

## EchoLUTION Plant DNA Kit (10) Cat. No. 58550

# Safety Data Sheets of the following Kit Components:

58550_1	1step purification columns	
58550_2	Plant Lysis Buffer	
58550_3	Clearing Solution	
58550_4	TurboLyse P Protease Mix	
58550_5	RNase	
58550_6	Grinding Suspension	
58550_7	10x TRIS buffer	

SECTION 1. Identificat		
SECTION 1. Inchaighead	tion of the substance/mixture and of the com	pany/undertaking
1.1 Product identifier		CFD\/A
Trade name: <u>1step purific</u>	ation columns	serving scientists
No further relevant inform	es <b>of the substance or mixture and uses advised a</b> ation available. <b>ace / the mixture</b> Laboratory chemicals	ngainst
1.3 Details of the supplier Manufacturer/Supplier: SERVA Electrophoresis Gr Carl-Benz-Str. 7 D-69115 Heidelberg Tel.: +49 6221 13840-0 FAX: +49 6221 13840-10 msds.info@serva.de		GN.
<b>1.4 Emergency telephone</b> Medical Emergency Inform	nation in case of poisoning: · Mainz - Phone: +49 (0) 6131 19240	.35
	X	
SECTION 2: Hazards id	dentification	
The product is not classifie 2.2 Label elements	o Regulation (EC) No 1272/2008 ed, according to the CLP regulation. gulation (EC) No 1272/2008 Void	
2.3 Other hazards Results of PBT and vPvB PBT: PBT - assessment no	ot available.	
2.3 Other hazards Results of PBT and vPvB PBT: PBT - assessment no vPvB: vPvB - assessment re	ot available.	
2.3 Other hazards Results of PBT and vPvB PBT: PBT - assessment no vPvB: vPvB - assessment no SECTION 3: Compositi 3.2 Chemical characterisa	ot available. not available. ion/information on ingredients ntion: Mixtures	
2.3 Other hazards Results of PBT and vPvB PBT: PBT - assessment no vPvB: vPvB - assessment no SECTION 3: Compositi 3.2 Chemical characterisa Description: single-step sp	ot available. not available. <b>con/information on ingredients</b> n <b>tion: Mixtures</b> pin columns	
2.3 Other hazards Results of PBT and vPvB PBT: PBT - assessment no vPvB: vPvB - assessment re	ot available. not available. <b>Con/information on ingredients</b> <b>ation: Mixtures</b> pin columns /oid	

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#### Trade name: 1step purification columns

· 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 the mouth and call a doctor.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed** No further relevant information available.

#### **SECTION 5: Firefighting measures**

- · 5.1 Extinguishing media
- · Suitable extinguishing agents
- CO<sub>2</sub>, 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.
- · 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: 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: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- Additional information: The lists that were valid during the creation were used as basis.

· 8.2 Exposure controls

- · Personal protective equipment
- General protective and hygienic measures Keep away from foodstuffs, beverages and feed.

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### Trade name: 1step purification columns

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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: 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:
Natural rubber, NR
Nitrile rubber, NBR
Fina protoction: Safety alasses

• Eye protection: Safety glasses • Body protection: Protective work clothing.

9.1 Information on basic physical a	nd chemical properties	
General Information		
Appearance: Form:	ania column	
Form: Colour:	spin column Not determined.	
Odour:	not determined.	
Odour: Odour threshold:	Not determined.	
pH-value:	no information available	
•		
Change in condition		
Melting point/freezing point:	undetermined	
Initial boiling point and boiling re	unge: undetermined	
Flash point:	no information available	
Flammability (solid, gaseous)	no information available	
Decomposition temperature:	no information available	
Self igniting:	Product is not selfigniting.	
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	

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#### Trade name: 1step purification columns

	(Contd. of page
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix
· 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:
- No further relevant informations available.

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.
- · 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.

