

20.08.2020 Kit components

Product code	Description
1702910	Rotofor® Starter Kit
Components:	
9702594	Cation Membrane/Anode Electrolyte
9702592	Anion Membrane/Cathode Electrolyte
1702919	Rotofor Cell Protein Standard
1631113	Bio-Lyte® 4/6, 5/7, 5/8, 6/8, 7/9, 3/10, 40%



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

Printing date 20.08.2020 Revision: 20.08.2020

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

- · 1.1 Product identifier
- · Trade name: Cation Membrane/Anode Electrolyte
- · Article number: 9702594
- · 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

- · Application of the substance / the mixture Laboratory chemicals
- · 1.3 Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

Bio-Rad Laboratories Ltd.

The Junction

Station Road

Watford

Hertfordshire

WD17 1ET

phone: +44 00 800 00 246 723 fax: +44 01 923 47 1340

- e:mail contact: techsupport.uk@bio-rad.com
- · Information department: techsupport.uk@bio-rad.com
- · 1.4 Emergency telephone number: 020-8328-2000

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 Not Applicable
- · Hazard pictograms Not Applicable
- · Signal word Not Applicable
- · Hazard statements Not Applicable
- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

- · 3.1 Chemical characterisation: Substances
- · CAS No. Description:

7732-18-5 water

- · Identification number(s):
- EC number: 231-791-2
- · 3.2 Chemical characterisation: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.
- · Dangerous components: Not applicable.
- · Additional information For the wording of the listed hazard phrases refer to section 16.



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

Printing date 20.08.2020 Revision: 20.08.2020

Trade name: Cation Membrane/Anode Electrolyte

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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 Generally the product does not irritate the skin.
- · After eye contact Rinse opened eye for several minutes under running water.
- · After swallowing Rinse mouth with water. Seek medical attention and appropriate follow-up.
- · 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 fighting measures that suit the environment.
- · 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.
- · 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

No dangerous substances are released.

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 protection against explosions and fires: No special measures required.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage
- · Requirements to be met by storerooms and receptacles: According to product specification
- · 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.





Revision: 20.08.2020 Printing date 20.08.2020

Trade name: Cation Membrane/Anode Electrolyte

(Contd. of page 2)

SECTION 8: Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · 8.1 Control parameters
- · Components 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

- · Additional information: The lists that were valid during the creation were used as basis.
- · 8.2 Exposure controls
- Personal protective equipment
- General protective and hygienic measures

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

- · Breathing equipment: Not required.
- · Protection of hands: Protective gloves.
- · Material of gloves Synthetic gloves
- · Penetration time of glove material

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

· Eye protection: Safety glasses

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SECTION 9: Physical and chemical properties				
 9.1 Information on basic physical and General Information Appearance: Form: Colour: Odour: Odour threshold: 	And chemical properties Fluid Colourless Odourless Not determined.			
· pH-value at 20 °C:	3			
· Change in condition Melting point/freezing point: Initial boiling point and boiling re	0 °C ange: undetermined			
· Flash point:	Not applicable Not determined.			
· Flammability (solid, gaseous)	Not applicable.			
· Decomposition temperature:	Not determined.			
· Self igniting:	Product is not selfigniting.			
· Explosive properties:	Not determined.			
· Explosion limits: Lower:	Not determined.			

Not determined.

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Printing date 20.08.2020 Revision: 20.08.2020

Trade name: Cation Membrane/Anode Electrolyte

		(Contd. of page 3
· Vapour pressure at 20 °C:	23 hPa	
· Density at 20 °C:	1.005 g/cm ³	
· Relative density	Not determined.	
· Vapour density	Not determined.	
· Evaporation rate	Not determined.	
· Solubility in / Miscibility with		
Water:	Fully miscible	
· Partition coefficient: n-octanol/water:	Not determined.	
· Viscosity:		
dynamic:	Not determined.	
kinematic:	Not determined.	
· Solvent content:		
Water:	99.0 %	
· 9.2 Other information	No further relevant information available.	

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 toxicological effects
- · Acute toxicity Based on available data, the classification criteria are not met.
- · Primary irritant effect:
- · 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.
- CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- · 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.

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Printing date 20.08.2020 Revision: 20.08.2020

Trade name: Cation Membrane/Anode Electrolyte

(Contd. of page 4)

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.
- · Additional ecological information:
- · General notes: Generally not hazardous for water.
- · 12.5 Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Dispose of waste in accordance to applicable national, regional, or local regulations.

- Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION 14: Transport information		
· 14.1 UN-Number · ADR, ADN, IMDG, IATA	Not Reguated	
· 14.2 UN proper shipping name · ADR · ADN, IMDG, IATA	Not Reguated Not Reguated Not Reguated	
· 14.3 Transport hazard class(es)		
· ADR, ADN, IMDG, IATA · Class	Not Reguated	
· 14.4 Packing group · ADR, IMDG, IATA	Not Reguated	
· 14.5 Environmental hazards: · Marine pollutant:	No	
· 14.6 Special precautions for user	Not applicable.	
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Trade name: Cation Membrane/Anode Electrolyte

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· 14.7 Transport in bulk according to Annex II of Mar	rpol
and the IBC Code	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN "Model Regulation":	Not Reguated

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.

- · National regulations
- · Water hazard 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: Environmental Health and Safety.
- · Contact:

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

· Abbreviations and acronyms:

ADR: Accord européen sur le transport 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)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

· * Data compared to the previous version altered.

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

Printing date 20.08.2020 Revision: 20.08.2020

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

- · 1.1 Product identifier
- · Trade name: Anion Membrane/Cathode Electrolyte
- · Article number: 9702592
- · 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

- · Application of the substance / the mixture Laboratory chemicals
- · 1.3 Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

Bio-Rad Laboratories Ltd.

The Junction

Station Road

Watford

Hertfordshire

WD17 1ET

phone: +44 00 800 00 246 723 fax: +44 01 923 47 1340

e:mail contact: techsupport.uk@bio-rad.com

- · Information department: techsupport.uk@bio-rad.com
- · 1.4 Emergency telephone number: 020-8328-2000

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 Not Applicable
- · Hazard pictograms Not Applicable
- · Signal word Not Applicable
- · Hazard statements Not Applicable
- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

- · 3.1 Chemical characterisation: Substances
- · CAS No. Description:

7732-18-5 water

- · Identification number(s):
- · EC number: 231-791-2
- · 3.2 Chemical characterisation: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.
- · Dangerous components: Not applicable.
- · Additional information For the wording of the listed hazard phrases refer to section 16.



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

Printing date 20.08.2020 Revision: 20.08.2020

Trade name: Anion Membrane/Cathode Electrolyte

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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 Generally the product does not irritate the skin.
- · After eye contact Rinse opened eye for several minutes under running water.
- · After swallowing Rinse mouth with water. Seek medical attention and appropriate follow-up.
- · 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 fighting measures that suit the environment.
- · 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.
- · 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

No dangerous substances are released.

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 protection against explosions and fires: No special measures required.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage
- · Requirements to be met by storerooms and receptacles: According to product specification
- · 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.





Revision: 20.08.2020 Printing date 20.08.2020

Trade name: Anion Membrane/Cathode Electrolyte

(Contd. of page 2)

SECTION 8: Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · 8.1 Control parameters
- · Components 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

- · Additional information: The lists that were valid during the creation were used as basis.
- · 8.2 Exposure controls
- Personal protective equipment
- General protective and hygienic measures

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

- · Breathing equipment: Not required.
- · Protection of hands: Protective gloves.
- · Material of gloves Synthetic gloves
- · Penetration time of glove material

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

· Eye protection: Safety glasses

Lower:

Upper:

SECTION 9: Ph	veical and	chemical	nro	nartias
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SECTION 9: Physical and ch	emical properties
• 9.1 Information on basic physical a	and chemical properties
General Information	
· Appearance:	
Form:	Fluid
Colour:	Colourless
· Odour:	Odourless
· Odour threshold:	Not determined.
· pH-value at 20 °C:	11
· Change in condition	
Melting point/freezing point:	0 °C
Initial boiling point and boiling ra	ange: undetermined
· Flash point:	Not applicable
•	Not determined.
· Flammability (solid, gaseous)	Not applicable.
· Decomposition temperature:	Not determined.
· Self igniting:	Product is not selfigniting.
· Explosive properties:	Not determined.
· Explosion limits:	

Not determined.

Not determined.

(Contd. on page 4)



Printing date 20.08.2020 Revision: 20.08.2020

Trade name: Anion Membrane/Cathode Electrolyte

	(Contd.	. of page
· Vapour pressure at 20 °C:	23 hPa	
· Density at 20 °C:	1.002 g/cm³	
· Relative density	Not determined.	
· Vapour density	Not determined.	
· Evaporation rate	Not determined.	
· Solubility in / Miscibility with		
Water:	Fully miscible	
Partition coefficient: n-octanol/water:	Not determined.	
· Viscosity:		
dynamic:	Not determined.	
kinematic:	Not determined.	
· Solvent content:		
Water:	99.6 %	
Solids content:	0.4 %	
· 9.2 Other information	No further relevant information available.	

