

2D HPE[™] Triple Gel NF 10 - 15% Kit Cat. No. 43301

Safety Data Sheets of the following Kit Components:

43881	2D HPE™ Triple Gel NF 10 - 15%
43801	SDS Anode buffer (blue)
43802	SDS Cathode buffer (white)
43371	Cooling Fluid
43805	Equilibration Buffer



Printing date 10.08.2021	Version number 1	Revision: 10.08.202
SECTION 1: Identification	n of the substance/mixture and of the co	ompany/undertaking
· 1.1 Product identifier		
• Trade name: <u>2D HPE™ Tri</u> p	ple Gel NF	SERVA serving scientists
No further relevant informati	of the substance or mixture and uses advise	
 1.3 Details of the supplier of Manufacturer/Supplier: SERVA Electrophoresis Gmb. Carl-Benz-Str. 7 D-69115 Heidelberg Tel.: +49 6221 13840-0 FAX: +49 6221 13840-10 msds.info@serva.de 		Section .
• 1.4 Emergency telephone nu Medical Emergency Informat	tion in case of poisoning: Iainz - Phone: +49 (0) 6131 19240	40-35
SECTION 2: Hazards iden	ntification	
The product is not classified, • 2.2 Label elements	Regulation (EC) No 1272/2008 according to the CLP regulation. lation (EC) No 1272/2008 Void sessment wailable.	
SECTION 3: Composition	/information on ingredients	
 • 3.2 Chemical characterisatio • Description: 2D HPE™ Triple Gel NF - G • Dangerous components: Voia • Additional information 2D HPE™ Triple Gel NF - 	on: Mixtures Tels are polyacrylamide-gels, bound to a non d Gels are articles according to the Articl 2006). We note that the SVHC substance A	le 3, 3. of the REACH Regulatio
SECTION 4: First aid me	asures	
• 4.1 Description of first aid m	e asures cial measures required.	

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Trade name: 2D HPETM Triple Gel NF

- · After skin contact
- Immediately wash with water and soap and rinse thoroughly. Consult doctor if you feel unwell. *After eye contact*

Rinse opened eye for several minutes under running water. Remove present contact lenses, if easy to do, and continue rinsing. Consult ophthalmologist In case of complaints.

- · After swallowing -
- 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
- CO_2 , extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- 5.2 Special hazards arising from the substance or mixture In case of fire, the following can be formed, but not limited to: Carbon monoxide and carbon dioxide Nitrogen oxides (NOx)
- · 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: Do not allow to enter sewers/ surface or ground water.

• 6.3 Methods and material for containment and cleaning up: Dispose contaminated material as waste according to item 13. 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 protection against explosions and fires: No special measures required.
- 7.2 Conditions for safe storage, including any incompatibilities
- · Storage
- \cdot Requirements to be met by storerooms and receptacles: Store at +2 to +8 °C
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Store in dry conditions.
- · 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

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

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Trade name: 2D HPETM Triple Gel NF

(Contd. of page 2) · 8.2 Exposure controls · Personal protective equipment · General protective and hygienic measures Keep away from foodstuffs, beverages and feed. Store protective clothing separately. Immediately remove all soiled and contaminated clothing Avoid contact with the eves and skin. Wash hands before breaks and at the end of work. · Breathing equipment: Suitable respiratory protective device recommended. · Protection of hands: 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. 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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed. For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable: Nitrile rubber, NBR Natural rubber, NR · Eve protection: Safety glasses · Body protection: Protective work clothing. **SECTION 9: Physical and chemical properties** · 9.1 Information on basic physical and chemical properties General Information • Appearance: Form: Gel between two polyester films Colour: Colourless · Odour: **Odourless** · Odour threshold: Not determined. · pH-value: no information available · Change in condition Melting point/freezing point: no information available Initial boiling point and boiling range: no information available · Flash point: no information available · Flammability (solid, gaseous) no information available

no information available

Product is not selfigniting.

Product does not present an explosion hazard.

· Decomposition temperature:
 · Self igniting:

• Explosive properties:

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Trade name: 2D HPETM Triple Gel NF

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Explosion limits:		
Lower:	no information available	
Upper:	no information available	
· Vapour pressure:	no information available	
Density:	no information available	
· Relative density	no information available	
· Vapour density	no information available	
· Evaporation rate	Not applicable.	
· Solubility in / Miscibility with		
Water:	Insoluble	
· Partition coefficient: n-octanol/water:	no information available	
· Viscosity:		
dynamic:	no information available	
kinematic:	no information available	
· 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 further relevant informations available.
- · 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: In case of fire: See Section 5

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.
- · Additional toxicological information:
- · 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.

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.

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· Additional ecological information:

· General notes:

Do not allow product to reach ground water, water course or sewage system. Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

· 12.5 Results of PBT and vPvB assessment

· **PBT:** PBT - assessment not available.