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Trade name: 1step purification columns

· 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, IMDG, IATA	Void	
<ul> <li>14.2 UN proper shipping name</li> <li>ADR, IMDG, IATA</li> </ul>	Void	
· 14.3 Transport hazard class(es)		
· ADR, IMDG, IATA		
· Class	Void	
· Label	-	
· 14.4 Packing group		
· ADR, IMDĞ, IATA	Void	
· 14.5 Environmental hazards:	Not applicable.	
· 14.6 Special precautions for user	Not applicable.	
· 14.7 Transport in bulk according to Annex	x II of	
Marpol and the IBC Code	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.

#### **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:
- 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 concerning me Registration, Evaluation, Admonstration and Restriction of Chemic CLP: Regulation on classification, labelling and packaging of substances and mixtures bw: body weight*

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

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### Trade name: 1step purification columns

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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: verv Persistent and verv Bioaccumulative

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1.1 Product identifier	CEDI 7A
Trade name: <u>Plant Lysis Buffer</u>	serving scientists
Article number:	
58550_2	
58551_2	
58552_2	
1.2 Relevant identified uses of the substance or mixture and uses advised again	inst
No further relevant information available.	
Application of the substance / the mixture Laboratory chemicals	
1.3 Details of the supplier of the safety data sheet	()
Manufacturer/Supplier:	$\bigcirc$
SERVA Electrophoresis GmbH	
Carl-Benz-Str. 7	
D-69115 Heidelberg	·
Tel.: +49 6221 13840-0	
FAX: +49 6221 13840-10	
msds.info@serva.de	
Information department: Product Safety department Tel.: +49 6221 13840-35	
1.4 Emergency telephone number:	
Medical Emergency Information in case of poisoning:	
Poison Information Center Mainz - Phone: +49 (0) 6131 19240	
(advisory service in German or English language)	
SECTION 2: Hazards identification	
2.1 Classification of the substance or mixture	
Classification according to Regulation (EC) No 1272/2008	
The product is not classified, according to the CLP regulation.	
2.2 Label elements	
Labelling according to Regulation (EC) No 1272/2008 Void	
Hazard pictograms Void	
Signal word Void	
Hazard statements Void	
2.3 Other hazards	
Results of PBT and vPvB assessment	
<b>PBT</b> : PBT - assessment not available.	
<i>vPvB</i> : <i>vPvB</i> - assessment not available.	

## SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

- $\cdot \textit{Description: Mixture of the substances listed below with harmless additions.}$
- · Dangerous components: contains < 3 % CAS 151-21-3 Dodecylsulfate-Na-salt

## **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

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

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#### Trade name: Plant Lysis Buffer

· 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. Drink plenty of water and supply fresh air. Consult doctor if you feel unwell.
- $\cdot$  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<sub>2</sub>, 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.
- 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: Store at +2 to +8  $^{\circ}C$
- · 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:
- 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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# Safety data sheet according to 1907/2006/EC, Article 31

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Trade name: Plant Lysis Buffer

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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 eyes 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 preparatio 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 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 quality and varies from manufacturer to manufacturer. As the product is a preparation of sever 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 a observed.
For the permanent contact of a maximum of 15 minutes gloves made of the following materials a suitable:
Natural rubber, NR
Nitrile rubber, NBR
Eye protection: Safety glasses
SECTION 9: Physical and chemical properties
9.1 Information on basic physical and chemical properties
General Information

· General Information

· General Information	
· Appearance:	
Form:	Solution
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)	Not applicable.
· Decomposition temperature:	no information available
· Self igniting:	Product is not selfigniting.
· Explosive properties:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	no information available
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Trade name: Plant Lysis Buffer

	(Contd. of page 3)
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 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.

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.
- · Additional ecological information:

· General notes:

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

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Revision: 22.10.2019

Trade name: Plant Lysis Buffer

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.

14.1 UN-Number ADR, IMDG, IATA	Void
ADK, IMDO, IATA	Void
14.2 UN proper shipping name	17 • 1
ADR, IMDG, IATA	Void
14.3 Transport hazard class(es)	
ADR, IMDG, IATA	
Class	Void
Label	-
14.4 Packing group	
ADR, IMDG, IATA	Void
14.5 Environmental hazards:	Not applicable.
14.6 Special precautions for user	Not applicable.
14.7 Transport in bulk according to Annex II of	
Marpol and the IBC Code	Not applicable.