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 toxicological effects
- · Acute toxicity Based on available data, the classification criteria are not met.
- Primary irritant effect:
- · 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.
- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- · 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.

(Contd. on page 5)





Printing date 20.08.2020 Revision: 20.08.2020

Trade name: Anion Membrane/Cathode Electrolyte

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

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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.
- · Additional ecological information:
- · General notes: Generally not hazardous for water.
- 12.5 Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Dispose of waste in accordance to applicable national, regional, or local regulations.

- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION 14: Transport information		
· 14.1 UN-Number	Not Degreeted	
· ADR, ADN, IMDG, IATA	Not Reguated	
· 14.2 UN proper shipping name		
ADR	Not Reguated	
	Not Reguated	
· ADN, IMDG, IATA	Not Reguated	
· 14.3 Transport hazard class(es)		
· ADR, ADN, IMDG, IATA		
· Class	Not Reguated	
· 14.4 Packing group		
· ADR, IMDG, IATA	Not Reguated	
· 14.5 Environmental hazards:		
· Marine pollutant:	No	
		(Contd. on page

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Trade name: Anion Membrane/Cathode Electrolyte

	(Contd. of page 5)
· 14.6 Special precautions for user	Not applicable.
 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code 	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN "Model Regulation":	Not Reguated

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.

- · National regulations
- · Water hazard 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: Environmental Health and Safety.
- · Contact:

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

· Abbreviations and acronyms:

ADR: Accord européen sur le transport 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)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

* Data compared to the previous version altered.



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

Printing date 20.08.2020 Revision: 20.08.2020

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

- · 1.1 Product identifier
- · Trade name: Rotofor Cell Protein Standard
- · Article number: 1702919
- · 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

- · Application of the substance / the mixture Laboratory chemicals
- · 1.3 Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

Bio-Rad Laboratories Ltd.

The Junction

Station Road

Watford

Hertfordshire

WD17 1ET e:mail contact: techsupport.uk@bio-rad.com

phone: +44 00 800 00 246 723 fax: +44 01 923 47 1340

- e.maii comaci. techsupport.uk@bio-rau.com
- · Information department: techsupport.uk@bio-rad.com
- · 1.4 Emergency telephone number: 020-8328-2000

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 Not Applicable
- · Hazard pictograms Not Applicable
- · Signal word Not Applicable
- · Hazard statements Not Applicable
- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

- · 3.1 Chemical characterisation: Substances
- · CAS No. Description:

7732-18-5 water

- · Identification number(s):
- EC number: 231-791-2
- · 3.2 Chemical characterisation: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.
- · Dangerous components: Not applicable.
- · Additional information For the wording of the listed hazard phrases refer to section 16.



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

Printing date 20.08.2020 Revision: 20.08.2020

Trade name: Rotofor Cell Protein Standard

(Contd. of page 1)

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 Generally the product does not irritate the skin.
- · After eye contact Rinse opened eye for several minutes under running water.
- · After swallowing Rinse mouth with water. Seek medical attention and appropriate follow-up.
- · 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 fighting measures that suit the environment.
- · 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.
- · 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

No dangerous substances are released.

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 protection against explosions and fires: No special measures required.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage
- · Requirements to be met by storerooms and receptacles: According to product specification
- · 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.





Printing date 20.08.2020 Revision: 20.08.2020

Trade name: Rotofor Cell Protein Standard

(Contd. of page 2)

SECTION 8: Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · 8.1 Control parameters
- · Components 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 that were valid during the creation were used as basis.
- · 8.2 Exposure controls
- · Personal protective equipment
- General protective and hygienic measures

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

- · Breathing equipment: Not required.
- · Protection of hands: Protective gloves.
- · Material of gloves Synthetic gloves
- · Penetration time of glove material

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

· Eye protection: Safety glasses

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SECTION 9. Physical and the	ennical properties	
 9.1 Information on basic physical a General Information Appearance: 		
Form: Colour: · Odour:	Fluid Colourless Odourless	
· Odour threshold:	Not determined.	
· pH-value:	Not determined.	
· Change in condition Melting point/freezing point:	0 °C	

Melting point/freezing point: 0 °C

Initial boiling point and boiling range: undetermined

· Flash point: Not applicable Not determined.

Not applicable.

• **Decomposition temperature:** Not determined.

· **Self igniting:** Product is not selfigniting.

· Explosive properties: Not determined.

· Explosion limits:

· Flammability (solid, gaseous)

Lower: Not determined. **Upper:** Not determined.

