39212579 41-800-815-308  
 Mexico Spanish Americas 01-800-681-9531  
 Netherlands Dutch Europe 31-858880596  
 New Zealand English Local (City) Auckland Oceania 64-98010034  
 Nigeria Hausa Local (City) Lagos Europe 234 1 227 8883  
 Panama Spanish Local (National) Americas 507-8322475  
 Peru Spanish Local (City) Lima Americas 51-17071295  
 Philippines Tagalog Local (City) Manila Asia 1-800-1-116-1020  
 Poland Polish Local (City) Warsaw Europe 48-223988029  
 Portugal Portuguese Local (National) Europe 351-308801773  
 Romania Romanian Local (National) Europe 40-37-6300026  
 Russia Russian Toll Free Mobile-Enabled Asia 8-800-100-6346  
 Saudi Arabia Arabic and English CHEMTREC DID Only Asia 966-8111095861  
 Singapore English and Mandarin Asia 65-31581349 or 800-101-2201  
 Slovakia Slovak Local (City) Bratislava Europe 421-233057972  
 Slovenia Slovenian Local (City) Ljubljana Europe 38-618888016  
 South Africa English Toll Free Africa 0-800-983-611  
 South Korea Korean Toll Free Asia 003-0813-2549 and 080-822-1374  
 Spain Spanish Local (City) Barcelona Europe 34-931768545 and 900-868538  
 Sweden Swedish Local (City) Stockholm Europe 46-852503403  
 Switzerland German and French and Italian Zurich Europe 41-435082011  
 Taiwan Mandarin Local (City) Taipei Asia 886-2-7741-4207 and 00801-14-8954  
 Thailand Thai Toll Free Asia 01-800-13-203-9987  
 Trinidad and Tobago English Local (National) Americas 1-868-224-5716  
 Turkey Turkish Local (City) Istanbul Europe 90-212-7055340

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**Safety data sheet**  
**according to 1907/2006/EC, Article 31**

Printing date 16.08.2023

Version number 7.0 (replaces version 6.0)

Revision: 16.08.2023

**Trade name: VitaFast® Vitamin C PMS Solution**

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Ukraine Ukrainian Europe 380-947101374

United Kingdom English Local (City) London Europe 44-870-8200418 and 44-2038073798

**Version number of previous version: 6.0**

**Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

IE

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 16.08.2023

Version number 5.0 (replaces version 4.0)

Revision: 16.08.2023

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

#### 1.1 Product identifier

**Trade name:** VitaFast® Vitamin C Standard

**Article number:** P1010-S

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

No further relevant information available.

**Application of the substance / the preparation:** In vitro

#### 1.3 Details of the supplier of the safety data sheet

**Manufacturer/Supplier:**

R-Biopharm AG

An der neuen Bergstraße 17

D-64297 Darmstadt

**Further information obtainable from:** e-mail: info@r-biopharm.de

#### 1.4 Emergency telephone number:

CHEMTREC (worldwide): +1 703-741-5970 / 1-800-424-9300

CHEMTREC (Ireland): 353-19014670

For additional worldwide local emergency numbers refer to section 16.

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008**

The product is not classified, according to the CLP regulation.

#### 2.2 Label elements

**Labelling according to Regulation (EC) No 1272/2008** Void

**Hazard pictograms** Void

**Signal word** Void

**Hazard statements** Void

#### 2.3 Other hazards

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

**Description:** Mixture of substances with nonhazardous additions.

**Dangerous components:** Void

**Additional information:** For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

**General information:** No special measures required.

**After inhalation:** Supply fresh air; consult doctor in case of complaints.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**After eye contact:** Rinse opened eye for several minutes under running water.

**After swallowing:** If symptoms persist consult doctor.

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

No further relevant information available.

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

No further relevant information available.

**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.**5.2 Special hazards arising from the substance or mixture**

No further relevant information available.

**5.3 Advice for firefighters****Protective equipment:** No special measures required.**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective clothing.

**6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.**6.3 Methods and material for containment and cleaning up:** Pick up mechanically.**6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling** No special measures required.**Information about fire - and explosion protection:** No special measures required.**7.2 Conditions for safe storage, including any incompatibilities****Storage:****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** None.**7.3 Specific end use(s)** No further relevant information available.**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:** The lists valid during the making were used as basis.**8.2 Exposure controls****Appropriate engineering controls** No further data; see item 7.**Individual protection measures, such as personal protective equipment****General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

**Respiratory protection:** Not required.

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**Hand protection**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**For the permanent contact gloves made of the following materials are suitable:**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**As protection from splashes gloves made of the following materials are suitable:**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye/face protection** Safety glasses

## SECTION 9: Physical and chemical properties

**9.1 Information on basic physical and chemical properties****General Information****Physical state**

Solid

**Colour:**

Colourless

**Odour:**

Characteristic

**Odour threshold:**

Not determined.

**Melting point/freezing point:**

Undetermined.

**Boiling point or initial boiling point and boiling range**

Undetermined.

**Flammability**

Not determined.

