an 1	Daniaian
er 4	Revision:

		· 4 Revis	sion: 26.09.202
SECTION 1: Ident	ification of the substance/mixture	and of the company/undertak	ing
1.1 Product identifier		SE	'R\/A
Trade name: <u>SERVA</u>	Tris-Tricine/SDS electrophoresis bu	ffer (20x)	ng scientists
No further relevant in	d uses of the substance or mixture a	-	\mathbf{x}
1.3 Details of the sup Manufacturer/Suppli SERVA Electrophores Carl-Benz-Str. 7 D-69115 Heidelberg Tel.: +49 6221 13840 FAX: +49 6221 13840 msds.info@serva.de	sis GmbH -0	cils Gri	Q.
1.4 Emergency teleph Medical Emergency I Poison Information C	ent: Product Safety department Tel.: none number: nformation in case of poisoning: enter Mainz - Phone: +49 (0) 6131 19 German or English language)	Sec. 1	
	0		
SECTION 2: Haza	rds identification		
2.1 Classification of t	the substance or mixture		
The product is not cla 2.2 Label elements Labelling according in Hazard pictograms: V Signal word: Void Hazard statements: V 2.3 Other hazards Results of PBT and v PBT: PBT - assessme vPvB: vPvB - assessme	<i>Toid</i> PvB assessment: nt not available.	ion. pid	
The product is not cla 2.2 Label elements Labelling according in Hazard pictograms: V Signal word: Void Hazard statements: V 2.3 Other hazards Results of PBT and v PBT: PBT - assessme vPvB: vPvB - assessme	assified, according to the CLP regulation to Regulation (EC) No 1272/2008: Vo Void Void PvB assessment: nt not available. tent not available.	ion. pid	
The product is not cla 2.2 Label elements Labelling according in Hazard pictograms: V Signal word: Void Hazard statements: V 2.3 Other hazards Results of PBT and v PBT: PBT - assessme vPvB: vPvB - assessme SECTION 3: Comp 3.2 Mixtures	assified, according to the CLP regulation to Regulation (EC) No 1272/2008: Vo Void Void PvB assessment: nt not available. ment not available. Dosition/information on ingredient buffer solution	ion. pid	
The product is not cla 2.2 Label elements Labelling according in Hazard pictograms: V Signal word: Void Hazard statements: V 2.3 Other hazards Results of PBT and v PBT: PBT - assessme vPvB: vPvB - assessme SECTION 3: Comp 3.2 Mixtures Description: aqueous Dangerous component CAS: 151-21-3 EINECS: 205-788-1	assified, according to the CLP regulation to Regulation (EC) No 1272/2008: Vo Void Void PvB assessment: nt not available. ment not available. Dosition/information on ingredient buffer solution	ion. Did S 4, H302; Acute Tox. 4, H332; Sk	0.5-1.5%
The product is not cla 2.2 Label elements Labelling according in Hazard pictograms: V Signal word: Void Hazard statements: V 2.3 Other hazards Results of PBT and v PBT: PBT - assessme vPvB: vPvB - assessme SECTION 3: Comp 3.2 Mixtures Description: aqueous Dangerous component CAS: 151-21-3 EINECS: 205-788-1	assified, according to the CLP regulation to Regulation (EC) No 1272/2008: Vo Void Void Pv B assessment: Int not available. Int not available. Dosition/information on ingredient buffer solution Its: sodium dodecyl sulphate	ion. pid \$ 4, H302; Acute Tox. 4, H332; Sk uatic Chronic 3, H412	
The product is not cla 2.2 Label elements Labelling according in Hazard pictograms: V Signal word: Void Hazard statements: V 2.3 Other hazards Results of PBT and v PBT: PBT - assessme vPvB: vPvB - assessme SECTION 3: Comp 3.2 Mixtures Description: aqueous Dangerous component CAS: 151-21-3 EINECS: 205-788-1	assified, according to the CLP regulation to Regulation (EC) No 1272/2008: Vo Void Void Pv B assessment: Int not available. Int not available.	ion. pid \$ 4, H302; Acute Tox. 4, H332; Sk uatic Chronic 3, H412	

(Regulation (EC) No. 1907/2006).

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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:
- 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 immediately.