- · **vPvB**: vPvB assessment not available.
- · 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation Disposal must be made according to official regulations.
- · Uncleaned packagings:
- · Recommendation:

Disposal of uncleaned packagings must be made according to official regulations in the same manner as the product.

SECTION 14: Transport information

· 14.1 UN-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 Transport in bulk according to Annex II o Marpol and the IBC Code	o f Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN "Model Regulation":	Void

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SECTION 15: Regulatory information

 \cdot 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.

· National regulations

• Water hazard 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: Product safety department

· Contact: +49 6221 13840-35

· Abbreviations and acronyms: RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ICAO: International Civil Aviation Organisation PBT: persistent, bioaccumulative, toxic substance (REACH) vPvB: very persistent, very bioaccumulative substance (REACH) REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals CLP: Regulation on classification, labelling and packaging of substances and mixtures bw: body weight 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) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative



Buffer Kit for 2D HPE[™] Gels Cat. No. 43312

Safety Data Sheets of the following Kit Components:

43801	SDS Anode buffer (blue)
43802	SDS Cathode buffer (white)
43371	Cooling Fluid
43805	Equilibration Buffer

Printing date 16.10.2020	I	/ersion number 3	Revision: 16	.10.202
SECTION 1: Identij	fication of the subst	ance/mixture and of the company/un	dertaking	
· 1.1 Product identifier			CLDI	7
· Trade name: <u>SDS And</u>	ode buffer (blue)		serving scien	ntists
• Article number: 4380. • 1.2 Relevant identified No further relevant inf • Application of the sub	l uses of the substanc Formation available.	e or mixture and uses advised against Laboratory chemicals	X	
 1.3 Details of the supp Manufacturer/Supplie SERVA Electrophorest Carl-Benz-Str. 7 D-69115 Heidelberg Tel.: +49 6221 13840- FAX: +49 6221 13840 msds.info@serva.de 	er: is GmbH 0	sheet	sinio.	
• Information departme • 1.4 Emergency teleph Medical Emergency In Poison Information Ce (advisory service in Ge	o ne number: formation in case of p nter Mainz - Phone: +	-49 (0) 6131 19240		
SECTION 2: Hazar	ds identification			
• 2.1 Classification of th • Classification accordi The product is not clas	ng to Regulation (EC) No 1272/2008		
 2.2 Label elements Labelling according to Hazard pictograms Void Signal word Void Hazard statements Void 2.3 Other hazards Results of PBT and viewers PBT: PBT - assessments vPvB: vPvB - assessments 	vid id PvB assessment it not available.	1272/2008 Void		
\sim				
SECTION 3: Compo	osition/information	on ingredients		
	erisation: Mixtures			
· 3.2 Chemical characte	of the substances lister	l below with harmless additions.		
	•	l below with harmless additions.		
· 3.2 Chemical character · Description: Mixture of · Dangerous componen	•	STOT RE 2, H373; () Acute Tox	. 4, H302	5-10%

SECTION 4: First aid measures

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- 4.1 Description of first aid measures
- · General information No special measures required.
- · After inhalation Supply fresh air; consult doctor in case of complaints.

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Trade name: SDS Anode buffer (blue)

· After skin contact

Immediately wash with water and soap and rinse thoroughly. Consult doctor if you feel unwell. · After eye contact

Rinse opened eye for several minutes under running water. Remove present contact lenses, if easy to do, and continue rinsing. Consult ophthalmologist In case of complaints.

- · After swallowing Wash out mouth. Seek medical advice if discomfort occurs.
- · 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
- CO_2 , extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- \cdot 5.2 Special hazards arising from the substance or mixture In case of fire, the following can be formed, but not limited to: Carbon monoxide and carbon dioxide Nitrogen oxides (NOx)
- · 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: Do not allow to enter sewers/ surface or ground water.
- · 6.3 Methods and material for containment and cleaning up: Dispose contaminated material as waste according to item 13.

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 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: No special requirements.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep receptacle tightly sealed and store in dry conditions.
- 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.

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Version number 3

Revision: 16.10.2020

Trade name: SDS Anode buffer (blue)