**Lower and upper explosion limit****Lower:**

Not determined.

**Upper:**

Not determined.

**Flash point:**

Not applicable.

**Decomposition temperature:**

Not determined.

**pH**

Not applicable.

**Viscosity:****Kinematic viscosity**

Not applicable.

**Dynamic:**

Not applicable.

**Solubility****water:**

Soluble.

**Partition coefficient n-octanol/water (log value)**

Not determined.

**Vapour pressure:**

Not applicable.

**Density and/or relative density****Density:**

Not determined.

**Relative density**

Not determined.

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<b>Vapour density</b>	Not applicable.
<b>Particle characteristics</b>	See item 3.
<b>9.2 Other information</b>	
<b>Appearance:</b>	
<b>Form:</b>	Solid
<b>Important information on protection of health and environment, and on safety.</b>	
<b>Auto-ignition temperature:</b>	Product is not selfigniting.
<b>Explosive properties:</b>	Product does not present an explosion hazard.
<b>Solvent content:</b>	
<b>Solids content:</b>	100.0 %
<b>Change in condition</b>	
<b>Evaporation rate</b>	Not applicable.

#### Information with regard to physical hazard classes

<b>Explosives</b>	Void
<b>Flammable gases</b>	Void
<b>Aerosols</b>	Void
<b>Oxidising gases</b>	Void
<b>Gases under pressure</b>	Void
<b>Flammable liquids</b>	Void
<b>Flammable solids</b>	Void
<b>Self-reactive substances and mixtures</b>	Void
<b>Pyrophoric liquids</b>	Void
<b>Pyrophoric solids</b>	Void
<b>Self-heating substances and mixtures</b>	Void
<b>Substances and mixtures, which emit flammable gases in contact with water</b>	Void
<b>Oxidising liquids</b>	Void
<b>Oxidising solids</b>	Void
<b>Organic peroxides</b>	Void
<b>Corrosive to metals</b>	Void
<b>Desensitised explosives</b>	Void

## SECTION 10: Stability and reactivity

**10.1 Reactivity** No further relevant information available.**10.2 Chemical stability****Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

**10.3 Possibility of hazardous reactions** No dangerous reactions known.**10.4 Conditions to avoid** No further relevant information available.**10.5 Incompatible materials:** No further relevant information available.**10.6 Hazardous decomposition products:** No dangerous decomposition products known.

## SECTION 11: Toxicological information

**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity** Based on available data, the classification criteria are not met.

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**LD/LC50 values relevant for classification:****50-81-7 ascorbic acid**

Oral LD50 11,900 mg/kg (rat)

**Skin corrosion/irritation** Based on available data, the classification criteria are not met.**Serious eye damage/irritation** Based on available data, the classification criteria are not met.**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.**Germ cell mutagenicity** Based on available data, the classification criteria are not met.**Carcinogenicity** Based on available data, the classification criteria are not met.**Reproductive toxicity** Based on available data, the classification criteria are not met.**STOT-single exposure** Based on available data, the classification criteria are not met.**STOT-repeated exposure** Based on available data, the classification criteria are not met.**Aspiration hazard** Based on available data, the classification criteria are not met.**11.2 Information on other hazards****Endocrine disrupting properties**

None of the ingredients is listed.

**SECTION 12: Ecological information****12.1 Toxicity****Aquatic toxicity:** No further relevant information available.**12.2 Persistence and degradability** No further relevant information available.**12.3 Bioaccumulative potential** No further relevant information available.**12.4 Mobility in soil** No further relevant information available.**12.5 Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Endocrine disrupting properties**

The product does not contain substances with endocrine disrupting properties.

**12.7 Other adverse effects****Additional ecological information:****General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Recommendation** Disposal must be made according to official regulations.**Uncleaned packaging:****Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agents:** Water, if necessary together with cleansing agents.**SECTION 14: Transport information****14.1 UN number or ID number**

ADR, ADN, IMDG, IATA

Void

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**14.2 UN proper shipping name**  
**ADR, ADN, IMDG, IATA**

Void

**14.3 Transport hazard class(es)**  
**ADR, ADN, IMDG, IATA**  
**Class**

Void

**14.4 Packing group**  
**ADR, IMDG, IATA**

Void

**14.5 Environmental hazards:**  
**Marine pollutant:**

No

**14.6 Special precautions for user**

Not applicable.

**14.7 Maritime transport in bulk according to**  
**IMO instruments**

Not applicable.

**Transport/Additional information:**

Not dangerous according to the above specifications.

**UN "Model Regulation":**

Void

### SECTION 15: Regulatory information

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
**Directive 2012/18/EU****Named dangerous substances - ANNEX I** None of the ingredients is listed.
**DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in**  
**electrical and electronic equipment – Annex II**

None of the ingredients is listed.

**REGULATION (EU) 2019/1148**
**Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of**  
**licensing under Article 5(3))**

None of the ingredients is listed.

**Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

**Regulation (EC) No 273/2004 on drug precursors**

None of the ingredients is listed.

**Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the**  
**Community and third countries in drug precursors**

None of the ingredients is listed.