#### **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.

#### **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

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### Trade name: Plant Lysis Buffer

	(Contd. of page )
Abbreviations and acronyms:	
PBT: persistent, bioaccumulative, toxic substance (REACH)	
vPvB: very persistent, very bioaccumulative substance (REACH)	
REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of C.	hemicals
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 A	Agreement concerning the Internation
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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	Identification of the substance/mixture and of the compo	iny/undertaking
1.1 Product ide	entifier	CFP\/A
Trade name: <u>C</u>	Clearing solution	serving scientists
Article number		
58550_3		
58551_3		
58552_3		
1.2 Relevant id	lentified uses of the substance or mixture and uses advised ag	ainst
	vant information available.	
Application of	the substance / the mixture Laboratory chemicals	
1.3 Details of t	he supplier of the safety data sheet	CA
Manufacturer/		$\bigcirc$
	phoresis GmbH	
Carl-Benz-Str.	-	3
D-69115 Heide	lberg	
Tel.: +49 6221		
FAX: +49 6221	1 13840-10	
msds.info@serv	va.de	
Information de	partment: Product Safety department Tel.: +49 6221 13840-3:	5
	telephone number:	
	ency Information in case of poisoning:	
	tion Center Mainz - Phone: +49 (0) 6131 19240	
	ce in German or English language)	
SECTION 2:	Hazards identification	
2.1 Classificati	on of the substance or mixture	
2.1 Classificati		
2.1 Classificati Classification o	on of the substance or mixture according to Regulation (EC) No 1272/2008	
2.1 Classificati	on of the substance or mixture according to Regulation (EC) No 1272/2008	
2.1 Classificati Classification of GHS	on of the substance or mixture according to Regulation (EC) No 1272/2008 07	
2.1 Classificati Classification of GHS Skin Irrit. 2 H.	ion of the substance or mixture according to Regulation (EC) No 1272/2008 107 315 Causes skin irritation.	
2.1 Classificati Classification of GHS Skin Irrit. 2 H. Eye Irrit. 2 H.	ion of the substance or mixture according to Regulation (EC) No 1272/2008 07 315 Causes skin irritation. 319 Causes serious eye irritation.	
2.1 Classificati Classification of GHS Skin Irrit. 2 H. Eye Irrit. 2 H.	ion of the substance or mixture according to Regulation (EC) No 1272/2008 107 315 Causes skin irritation.	
2.1 Classificati Classification of GHS Skin Irrit. 2 H. Eye Irrit. 2 H. STOT SE 3 H.	on of the substance or mixture according to Regulation (EC) No 1272/2008 07 315 Causes skin irritation. 319 Causes serious eye irritation. 335 May cause respiratory irritation.	
2.1 Classificati Classification of GHS Skin Irrit. 2 H. Eye Irrit. 2 H. STOT SE 3 H. 2.2 Label elem	on of the substance or mixture according to Regulation (EC) No 1272/2008 07 315 Causes skin irritation. 319 Causes serious eye irritation. 335 May cause respiratory irritation.	
2.1 Classificati Classification of GHS Skin Irrit. 2 H. Eye Irrit. 2 H. STOT SE 3 H. 2.2 Label elem Labelling acco The product is	<ul> <li><i>ion of the substance or mixture</i></li> <li><i>according to Regulation (EC) No 1272/2008</i></li> <li><i>ion</i></li> <li><i>ion</i>&lt;</li></ul>	