 Components with limit values that require monitoring at the workplace: 107-21-1 Ethanediol (5-10%) WEL Short-term value: 104** mg/m³, 40** ppm Long-term value: 10 52** mg/m³, 20** ppm Sk *particulate **vapour 64-19-7 acetic acid 100 % (1-3%) WEL Short-term value: 50 mg/m³, 20 ppm Long-term value: 25 mg/m³, 10 ppm • Additional information: The lists that were valid during the creation were used as basis. • 8.2 Exposure controls • Personal protective equipment • General protective equipment • General protective and hygienic measures Keep away from foodstuffs, beverages and feed. Store protective clothing separately. Immediately remove all soiled and contaminated clothing Avoid contact with the eyes and skin. • Wash hands before breaks and at the end of work. • Breathing equipment: Short term filter device: Filter P2. • Protection of hands: The glove material has to be impermeable and resistant to the product/ the substance/ the pr Due to missing tests no recommendation to the glove material can be given for the product/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of d degradation • Material of gloves The selection of the suitable gloves does not only depend on the material, but also on j 	
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Selection of the glove material on consideration of the penetration times, rates of d degradation Material of gloves	ine propulation
degradation Material of gloves	iffusion and t
Material of gloves	ijjusion ana i
	further marks
quality and varies from manufacturer to manufacturer.	
The selection of the suitable gloves does not only depend on the material, but also on j	further marks
quality and varies from manufacturer to manufacturer. As the product is a prepare	
substances, the resistance of the glove material can not be calculated in advance and ha	
checked prior to the application.	
Penetration time of glove material	
The exact break trough time has to be found out by the manufacturer of the protective glow	ves and has to
observed.	
For the permanent contact of a maximum of 15 minutes gloves made of the following	ng materials a
suitable:	
Natural rubber, NR	
Eye protection: Safety glasses	
Body protection: Protective work clothing.	
SECTION 9: Physical and chemical properties	
9.1 Information on basic physical and chemical properties	
General Information	

 Form:
 Solution

 Colour:
 Blue

 • Odour:
 Recognisable

 • Odour threshold:
 Not determined.

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GB

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Trade name: SDS Anode buffer (blue)

	(Contd. of pag
· pH-value at 20 •C:	7.9-8.1
· Change in condition	
Melting point/freezing point:	undetermined
Initial boiling point and boiling range	2: undetermined
· Flash point:	no information available
· Flammability (solid, gaseous)	Not applicable.
Decomposition temperature:	Not determined.
· Self igniting:	Product is not selfigniting.
· Explosive properties:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure:	Not determined.
· Density:	Not determined
· 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:	
Organic solvents:	6-13 %
• 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant informations 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 further relevant informations available.
- · 10.4 Conditions to avoid No further relevant information available.
- · 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: In case of fire: See Section 5

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.

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Trade name: SDS Anode buffer (blue)

- · 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.

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:
- Do not allow product to reach ground water, water course or sewage system. Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.
- · 12.5 Results of PBT and vPvB assessment
- · **PBT:** PBT assessment not available.
- · **vPvB**: vPvB assessment not available.
- 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- *Recommendation Disposal must be made according to official regulations.*
- · Uncleaned packagings:
- · Recommendation:

Disposal of uncleaned packagings must be made according to official regulations in the same manner as the product.

• Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG, IATA	Void	
· 14.2 UN proper shipping name · ADR, IMDG, IATA	Void	
· 14.3 Transport hazard class(es)		
· ADR, IMDG, IATA · Class · Label	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 Transport in bulk according to Ann Marpol and the IBC Code	ex II of Not applicable.	

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Trade name: SDS Anode buffer (blue)

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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.
- · National regulations

· Technical instructions (air):

Class	Share in %
II	1-3
NK	5-10

· Water hazard class: Water hazard class 2 (Self-assessment): 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

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H373 May cause damage to organs through prolonged or repeated exposure.

· Department issuing SDS: Product safety department

• Contact: +49 6221 13840-35

· Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

PBT: persistent, bioaccumulative, toxic substance (REACH) vPvB: very persistent, very bioaccumulative substance (REACH)

REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

CLP: Regulation on classification, labelling and packaging of substances and mixtures

bw: body weight

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

ELINECS: European Inventory of Existing Commercial Chemic 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