(Contd. on page 4)



Printing date 20.08.2020 Revision: 20.08.2020

Trade name: Rotofor Cell Protein Standard

	(Contd. of p	page 3
· Vapour pressure at 20 °C:	23 hPa	
· Density at 20 °C:	1 g/cm³	
· Relative density	Not determined.	
· Vapour density	Not determined.	
Evaporation rate	Not determined.	
· Solubility in / Miscibility with		
Water:	Fully miscible	
· Partition coefficient: n-octanol/water:	Not determined.	
· Viscosity:		
dynamic:	Not determined.	
kinematic:	Not determined.	
· Solvent content:		
Water:	99.4 %	
Solids content:	0.6 %	
· 9.2 Other information	No further relevant information available.	

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 toxicological effects
- · Acute toxicity Based on available data, the classification criteria are not met.
- Primary irritant effect:
- · 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.
- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- · 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.

(Contd. on page 5)





Printing date 20.08.2020 Revision: 20.08.2020

Trade name: Rotofor Cell Protein Standard

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

(Contd. of page 4)

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.
- · Additional ecological information:
- · General notes: Generally not hazardous for water.
- 12.5 Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Dispose of waste in accordance to applicable national, regional, or local regulations.

- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION 14: Transport information		
· 14.1 UN-Number	Not Degreeted	
· ADR, ADN, IMDG, IATA	Not Reguated	
· 14.2 UN proper shipping name		
ADR	Not Reguated	
	Not Reguated	
· ADN, IMDG, IATA	Not Reguated	
· 14.3 Transport hazard class(es)		
· ADR, ADN, IMDG, IATA		
· Class	Not Reguated	
· 14.4 Packing group		
· ADR, IMDG, IATA	Not Reguated	
· 14.5 Environmental hazards:		
· Marine pollutant:	No	
		(Contd. on page

ontd. on page 6





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Trade name: Rotofor Cell Protein Standard

	(Contd. of page 5)
· 14.6 Special precautions for user	Not applicable.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	l Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN "Model Regulation":	Not Reguated

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.

- · National regulations
- · Water hazard 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: Environmental Health and Safety.
- · Contact:

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

· Abbreviations and acronyms:

ADR: Accord européen sur le transport 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)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

· * Data compared to the previous version altered.

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Printing date 20.08.2020 Revision: 28.07.2020

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

- · 1.1 Product identifier
- · Trade name: Bio-Lyte® 4/6, 5/7, 5/8, 6/8, 7/9, 3/10, 40%
- · Article number:

1631113, 1631112, 1631143, 1631192, 1631153, 1631172, 1631142, 1631152, 1631193, 1631112EDU, 1631142EDU, 1631152EDU, 1631192EDU, 1631162, 1631163

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

No further relevant information available.

- · Application of the substance / the mixture Laboratory chemicals
- · 1.3 Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

Bio-Rad Laboratories Ltd.

The Junction

Station Road

Watford

Hertfordshire

WD17 1ET

phone: +44 00 800 00 246 723 fax: +44 01 923 47 1340

- e:mail contact: techsupport.uk@bio-rad.com
- Information department: techsupport.uk@bio-rad.com
 1.4 Emergency telephone number: 020-8328-2000

SECTION 2: Hazards identification

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

- · 2.2 Label elements
- · Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

· Hazard pictograms



GHS07

- · Signal word Warning
- · Hazard-determining components of labelling:

Bio-Lyte ampholytes

· Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

· Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

(Contd. on page 2)





Printing date 20.08.2020 Revision: 28.07.2020

Trade name: Bio-Lyte® 4/6, 5/7, 5/8, 6/8, 7/9, 3/10, 40%

(Contd. of page 1)

P280 Wear protective gloves / eye protection / face protection.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy

to do. Continue rinsing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- PBT: Not applicable.vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

- · 3.2 Chemical characterisation: Mixtures
- · **Description**: Mixture of the substances listed below with nonhazardous additions.
- · Dangerous components:

Bio-Lyte ampholytes

Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335

35-50%

· 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 Immediately remove any clothing soiled by the product.
- · After inhalation Supply fresh air; consult doctor in case of complaints.
- · After skin contact

Immediately wash with water and soap and rinse thoroughly.

Immediately rinse with water.

- · After eye contact Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- · After swallowing Rinse mouth with water. Seek medical attention and appropriate follow-up.
- 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 fighting measures that suit the environment.
- 5.2 Special hazards arising from the substance or mixture No further relevant information available.
- · 5.3 Advice for firefighters
- · Protective equipment: Wear self-contained respiratory protective device.

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.