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2.1 Classificati Classification of GHS Skin Irrit. 2 H. Eye Irrit. 2 H. STOT SE 3 H. 2.2 Label elem Labelling acco The product is Hazard pictogr Signal word W. Hazard statemon H315 Causes st H319 Causes st	<ul> <li>Fon of the substance or mixture according to Regulation (EC) No 1272/2008</li> <li>707</li> <li>315 Causes skin irritation.</li> <li>319 Causes serious eye irritation.</li> <li>335 May cause respiratory irritation.</li> <li>835 May cause respiratory irritation.</li> <li>845 ents</li> <li>845 cause cause can be caused according to the CLP regulation.</li> <li>845 cause cause cause caused according to the CLP regulation.</li> <li>845 cause cause caused according to the CLP regulation.</li> <li>845 cause cause caused according to the CLP regulation.</li> <li>845 cause caused caused according to the CLP regulation.</li> <li>845 caused cause</li></ul>	
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2.1 Classificati Classification of GHS Skin Irrit. 2 H. Eye Irrit. 2 H. STOT SE 3 H. 2.2 Label elem Labelling acco The product is Hazard pictogr Signal word W. Hazard statema H315 Causes st H319 Causes st H319 Causes st H315 May cause Precautionary P280 P302+P352	<ul> <li><i>ion of the substance or mixture</i></li> <li><i>according to Regulation (EC) No 1272/2008</i></li> <li><i>ion</i></li> <li><i>ion</i>&lt;</li></ul>	face protection.
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2.1 Classificati Classification of GHS Skin Irrit. 2 H. Eye Irrit. 2 H. STOT SE 3 H. 2.2 Label elem Labelling acco The product is Hazard pictogr Signal word W. Hazard stateme H315 Causes si H319 Cause si H319	<ul> <li><i>ion of the substance or mixture</i></li> <li><i>iaccording to Regulation (EC) No 1272/2008</i></li> <li><i>ion of the substance or mixture</i></li> <li><i>ion constant of the substance or mixture</i></li> <li><i>ion constant of the substance or mixture</i></li> <li><i>ion of the substance or mixture</i></li> <li><i>ion constant of the substance or mixture</i></li> <li><i>ion of the substance</i></li> <li><i>ion</i></li></ul>	rtable for breathing.
2.1 Classificati Classification of GHS Skin Irrit. 2 H. Eye Irrit. 2 H. STOT SE 3 H. 2.2 Label elem Labelling acco The product is Hazard pictogr Signal word W. Hazard stateme H315 Causes si H319 Causes si H319 Causes si H319 Causes si H319 Causes si H315 May caus Precautionary P280 P302+P352 P321 P304+P340	<ul> <li><i>ion of the substance or mixture</i></li> <li><i>according to Regulation (EC) No 1272/2008</i></li> <li><i>ion of the substance or mixture</i></li> <li><i>ion constant of the substance or mixture</i></li> <li><i>ion constant of the substance or mixture</i></li> <li><i>ion of the substance or mixture</i></li> <li><i>ion constant of the substance or mixture</i></li> <li><i>ion constant of the substance or mixture</i></li> <li><i>ion constant of the substance or mixture</i></li> <li><i>ion of the substance or mixture</i></li> <li><i>ion constant of the substance or mixture</i></li> <li><i>ion constant of the substance or mixture</i></li> <li><i>ion constant of the substance or mixture</i></li> <li><i>ion of the substance or mixture</i></li> <li><i>ion constant of the substance or mixture</i></li> <li><i>ion of the substance</i></li> <li><i>ion of the subst</i></li></ul>	rtable for breathing.
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· Lahelling of na	ckages where the contents do not exceed 125 ml (Contd. of page 1
· Hazard pictogr	8
Signal word Wo	
Hazard stateme	nts Void
· Precautionary s	statements
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P3	338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, i present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
2.3 Other hazar	ds
· Results of PBT	and vPvB assessment
PBT: PBT - ass	essment not available.