Flam. Liq. 3: Flammable liquids – Category 3

Acute Tox. 4: Acute toxicity - oral – Category 4

Skin Corr. 1A: Skin corrosion/irritation - Category 1A

STOT RE 2: Specific target organ toxicity (repeated exposure) - Category 2

		Revision: 16.10.202
SECTION 1: Identification of	of the substance/mixture and of the c	ompany/undertaking
· 1.1 Product identifier		CFD1/A
· Trade name: <u>SDS Cathode buff</u>	fer (white)	serving scientists
 Article number: 43802 1.2 Relevant identified uses of t No further relevant information Application of the substance / the substance /		ed against
 1.3 Details of the supplier of the Manufacturer/Supplier: SERVA Electrophoresis GmbH Carl-Benz-Str. 7 D-69115 Heidelberg Tel.: +49 6221 13840-0 FAX: +49 6221 13840-10 msds.info@serva.de 	e safety data sheet	Suno.
• Information department: Produ • 1.4 Emergency telephone numb Medical Emergency Information Poison Information Center Main (advisory service in German or 1	n in case of poisoning: nz - Phone: +49 (0) 6131 19240	340-35
SECTION 2: Hazards identig	fication	
• 2.1 Classification of the substant • Classification according to Reg		
The product is not classified, ac	eoranig to the CEL regulation.	
 2.2 Label elements Labelling according to Regulate Hazard pictograms Void Signal word Void Hazard statements Void 2.3 Other hazards 	ion (EC) No 1272/2008 Void sment ilable.	
 2.2 Label elements Labelling according to Regulate Hazard pictograms Void Signal word Void Hazard statements Void 2.3 Other hazards Results of PBT and vPvB assess PBT: PBT - assessment not avait vPvB; vPvB - assessment not avait 	ion (EC) No 1272/2008 Void sment ilable. ailable.	
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 2.2 Label elements Labelling according to Regulate Hazard pictograms Void Signal word Void Hazard statements Void 2.3 Other hazards Results of PBT and vPvB assess PBT: PBT - assessment not availe vPvB: vPvB - assessment not availe SECTION 3: Composition/in 3.2 Chemical characterisation: Description: Mixture of the subssistic cases: 107-21-1 EINECS: 203-473-3 	ion (EC) No 1272/2008 Void sment ilable. ailable. formation on ingredients Mixtures stances listed below with harmless additi f STOT RE 2, H373,	
 2.2 Label elements Labelling according to Regulate Hazard pictograms Void Signal word Void Hazard statements Void 2.3 Other hazards Results of PBT and vPvB assess PBT: PBT - assessment not avail vPvB: vPvB - assessment not avail SECTION 3: Composition/in 3.2 Chemical characterisation: Description: Mixture of the subs Dangerous components: CAS: 107-21-1 	ion (EC) No 1272/2008 Void sment ilable. ailable. formation on ingredients Mixtures stances listed below with harmless addition with the standard sta	

· After skin contact

*

*

*

Immediately wash with water and soap and rinse thoroughly. Consult doctor if you feel unwell.

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· After eye contact

Rinse opened eye for several minutes under running water. Remove present contact lenses, if easy to do, and continue rinsing. Consult ophthalmologist In case of complaints.

- · After swallowing Wash out mouth. Seek medical advice if discomfort occurs.
- **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
- CO_2 , extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. • 5.2 Special hazards arising from the substance or mixture
- In case of fire, the following can be formed, but not limited to: Carbon monoxide and carbon dioxide Nitrogen oxides (NOx)
- · 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: Do not allow to enter sewers/ surface or ground water.

• 6.3 Methods and material for containment and cleaning up: Dispose contaminated material as waste according to item 13.

- 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 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: No special requirements.
- · Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep receptacle tightly sealed and store in dry conditions.
- · 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:

107-21-1 Ethanediol (5-10%)

WEL Short-term value: 104** mg/m³, 40** ppm Long-term value: 10* 52** mg/m³, 20** ppm

Sk *particulate **vapour

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Trade name: SDS Cathode buffer (white)

8.2 Exposure controls	
Personal protective equipment	
General protective and hygienic mea	sures
Keep away from foodstuffs, beverages	s and feed.
Store protective clothing separately.	
Immediately remove all soiled and co.	ntaminated clothing
Avoid contact with the eyes and skin.	
Wash hands before breaks and at the	end of work.
Breathing equipment:	
Short term filter device:	
Filter P2.	
Protection of hands:	
	eable and resistant to the product/ the substance/ the preparation.
-	ion to the glove material can be given for the product/ the preparation
the chemical mixture.	consideration of the non-struction times, notes of diffusion and
degradation	consideration of the penetration times, rates of diffusion and t
Material of gloves	
	does not only depend on the material, but also on further marks
quality and varies from manufacturer	
	does not only depend on the material, but also on further marks
	urer to manufacturer. As the product is a preparation of seven
	ve material can not be calculated in advance and has therefore to
checked prior to the application.	5
suitable:	aximum of 15 minutes gloves made of the following materials a
suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work clot	thing.
suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work clot SECTION 9: Physical and chemic	cal properties
suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work clot SECTION 9: Physical and chemic 9.1 Information on basic physical an	thing. cal properties
suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work clot SECTION 9: Physical and chemic 9.1 Information on basic physical an General Information	thing. cal properties
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suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work clot SECTION 9: Physical and chemic 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour: Odour: PH-value at 20 °C: Change in condition	thing. cal properties od chemical properties Solution Colourless Odourless Not determined. 7.4-7.6
suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work clot SECTION 9: Physical and chemic 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour: Odour: Odour: PH-value at 20 °C: Change in condition Melting point/freezing point:	thing. cal properties od chemical properties Solution Colourless Odourless Not determined. 7.4-7.6 undetermined
suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work clot SECTION 9: Physical and chemic 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour: Odour: Odour threshold: pH-value at 20 °C: Change in condition Melting point/freezing point: Initial boiling point and boiling ran	thing. cal properties od chemical properties Solution Colourless Odourless Not determined. 7.4-7.6 undetermined nge: undetermined
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suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work clot SECTION 9: Physical and chemic 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour: Odour: Odour: Odour: PH-value at 20 °C: Change in condition Melting point/freezing point: Initial boiling point and boiling ran Flash point: Flammability (solid, gaseous)	thing. cal properties cal properties d chemical properties Solution Colourless Odourless Not determined. 7.4-7.6 undetermined nge: undetermined no information available Not applicable.
suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work clou SECTION 9: Physical and chemic 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour: Odour: Odour: Odour: Odour threshold: pH-value at 20 °C: Change in condition Melting point/freezing point: Initial boiling point and boiling ran Flash point:	thing. cal properties od chemical properties Solution Colourless Odourless Not determined. 7.4-7.6 undetermined nge: undetermined no information available