(Contd. on page 3)



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

Printing date 20.08.2020 Revision: 28.07.2020

Trade name: Bio-Lyte® 4/6, 5/7, 5/8, 6/8, 7/9, 3/10, 40%

(Contd. of page 2)

· 6.3 Methods and material for containment and cleaning up:

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

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· 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.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

- · Information about protection against explosions and fires: No special measures required.
- · 7.2 Conditions for safe storage, including any incompatibilities
- Storage
- · Requirements to be met by storerooms and receptacles: According to product specification
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep receptacle tightly sealed.
- · 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · 8.1 Control parameters
- Components 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 that were valid during the creation were used as basis.
- · 8.2 Exposure controls
- · Personal protective equipment
- · General protective and hygienic measures

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Not necessary if room is well-ventilated.

- · Protection of hands: Protective gloves.
- · Material of gloves Synthetic gloves

(Contd. on page 4)





Printing date 20.08.2020 Revision: 28.07.2020

Trade name: Bio-Lyte® 4/6, 5/7, 5/8, 6/8, 7/9, 3/10, 40%

(Contd. of page 3)

· Penetration time of glove material

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

· Eye protection:

Safety glasses

Tightly sealed goggles.

SECTION 9: Physical and chemi	ical properties
 9.1 Information on basic physical and General Information Appearance: 	chemical properties
Form:	Fluid
Colour:	Yellow
· Odour:	Odourless
· Odour threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition Melting point/freezing point: Initial boiling point and boiling range	undetermined e: undetermined
· Flash point:	Not applicable Not determined.
· Flammability (solid, gaseous)	Not applicable.
· Decomposition temperature:	Not determined.
· Self igniting:	Product is not selfigniting.
· Explosive properties:	Not determined.
· Explosion limits: Lower: Upper:	Not determined. Not determined.
· Vapour pressure at 20 °C:	23 hPa
Density:Relative densityVapour densityEvaporation rate	Not determined Not determined. Not determined. Not determined. Not determined.
· Solubility in / Miscibility with Water:	Fully miscible
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity: dynamic: kinematic:	Not determined. Not determined.
	(Contd. on page 5

(Contd. on page 5)



Page 5/7

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

Printing date 20.08.2020 Revision: 28.07.2020

Trade name: Bio-Lyte® 4/6, 5/7, 5/8, 6/8, 7/9, 3/10, 40%

(Contd. of page 4)

· Solvent content:

Water: 60.0 %

Solids content: 40.0 %

• 9.2 Other information No further relevant information available.

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 toxicological effects
- · Acute toxicity Based on available data, the classification criteria are not met.
- · Primary irritant effect:
- · Skin corrosion/irritation

Causes skin irritation.

· Serious eye damage/irritation

Causes serious eye irritation.

- · Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- · 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

May cause respiratory irritation.

- · 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.

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.
- · Additional ecological information:
- · General notes: Generally not hazardous for water.

(Contd. on page 6)





Printing date 20.08.2020 Revision: 28.07.2020

Trade name: Bio-Lyte® 4/6, 5/7, 5/8, 6/8, 7/9, 3/10, 40%

(Contd. of page 5)

- · 12.5 Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Dispose of waste in accordance to applicable national, regional, or local regulations.

- · Uncleaned packagings:
- · **Recommendation:** Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION 14: Transport information		
· 14.1 UN-Number · ADR, ADN, IMDG, IATA	Not Reguated	
 14.2 UN proper shipping name ADR ADN, IMDG, IATA 	Not Reguated Not Reguated Not Reguated	
· 14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA · Class	Not Reguated	
· 14.4 Packing group · ADR, IMDG, IATA	Not Reguated	
 14.5 Environmental hazards: Marine pollutant: 	No	
· 14.6 Special precautions for user	Not applicable.	
 14.7 Transport in bulk according to Annex I and the IBC Code 	Il of Marpol Not applicable.	
· UN "Model Regulation":	Not Reguated	

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.

(Contd. on page 7)





Printing date 20.08.2020 Revision: 28.07.2020

Trade name: Bio-Lyte® 4/6, 5/7, 5/8, 6/8, 7/9, 3/10, 40%

(Contd. of page 6)

- · REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- 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.

- · National regulations
- · Water hazard 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.

· Relevant phrases

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

- · Department issuing SDS: Environmental Health and Safety.
- · Contact:

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

Abbreviations and acronyms:

ADR: Accord européen sur le transport 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)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation - Category 2

STOT SE 3: Specific target organ toxicity (single exposure) - Category 3

· * Data compared to the previous version altered.

3B