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

#### **SECTION 3: Composition/information on ingredients**

· 3.2 Chemical characterisation: Mixtures

- Description: Mixture of the substances listed below with harmless additions.
- · Dangerous components:

contains < 35% EG-Nr. 233-971-6 SrCl<sub>2</sub>. This substance is classified according to Regulation (EC) No. 1272/2008 (CLP) as follows: Skin Irrit. 2 H315; Eye Irrit. 2 H319; STOT SE 3 H335. • Additional information For the wording of the listed hazard phrases refer to section 16.

#### **SECTION 4: First aid measures**

- · 4.1 Description of first aid measures
- 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 In case of complaints.

- · After swallowing
- Wash out mouth. Drink plenty of water and supply fresh air. Seek medical advice if discomfort occurs.
- $\cdot$  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<sub>2</sub>, 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.
 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.

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· 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 precautions are necessary if used correctly.
- 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:
- The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- Additional information: The lists that were valid during the creation were used as basis.
- · 8.2 Exposure controls
- · Personal protective equipment
- General protective and hygienic measures Keep away from foodstuffs, beverages and feed.
  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: Not required.
- · 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:

Natural rubber, NR

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- Nitrile rubber, NBR
- Eye protection: Safety glasses
- **Body protection:** Protective work clothing.

#### **SECTION 9: Physical and chemical properties**

• 9.1 Information on basic physical and c	chemical properties
· General Information	
· Appearance:	
Form:	Solution
Colour:	Not determined.
· 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	e: no information available
· Flash point:	no information available
· Flammability (solid, gaseous)	Not applicable.
· Decomposition temperature:	no information available
· Self igniting:	Product is not selfigniting.
· 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	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
Water:	no information available
· Partition coefficient: n-octanol/water:	no information available
· Viscosity:	
dynamic:	no information available
kinematic:	no information available
$\cdot$ 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:

No further relevant informations available.

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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
- Causes skin irritation.
- Serious eye damage/irritation Causes serious eye irritation.
- · Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity Based on available data, the classification criteria are not met.
- · Reproductive toxicity Based on available data, the classification criteria are not met.
- **STOT-single exposure** May cause respiratory irritation.
- STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard Based on available data, the classification criteria are not met.

#### **SECTION 12: Ecological information**

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

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 Must not be disposed of together with household garbage. Do not allow product to reach sewage system.*
- · 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, IMDG, IATA

Void

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	(Contd. of	f page 5
· 14.2 UN proper shipping name · ADR, IMDG, IATA	Void	
· 14.3 Transport hazard class(es)		
· ADR, IMDG, IATA		
· Class	Void	
· Label	-	
· 14.4 Packing group		
· ADR, IMDG, IATA	Void	
· 14.5 Environmental hazards:	Not applicable.	
· 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.

#### **SECTION 16: Other information**

*The following Hazard phrases are relevant for this product according to Regulation (EC) No. 1272/2008 (CLP):* 

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

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:

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* 

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

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

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

• \* Data compared to the previous version altered.