**National regulations:****Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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#### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Department issuing SDS:** QS 0049-6151-8102-0

**Contact:** QS 0049-6151-8102-0

**Worldwide local emergency numbers**

Argentina Spanish Local (City) Buenos Aires Americas 54-1159839431  
 Australia English Local (City) Sydney Oceania 61-290372994  
 Austria German Local (City) Vienna Europe 43-13649237  
 Belgium French Local (City) Brussels Europe 32-28083237  
 Brazil Portuguese Local (City) Rio De Janeiro Americas 55-2139581449  
 Brazil Portuguese Local (City) Sao Paulo Americas 55-1143491359  
 Brazil - Toll Free Portuguese Toll free Mobile-Enabled Americas 0800 892 0479  
 Bulgaria Bulgarian Local (City) Plovdiv Europe 359-32570104  
 Cayman Islands English Local (National) Americas 345-749-8392  
 Chile Spanish Local (City) Santiago Americas 56 2 2581 4934  
 China Mandarin Local (National) Asia 4001-204937  
 Colombia Spanish Toll Free Americas 01800-710-2151  
 Costa Rica Spanish Local (National) Americas 506-40003869  
 Croatia Croatian Local (City) Zagreb Europe 385-17776920  
 Czech Republic Czech Local (City) Prague Europe 420-228880039  
 Denmark Danish Local (National) Europe 45-69918573  
 Dominican Republic Spanish Local (City) Santo Domingo Americas (829) 956-7588  
 El Salvador Spanish Local (City) San Salvador Americas 503 2136 7633  
 Estonia Estonian Local (National) Europe 372-6681294  
 Finland Finnish Local (City) Helsinki Europe 358-942419014  
 France French National Europe 33-975181407  
 Germany German Local (City) Frankfurt Europe 49-69643508409 0800-181-7059  
 Greece Greek Local (City) Athens Europe 30-2111768478  
 Grenada English Local (City) St George Americas 1 (473) 230-0165  
 Guinea French Americas 224 660 71 03 00  
 Hong Kong Toll Free Asia 800-968-793  
 Hungary Hungarian Local (City) Budapest Europe 36-18088425  
 Iceland Icelandic Local (City) Reykjavik Europe 354 539 0655  
 India Hindi, Bengali, English Asia 000-800-100-7141  
 Indonesia Indonesian Toll Free Asia 001-803-017-9114  
 Ireland English Local (City) Dublin Europe 353-19014670  
 Israel Hebrew Local (City) Tel Aviv Asia 972-37630639  
 Italy Italian Local (City) Milan Europe 39-0245557031 800-789-767  
 Japan Japanese Local (City) Tokyo Asia 81-345209637  
 Latvia Latvian Lettish Local (City) Riga Europe 371-66165504  
 Lithuania Lithuanian Local (City) Vilnius Europe 370-52140238  
 Luxembourg French and German Europe 352-20202416  
 Macedonia Macedonian Local (City) Skopje Europe 389 2 551 7456  
 Malaysia Malay Local (City) Kuala Lumpur Asia 60-39212579 41-800-815-308  
 Mexico Spanish Americas 01-800-681-9531  
 Netherlands Dutch Europe 31-858880596  
 New Zealand English Local (City) Auckland Oceania 64-98010034  
 Nigeria Hausa Local (City) Lagos Europe 234 1 227 8883  
 Panama Spanish Local (National) Americas 507-8322475  
 Peru Spanish Local (City) Lima Americas 51-17071295  
 Philippines Tagalog Local (City) Manila Asia 1-800-1-116-1020  
 Poland Polish Local (City) Warsaw Europe 48-223988029  
 Portugal Portuguese Local (National) Europe 351-308801773  
 Romania Romanian Local (National) Europe 40-37-6300026

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Russia Russian Toll Free Mobile-Enabled Asia 8-800-100-6346  
Saudi Arabia Arabic and English CHEMTREC DID Only Asia 966-8111095861  
Singapore English and Mandarin Asia 65-31581349 or 800-101-2201  
Slovakia Slovak Local (City) Bratislava Europe 421-233057972  
Slovenia Slovenian Local (City) Ljubljana Europe 38-618888016  
South Africa English Toll Free Africa 0-800-983-611  
South Korea Korean Toll Free Asia 003-0813-2549 and 080-822-1374  
Spain Spanish Local (City) Barcelona Europe 34-931768545 and 900-868538  
Sweden Swedish Local (City) Stockholm Europe 46-852503403  
Switzerland German and French and Italian Zurich Europe 41-435082011  
Taiwan Mandarin Local (City) Taipei Asia 886-2-7741-4207 and 00801-14-8954  
Thailand Thai Toll Free Asia 01-800-13-203-9987  
Trinidad and Tobago English Local (National) Americas 1-868-224-5716  
Turkey Turkish Local (City) Istanbul Europe 90-212-7055340  
Ukraine Ukrainian Europe 380-947101374  
United Kingdom English Local (City) London Europe 44-870-8200418 and 44-2038073798

**Version number of previous version: 4.0****Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative

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