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Trade name: SDS Cathode buffer (white)

	(Contd. of page
Explosive properties:	Product does not present an explosion hazard.
• Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure:	Not determined.
Density:	Not determined
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:	
Organic solvents:	5-10 %
• 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant informations 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 further relevant informations available.
- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: In case of fire: See Section 5

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.
- $\cdot \textit{STOT-single exposure Based on available data, the classification criteria are not met.}$
- · 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.

SECTION 12: Ecological information

- · 12.1 Toxicity
- Aquatic toxicity: No further relevant information available.
- · 12.2 Persistence and degradability No further relevant information available.

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Trade name: SDS Cathode buffer (white)

- 12.3 Bioaccumulative potential No further relevant information available.
- 12.4 Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes:

Do not allow product to reach ground water, water course or sewage system.

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water. • 12.5 Results of PBT and vPvB assessment

• **PBT:** PBT - assessment not available.

- **vPvB**: vPvB assessment not available.
- 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- *Recommendation Disposal must be made according to official regulations.*
- · Uncleaned packagings:
- · Recommendation:

Disposal of uncleaned packagings must be made according to official regulations in the same manner as the product.

• Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION 14: Transport information

· 14.1 UN-Number · ADR, ADN, IMDG, IATA	Void	
· 14.2 UN proper shipping name · ADR, ADN, IMDG, IATA	Void	
· 14.3 Transport hazard class(es)		
· ADR, IMDG, IATA · Class · Label · ADN/R Class:	Void - 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 Transport in bulk according to Anne Marpol and the IBC Code	ex II of Not applicable.	
· UN "Model Regulation":	Void	

SECTION 15: Regulatory information

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

· Named dangerous substances - ANNEX I None of the ingredients is listed.

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[·] Directive 2012/18/EU

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Trade name: SDS Cathode buffer (white)

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· National regulations

• Technical instructions (air):



• Water hazard 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

H302 Harmful if swallowed. H373 May cause damage to organs through prolonged or repeated exposure.

· Department issuing SDS: Product safety department

• Contact: +49 6221 13840-35 • Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ICAO: International Civil Aviation Organisation

PBT: persistent, bioaccumulative, toxic substance (REACH)

- vPvB: very persistent, very bioaccumulative substance (REACH)
- REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

CLP: Regulation on classification, labelling and packaging of substances and mixtures

bw: body weight 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

Acute Tox. 4: Acute toxicity - oral - Category 4

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

GB -

Printing date 14.10.2020	Version number 2	Revision: 12.10.2020
SECTION 1: Identification of	of the substance/mixture and of the compo	any/undertaking
· 1.1 Product identifier		CEDI/V
• Trade name: <u>Cooling Fluid</u>		SERVA serving scientists
No further relevant information	the substance or mixture and uses advised ag available. the mixture Laboratory chemicals	ainst
 1.3 Details of the supplier of th Manufacturer/Supplier: SERVA Electrophoresis GmbH Carl-Benz-Str. 7 D-69115 Heidelberg Tel.: +49 6221 13840-0 FAX: +49 6221 13840-10 msds.info@serva.de 	ne safety data sheet	GMD
• 1.4 Emergency telephone numl Medical Emergency Information	n in case of poisoning: nz - Phone: +49 (0) 6131 19240	5
SECTION 2: Hazards idention • 2.1 Classification of the substance • Classification according to Reg The product is not classified, acc • 2.2 Label elements • Labelling according to Regulat	nce or mixture gulation (EC) No 1272/2008 ccording to the CLP regulation.	
 Hazard pictograms Void Signal word Void Hazard statements Void 2.3 Other hazards Results of PBT and vPvB asses PBT: PBT - assessment not ava vPvB: vPvB - assessment not ava 	ss ment vilable.	
SECTION 3: Composition/in	nformation on ingredients	
• 3.2 Chemical characterisation: • Description: aqueous solution	Mixtures	
• Dangerous components: The product contains no ingred	dients classified as hazardous substances acco n individual concentrations which shall be indi Regulation).	
SECTION 4: First aid measure	ures	
• 4.1 Description of first aid mea • General information No specia	isures	

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Trade name: Cooling Fluid

· After eye contact

Rinse opened eye for several minutes under running water. Remove present contact lenses, if easy to do, and continue rinsing. Consult ophthalmologist In case of complaints.