<b>SECTION 1: Identification</b>	of the substance/mixture and of the co	mpany/undertaking
1.1 Product identifier		SFR\/A
Trade name: <u>TurboLyse P Pro</u>	tease Mix	serving scientists
Article number:		
58550_4		
58551_4		
58552_4	.,	
	the substance or mixture and uses advised	against
No further relevant information	the mixture Laboratory chemicals	
1.3 Details of the supplier of the	he safety data sheet	
Manufacturer/Supplier:		
SERVA Electrophoresis GmbH	<u> </u>	Co
Carl-Benz-Str. 7		~
D-69115 Heidelberg Tel.: +49 6221 13840-0	Chi Chi	
FAX: +49 6221 13840-0	0.2	Ŧ
msds.info@serva.de	O2	
v		0.25
	uct Safety department Tel.: +49 6221 1384	0-35
1.4 Emergency telephone num		
Medical Emergency Information Poison Information Center Mai	n in case of poisoning: inz - Phone: +49 (0) 6131 19240	
(advisory service in German or		
	Laguan unguage)	
	X	
SECTION 2: Hazards ident	ification	
2.1 Classification of the substa	ince or mixture	
2.1 Classification of the substa Classification according to Reg GHS08		
Classification according to Reg GHS08	gulation (EC) No 1272/2008	
Classification according to Reg GHS08		difficulties if inhaled.
Classification according to Rey GHS08 Resp. Sens. 1 H334 May cause	gulation (EC) No 1272/2008	difficulties if inhaled.
Classification according to Reg GHS08	gulation (EC) No 1272/2008	difficulties if inhaled.
Classification according to Rey GHS08 Resp. Sens. 1 H334 May cause	gulation (EC) No 1272/2008	difficulties if inhaled.
Classification according to Rey GHS08 Resp. Sens. 1 H334 May cause GHS07	gulation (EC) No 1272/2008 e allergy or asthma symptoms or breathing	difficulties if inhaled.
Classification according to Reg GHS08 Resp. Sens. 1 H334 May cause GHS07 Skin Irrit. 2 H315 Causes sk	gulation (EC) No 1272/2008 e allergy or asthma symptoms or breathing in irritation.	difficulties if inhaled.
Classification according to Reg GHS08 Resp. Sens. 1 H334 May cause GHS07 Skin Irrit. 2 H315 Causes ski Eye Irrit. 2 H319 Causes se	gulation (EC) No 1272/2008 e allergy or asthma symptoms or breathing in irritation. rious eye irritation.	difficulties if inhaled.
Classification according to Reg GHS08 Resp. Sens. 1 H334 May cause GHS07 Skin Irrit. 2 H315 Causes sk Eye Irrit. 2 H319 Causes se Skin Sens. 1 H317 May cause	gulation (EC) No 1272/2008 e allergy or asthma symptoms or breathing in irritation. rious eye irritation. e an allergic skin reaction.	difficulties if inhaled.
Classification according to Reg GHS08 Resp. Sens. 1 H334 May cause GHS07 Skin Irrit. 2 H315 Causes sk Eye Irrit. 2 H319 Causes se Skin Sens. 1 H317 May cause	gulation (EC) No 1272/2008 e allergy or asthma symptoms or breathing in irritation. rious eye irritation.	difficulties if inhaled.
Classification according to Reg GHS08 Resp. Sens. 1 H334 May cause GHS07 Skin Irrit. 2 H315 Causes sk Eye Irrit. 2 H319 Causes se Skin Sens. 1 H317 May cause STOT SE 3 H335 May cause 2.2 Label elements	gulation (EC) No 1272/2008 e allergy or asthma symptoms or breathing in irritation. rious eye irritation. e an allergic skin reaction. e respiratory irritation.	difficulties if inhaled.
Classification according to Reg GHS08 Resp. Sens. 1 H334 May cause GHS07 Skin Irrit. 2 H315 Causes sk Eye Irrit. 2 H319 Causes se Skin Sens. 1 H317 May cause STOT SE 3 H335 May cause 2.2 Label elements Labelling according to Regula	gulation (EC) No 1272/2008 e allergy or asthma symptoms or breathing in irritation. rious eye irritation. e an allergic skin reaction. e respiratory irritation. tion (EC) No 1272/2008	difficulties if inhaled.
Classification according to Reg GHS08 Resp. Sens. 1 H334 May cause GHS07 Skin Irrit. 2 H315 Causes ski Eye Irrit. 2 H319 Causes sel Skin Sens. 1 H317 May cause STOT SE 3 H335 May cause 2.2 Label elements Labelling according to Regular The product is classified and lab	gulation (EC) No 1272/2008 e allergy or asthma symptoms or breathing in irritation. rious eye irritation. e an allergic skin reaction. e respiratory irritation. tion (EC) No 1272/2008 ubelled according to the CLP regulation.	difficulties if inhaled.