- After swallowing: Wash out mouth. Call a doctor immediately.
- **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:

CO₂, 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: 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. 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: The product is not flammable
- 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.

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and the second se	sonal protection
8.1 Control parameters	
Components with limit values that requ	ire monitoring at the workplace:
	evant quantities of materials with critical values that have to i
monitored at the workplace.	
Additional information: The lists that w	ere valid during the creation were used as basis.
8.2 Exposure controls	
Appropriate engineering controls: No fu	urther data; see item 7.
Individual protection measures, such as	
General protective and hygienic measur	
Keep away from foodstuffs, beverages an	nd feed.
Store protective clothing separately.	
Immediately remove all soiled and conta	uminated clothing
Avoid contact with the eyes and skin.	
Wash hands before breaks and at the end	
Breathing equipment: Suitable respirate	ory protective device recommended.
Hand protection:	
	le and resistant to the product/ the substance/ the preparation.
	to the glove material can be given for the product/ the preparation
the chemical mixture.	
	nsideration of the penetration times, rates of diffusion and t
degradation	
Material of gloves:	and and and an draw draw in had also an fundhan manha
	pes not only depend on the material, but also on further marks
quality and varies from manufacturer to	
	pes not only depend on the material, but also on further marks
	er to manufacturer. As the product is a preparation of sever material can not be calculated in advance and has therefore to
checked prior to the application.	material can not be calculated in davance and has inerejore to
Penetration time of glove material:	
	ound out by the manufacturer of the protective gloves and has to
observed.	
For the permanent contact of a maxi	
For the permanent contact of a maxi suitable:	
For the permanent contact of a maxi suitable: Nitrile rubber, NBR Natural rubber, NR	
For the permanent contact of a maxi suitable: Nitrile rubber, NBR Natural rubber, NR Eye/face protection: Safety glasses	mum of 15 minutes gloves made of the following materials a
For the permanent contact of a maxi suitable: Nitrile rubber, NBR Natural rubber, NR Eye/face protection: Safety glasses	mum of 15 minutes gloves made of the following materials a
For the permanent contact of a maxi suitable: Nitrile rubber, NBR Natural rubber, NR Eye/face protection: Safety glasses	mum of 15 minutes gloves made of the following materials an
For the permanent contact of a maxi suitable: Nitrile rubber, NBR Natural rubber, NR Eye/face protection: Safety glasses Body protection: Protective work clothin SECTION 9: Physical and chemical	mum of 15 minutes gloves made of the following materials and ng.
For the permanent contact of a maxi suitable: Nitrile rubber, NBR Natural rubber, NR Eye/face protection: Safety glasses Body protection: Protective work clothin SECTION 9: Physical and chemical 9.1 Information on basic physical and c General Information:	mum of 15 minutes gloves made of the following materials and ang.
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For the permanent contact of a maxi suitable: Nitrile rubber, NBR Natural rubber, NR Eye/face protection: Safety glasses Body protection: Protective work clothin SECTION 9: Physical and chemical 9.1 Information on basic physical and c General Information: Physical state: Colour: Odour: Odour threshold: Melting point/freezing point:	mum of 15 minutes gloves made of the following materials a ng. properties chemical properties Fluid Colourless Recognisable Not determined. no information available
For the permanent contact of a maxi suitable: Nitrile rubber, NBR Natural rubber, NR Eye/face protection: Safety glasses Body protection: Protective work clothin SECTION 9: Physical and chemical 9.1 Information on basic physical and c General Information: Physical state: Colour: Odour: Odour threshold: Melting point/freezing point: Boiling point or initial boiling point and	mum of 15 minutes gloves made of the following materials a ng. properties chemical properties Fluid Colourless Recognisable Not determined. no information available d boiling
For the permanent contact of a maxi suitable: Nitrile rubber, NBR Natural rubber, NR Eye/face protection: Safety glasses Body protection: Protective work clothin SECTION 9: Physical and chemical 9.1 Information on basic physical and c General Information: Physical state: Colour: Odour: Odour threshold: Melting point/freezing point: Boiling point or initial boiling point and range:	mum of 15 minutes gloves made of the following materials a ng. properties chemical properties Fluid Colourless Recognisable Not determined. no information available d boiling no information available
For the permanent contact of a maxi suitable: Nitrile rubber, NBR Natural rubber, NR Eye/face protection: Safety glasses Body protection: Protective work clothin SECTION 9: Physical and chemical 9.1 Information on basic physical and c General Information: Physical state: Colour: Odour: Odour threshold: Melting point/freezing point: Boiling point or initial boiling point and range: Flammability:	mum of 15 minutes gloves made of the following materials a ng. properties chemical properties Fluid Colourless Recognisable Not determined. no information available d boiling
For the permanent contact of a maxis suitable: Nitrile rubber, NBR Natural rubber, NR Eye/face protection: Safety glasses Body protection: Protective work clothin SECTION 9: Physical and chemical 9.1 Information on basic physical and c General Information: Physical state: Colour: Odour: Odour: Odour threshold: Melting point/freezing point: Boiling point or initial boiling point and range: Flammability: Lower and upper explosion limit:	mum of 15 minutes gloves made of the following materials a ng. properties themical properties Fluid Colourless Recognisable Not determined. no information available d boiling no information available no information available
For the permanent contact of a maxis suitable: Nitrile rubber, NBR Natural rubber, NR Eye/face protection: Safety glasses Body protection: Protective work clothin SECTION 9: Physical and chemical 9.1 Information on basic physical and c General Information: Physical state: Colour: Odour: Odour threshold: Melting point/freezing point: Boiling point or initial boiling point and range: Flammability:	mum of 15 minutes gloves made of the following materials a ng. properties chemical properties Fluid Colourless Recognisable Not determined. no information available d boiling no information available