- · After swallowing Wash out mouth. Seek medical advice if discomfort occurs.
- **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
- CO_2 , extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. • 5.2 Special hazards arising from the substance or mixture
- In case of fire, the following can be formed, but not limited to: Carbon monoxide and carbon dioxide
- · 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. Ensure adequate ventilation
 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
 6.3 Methods and material for containment and cleaning up:
- Dispose contaminated material as waste according to item 13. 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 protection against explosions and fires: No special measures required.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage
- \cdot Requirements to be met by storerooms and receptacles: Store at +2 to +8 °C
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep receptacle tightly sealed and store in dry conditions.
- 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:

56-81-5 glycerol (5-15%)

WEL Long-term value: 10 mg/m³

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	at were valid during the creation were used as basis.
8.2 Exposure controls	
Personal protective equipment	
General protective and hygienic med	
Keep away from foodstuffs, beverage	es and feed.
Store protective clothing separately.	autominated alothing
Immediately remove all soiled and co Avoid contact with the eyes and skin.	e e e e e e e e e e e e e e e e e e e
Wash hands before breaks and at the	
Breathing equipment:	cha of work.
Short term filter device:	
Filter P2.	
Protection of hands:	
	eable and resistant to the product/ the substance/ the preparation.
	tion to the glove material can be given for the product/ the preparation
the chemical mixture.	
	n consideration of the penetration times, rates of diffusion and th
degradation Material of gloves	
	s does not only depend on the material, but also on further marks o
quality and varies from manufacturer	
	s does not only depend on the material, but also on further marks o
	turer to manufacturer. As the product is a preparation of severa
	ove material can not be calculated in advance and has therefore to b
checked prior to the application.	·
Penetration time of glove material	
The engot have 1 to 1 to 1	
ine exact break trough time has to b	be found out by the manufacturer of the protective gloves and has to b
The exact break trough time has to b observed.	be found out by the manufacturer of the protective gloves and has to b
observed. For the permanent contact of a m	
observed. For the permanent contact of a m suitable:	
observed. For the permanent contact of a m suitable: Natural rubber, NR	
observed. For the permanent contact of a m suitable: Natural rubber, NR Eye protection: Safety glasses	naximum of 15 minutes gloves made of the following materials ar
observed. For the permanent contact of a m suitable: Natural rubber, NR	naximum of 15 minutes gloves made of the following materials ar
observed. For the permanent contact of a m suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work clo	paximum of 15 minutes gloves made of the following materials ar
observed. For the permanent contact of a m suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work clo SECTION 9: Physical and chemi	paximum of 15 minutes gloves made of the following materials are othing. ical properties
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observed. For the permanent contact of a m suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work clo SECTION 9: Physical and chemi 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour:	aximum of 15 minutes gloves made of the following materials are othing. ical properties nd chemical properties Solution Colourless Odourless
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observed. For the permanent contact of a m suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work clo SECTION 9: Physical and chemi 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour: Odour: Odour threshold: pH-value at 20 °C: Change in condition Melting point/freezing point: Initial boiling point and boiling ra Flash point: Flammability (solid, gaseous) Decomposition temperature:	ical properties ind chemical properties Solution Colourless Odourless no information available 6-8.3 no information available no information available Not applicable. no information available
observed. For the permanent contact of a m suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work clo SECTION 9: Physical and chemi 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour threshold: pH-value at 20 °C: Change in condition Melting point/freezing point: Initial boiling point and boiling ra Flash point: Flammability (solid, gaseous)	baximum of 15 minutes gloves made of the following materials are othing. ical properties ind chemical properties Solution Colourless Odourless Odourless no information available 6-8.3 no information available inge: no information available Not applicable.

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· Explosive properties:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	no information available
Upper:	no information available
· Vapour pressure:	no information available
· Density:	no information available
· Relative density	no information available
· Vapour density	no information available
· Evaporation rate	no information available
· Solubility in / Miscibility with	
Water:	Fully miscible
· Partition coefficient: n-octanol/water:	no information available
· Viscosity:	
dynamic:	no information available
kinematic:	no information available
• 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant informations 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 further relevant informations available.
- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: In case of fire: See Section 5

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.

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.

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· Additional ecological information:

· General notes:

Do not allow product to reach ground water, water course or sewage system. Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

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

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation Disposal must be made according to official regulations.
- · Uncleaned packagings:
- · Recommendation:

Disposal of uncleaned packagings must be made according to official regulations in the same manner as the product.

• **Recommended cleansing agent:** Water, if necessary with cleansing agents.

SECTION 14: Transport information	1	
· 14.1 UN-Number · ADR, IMDG, IATA	Void	
· 14.2 UN proper shipping name · ADR, IMDG, IATA	Void	
· 14.3 Transport hazard class(es)		
· ADR, IMDG, IATA · Class · Label	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 Transport in bulk according to Ann Marpol and the IBC Code	nex II of Not applicable.	

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.

· National regulations

• Water hazard 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: Product safety department

· Abbreviations and acronyms: RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ICAO: International Civil Aviation Organisation PBT: persistent, bioaccumulative, toxic substance (REACH) vPvB: very persistent, very bioaccumulative substance (REACH) REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals CLP: Regulation on classification, labelling and packaging of substances and mixtures bw: body weight 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

[·] Contact: +49 6221 13840-35

1.1 Product identifier Trade name: Equilibration Buffer Article number: 43805 1.2 Relevant identified uses of the No further relevant information ava Application of the substance / the 1.3 Details of the supplier of the sa		undertaking SERVA serving scientists
Trade name: Equilibration Buffer Article number: 43805 1.2 Relevant identified uses of the No further relevant information ava Application of the substance / the 1.3 Details of the supplier of the sa	uilable.	SERVA serving scientists
Article number: 43805 1.2 Relevant identified uses of the No further relevant information ava Application of the substance / the 1.3 Details of the supplier of the sa	uilable.	serving scientists
1.2 Relevant identified uses of the No further relevant information avo Application of the substance / the 1.3 Details of the supplier of the so	uilable.	
	nulli e Euser alor y chemicais	t N
Manufacturer/Supplier: SERVA Electrophoresis GmbH Carl-Benz-Str. 7 D-69115 Heidelberg Tel.: +49 6221 13840-0 FAX: +49 6221 13840-10 msds.info@serva.de	ıfety data sheet	3000
Information department: Product S 1.4 Emergency telephone number: Medical Emergency Information in Poison Information Center Mainz - (advisory service in German or Eng	case of poisoning: Phone: +49 (0) 6131 19240	
	0	
The product is not classified, accor 2.2 Label elements Labelling according to Regulation Hazard pictograms Void Signal word Void Hazard statements Void 2.3 Other hazards Results of PBT and vPvB assessme PBT: PBT - assessment not availab vPvB: vPvB - assessment not availab	(EC) No 1272/2008 Void ent ele.	
SECTION 3: Composition/info	rmation on ingredients	
3.2 Chemical characterisation: Mi Description: aqueous solution	xtures	
1 0	ts classified as hazardous substances accordia lividual concentrations which shall be indicate lation).	8 8 9
SECTION 4: First aid measure	<i>s</i>	
After skin contact		ı feel unwell.

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· After eye contact

Rinse opened eye for several minutes under running water. Remove present contact lenses, if easy to do, and continue rinsing. Consult ophthalmologist In case of complaints.

- · After swallowing Wash out mouth. Seek medical advice if discomfort occurs.
- **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
- CO_2 , extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. • 5.2 Special hazards arising from the substance or mixture
- In case of fire, the following can be formed, but not limited to: Carbon monoxide and carbon dioxide
- · 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: Do not allow to enter sewers/ surface or ground water.
- 6.3 Methods and material for containment and cleaning up: Dispose contaminated material as waste according to item 13.
 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 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: No special requirements.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep receptacle tightly sealed and store in dry conditions.
- 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:

56-81-5 glycerol (20-40%)

WEL Long-term value: 10 mg/m³

• Additional information: The lists that were valid during the creation were used as basis.