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· Flash point:	no information available	
· Decomposition temperature:	no information available	
· pH at 20 °C:	8.3-8.7	
· Viscosity:		
· Kinematic viscosity:	no information available	
· Dynamic viscosity:	no information available	
· Solubility:	·	
· Water:	Fully miscible	
· Partition coefficient n-octanol/water (log value):	no information available	
· Vapour pressure:	no information available	
· Density and/or relative density:	-	
· Density:	no information available	
Relative density:	no information available	
• 9.2 Other information		
· Appearance:		
· Form:	Solution	
· Important information on protection of health and	1	
environment, and on safety:		
• Explosive properties:	no 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: No further relevant informations available.

SECTION 11: Toxicological information

- · 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:
- Acute toxicity: Based on available data, the classification criteria are not met.
- Skin corrosion/irritation: Based on available data, the classification criteria are not met.
- Serious eye damage/irritation: Based on available data, the classification criteria are not met.
- Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.
- Germ cell mutagenicity: Based on available data, the classification criteria are not met.
- Carcinogenicity: Based on available data, the classification criteria are not met.
- Reproductive toxicity: Based on available data, the classification criteria are not met.
- STOT-single exposure: Based on available data, the classification criteria are not met.
- STOT-repeated exposure: Based on available data, the classification criteria are not met.
- Aspiration hazard: Based on available data, the classification criteria are not met.
- · 11.2 Information on other hazards:
- · Endocrine disrupting properties:

None of the ingredients is listed.

SECTION 12: Ecological information

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

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- 12.4 Mobility in soil: No further relevant information available.
- 12.5 Results of PBT and vPvB assessment:

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

- $\cdot vPvB: vPvB assessment not available.$
- 12.6 Endocrine disrupting properties: For information on endocrine disrupting properties see section 11.
- · 12.7 Other adverse effects:
- · 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.

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 or ID number · ADR, ADN, IMDG, IATA	Void
 14.2 UN proper shipping name ADR, ADN, IMDG, IATA 	Void
· 14.3 Transport hazard class(es)	
· ADR, ADN, IMDG, IATA · Class:	Void
· 14.4 Packing group · ADR, IMDG, IATA	Void
 14.5 Environmental hazards Marine pollutant: 	No
· 14.6 Special precautions for user	Not applicable.
• 14.7 Maritime transport in bulk according to IMO instruments Not applicable.	
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN ''Model Regulation'':	Void

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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.

· 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.

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· REGULATION (EU) 2019/1148

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

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

· National regulations:

• 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.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

· Department issuing SDS: Product safety department

· Contact: +49 6221 13840-35

• Date of previous version: 17.01.2019

• Version number of previous version: 3

• 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: meristent here environment dans environment (JEACU)

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

Acute Tox. 4: Acute toxicity – Category 4

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

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

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