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8.2 Exposure controls	(Contd. of page 2
Personal protective equipment	
General protective and hygienic me	asures
Keep away from foodstuffs, beverage	es and feed.
Store protective clothing separately.	
Immediately remove all soiled and co	
Avoid contact with the eyes and skin.	
Wash hands before breaks and at the	e end of work.
Breathing equipment:	
Short term filter device:	
Filter P2.	
Protection of hands:	
	eable and resistant to the product/ the substance/ the preparation.
	tion to the glove material can be given for the product/ the preparation
the chemical mixture.	
	n consideration of the penetration times, rates of diffusion and th
degradation	
Material of gloves	s does not only depend on the material but also as further mont-
quality and varies from manufacture	s does not only depend on the material, but also on further marks or to manufacturar
	s does not only depend on the material, but also on further marks of turer to manufacturer. As the product is a preparation of severo
	• • • • •
checked prior to the application.	ove material can not be calculated in advance and has therefore to b
Penetration time of glove material	be found out by the manufactures of the protective along and has to h
observed.	be found out by the manufacturer of the protective gloves and has to b
	aximum of 15 minutes gloves made of the following materials ar
suitable:	aximum of 15 minutes gloves made of the following materials at
Natural rubber, NR	
Natural rubber, NR • Eve protection: Safety glasses	
Eye protection: Safety glasses	othing.
<i>Eye protection:</i> Safety glasses <i>Body protection:</i> Protective work cla	
Eye protection: Safety glasses Body protection: Protective work clo SECTION 9: Physical and chemi	ical properties
<i>Eye protection:</i> Safety glasses <i>Body protection:</i> Protective work cla	ical properties
Eye protection: Safety glasses Body protection: Protective work clo SECTION 9: Physical and chemi 9.1 Information on basic physical and General Information	ical properties
Eye protection: Safety glasses Body protection: Protective work clo SECTION 9: Physical and chemi 9.1 Information on basic physical and General Information Appearance: Form:	ical properties nd chemical properties Solution
Eye protection: Safety glasses Body protection: Protective work cla SECTION 9: Physical and chemi 9.1 Information on basic physical an General Information Appearance: Form: Colour:	ical properties nd chemical properties Solution Violet
Eye protection: Safety glasses Body protection: Protective work clo SECTION 9: Physical and chemi 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour:	ical properties nd chemical properties Solution Violet Odourless
Eye protection: Safety glasses Body protection: Protective work clo SECTION 9: Physical and chemi 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour:	ical properties nd chemical properties Solution Violet
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Eye protection: Safety glasses Body protection: Protective work clo SECTION 9: Physical and chemi 9.1 Information on basic physical an General Information Appearance: Form: Colour: Odour: Odour: Odour threshold: pH-value at 20 °C: Change in condition Melting point/freezing point: Initial boiling point and boiling ra	ical properties nd chemical properties Solution Violet Odourless Not determined. 8.9-9.3 undetermined
Eye protection: Safety glasses Body protection: Protective work closes SECTION 9: Physical and chemic 9.1 Information on basic physical and General Information Appearance: Form: Colour: Odour: Odour: Odour threshold: pH-value at 20 °C: Change in condition Melting point/freezing point: Initial boiling point and boiling rates Flash point:	ical properties nd chemical properties Solution Violet Odourless Not determined. 8.9-9.3 undetermined unge: undetermined
Eye protection: Safety glasses Body protection: Protective work clo SECTION 9: Physical and chemi 9.1 Information on basic physical and General Information Appearance: Form: Colour: Odour: Odour: Odour threshold: pH-value at 20 °C: Change in condition Melting point/freezing point:	ical properties ind chemical properties Solution Violet Odourless Not determined. 8.9-9.3 undetermined inge: undetermined no information available
Eye protection: Safety glasses Body protection: Protective work classes SECTION 9: Physical and chemic 9.1 Information on basic physical and General Information Appearance: Form: Colour: Odour: Odour: Odour threshold: pH-value at 20 °C: Change in condition Melting point/freezing point: Initial boiling point and boiling rate Flash point: Flammability (solid, gaseous)	ical properties ind chemical properties Solution Violet Odourless Not determined. 8.9-9.3 undetermined unge: undetermined no information available Not applicable.
Eye protection: Safety glasses Body protection: Protective work classes SECTION 9: Physical and chemic 9.1 Information on basic physical and General Information Appearance: Form: Colour: Odour: Odour threshold: pH-value at 20 °C: Change in condition Melting point/freezing point: Initial boiling point and boiling rate Flash point: Flammability (solid, gaseous) Decomposition temperature:	ical properties ind chemical properties Solution Violet Odourless Not determined. 8.9-9.3 undetermined inge: undetermined no information available Not applicable. no information available

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· Explosion limits:	
Lower:	no information available
Upper:	no information available
· Vapour pressure:	no information available
· Density:	no information available
· Relative density	Not determined.
· Vapour density	Not determined.
• Evaporation rate	Not determined.
· Solubility in / Miscibility with	
Water:	Fully miscible
· Partition coefficient: n-octanol/water:	no information available
· Viscosity:	
dynamic:	no information available
kinematic:	no information available
• 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant informations 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 further relevant informations available.
- · 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.

• 10.6 Hazardous decomposition products: In case of fire: See Section 5

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.

SECTION 12: Ecological information

- · 12.1 Toxicity
- Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability No further relevant information available.
- \cdot 12.3 Bioaccumulative potential No further relevant information available.
- 12.4 Mobility in soil No further relevant information available.

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· Additional ecological information:

· General notes:

Do not allow product to reach ground water, water course or sewage system. Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

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

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation Disposal must be made according to official regulations.
- · Uncleaned packagings:
- · Recommendation:

Disposal of uncleaned packagings must be made according to official regulations in the same manner as the product.

• Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION 14: Transport information	
· 14.1 UN-Number · ADR, IMDG, IATA	Void
· 14.2 UN proper shipping name · ADR, IMDG, IATA	Void
· 14.3 Transport hazard class(es)	
· ADR, IMDG, IATA · Class · Label	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 Transport in bulk according to Annex Marpol and the IBC Code	x II of Not applicable.

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.

· National regulations

• Water hazard 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: Product safety department

· Abbreviations and acronyms: RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ICAO: International Civil Aviation Organisation PBT: persistent, bioaccumulative, toxic substance (REACH) vPvB: very persistent, very bioaccumulative substance (REACH) REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals CLP: Regulation on classification, labelling and packaging of substances and mixtures bw: body weight 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

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