Classification according to Reg GHS08 Resp. Sens. 1 H334 May cause GHS07 Skin Irrit. 2 H315 Causes ski Eye Irrit. 2 H319 Causes sel Skin Sens. 1 H317 May cause STOT SE 3 H335 May cause STOT SE 3 H335 May cause 2.2 Label elements Labelling according to Regula The product is classified and la Hazard pictograms GHS07, GH	gulation (EC) No 1272/2008 e allergy or asthma symptoms or breathing in irritation. rious eye irritation. e an allergic skin reaction. e respiratory irritation. tion (EC) No 1272/2008 ubelled according to the CLP regulation.	difficulties if inhaled.
Classification according to Reg GHS08 Resp. Sens. 1 H334 May cause GHS07 Skin Irrit. 2 H315 Causes ski Eye Irrit. 2 H319 Causes sel Skin Sens. 1 H317 May cause Stor SE 3 H335 May cause STOT SE 3 H335 May cause 2.2 Label elements Labelling according to Regula The product is classified and la Hazard pictograms GHS07, GH Signal word Danger	gulation (EC) No 1272/2008 e allergy or asthma symptoms or breathing in irritation. rious eye irritation. e an allergic skin reaction. e respiratory irritation. tion (EC) No 1272/2008 ubelled according to the CLP regulation.	difficulties if inhaled.
Classification according to Reg GHS08 Resp. Sens. 1 H334 May cause GHS07 Skin Irrit. 2 H315 Causes ski Eye Irrit. 2 H319 Causes set Skin Sens. 1 H317 May cause STOT SE 3 H335 May cause STOT SE 3 H335 May cause C.2 Label elements Labelling according to Regular The product is classified and la Hazard pictograms GHS07, GH Signal word Danger Hazard statements	gulation (EC) No 1272/2008 e allergy or asthma symptoms or breathing in irritation. rious eye irritation. e an allergic skin reaction. e respiratory irritation. tion (EC) No 1272/2008 ubelled according to the CLP regulation.	difficulties if inhaled.
Classification according to Reg GHS08 Resp. Sens. 1 H334 May cause GHS07 Skin Irrit. 2 H315 Causes ski Eye Irrit. 2 H319 Causes set Skin Sens. 1 H317 May cause STOT SE 3 H335 May cause STOT SE 3 H335 May cause 2.2 Label elements Labelling according to Regula The product is classified and la Hazard pictograms GHS07, GH Signal word Danger Hazard statements H315 Causes skin irritation.	gulation (EC) No 1272/2008 e allergy or asthma symptoms or breathing in irritation. rious eye irritation. e an allergic skin reaction. e respiratory irritation. tion (EC) No 1272/2008 ibelled according to the CLP regulation. HS08	difficulties if inhaled.
Classification according to Reg GHS08 Resp. Sens. 1 H334 May cause GHS07 Skin Irrit. 2 H315 Causes ski Eye Irrit. 2 H319 Causes set Skin Sens. 1 H317 May cause STOT SE 3 H335 May cause STOT SE 3 H335 May cause 2.2 Label elements Labelling according to Regula The product is classified and la Hazard pictograms GHS07, GH Signal word Danger Hazard statements H315 Causes skin irritation. H319 Causes serious eye irritation.	gulation (EC) No 1272/2008 e allergy or asthma symptoms or breathing in irritation. rious eye irritation. e an allergic skin reaction. e respiratory irritation. tion (EC) No 1272/2008 ibelled according to the CLP regulation. HS08	
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Classification according to Reg GHS08 Resp. Sens. 1 H334 May cause GHS07 Skin Irrit. 2 H315 Causes ski Eye Irrit. 2 H319 Causes set Skin Sens. 1 H317 May cause STOT SE 3 H335 May cause STOT SE 3 H335 May cause 2.2 Label elements Labelling according to Regula The product is classified and la Hazard pictograms GHS07, GH Signal word Danger Hazard statements H315 Causes skin irritation. H319 Causes serious eye irritation.	gulation (EC) No 1272/2008 e allergy or asthma symptoms or breathing in irritation. rious eye irritation. e an allergic skin reaction. e respiratory irritation. tion (EC) No 1272/2008 abelled according to the CLP regulation. HS08 tion. hma symptoms or breathing difficulties if in in reaction.	

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· Precaution	ary statements
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351	+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if
	present and easy to do. Continue rinsing.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P362+P364	Take off contaminated clothing and wash it before reuse.
· Labelling o	f packages where the contents do not exceed 125 ml
· Hazard pict	tograms GHS07, GHS08
<ul> <li>Signal word</li> </ul>	<b>1</b> Danger
• Hazard stat	ements
H334 May 6	cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May 6	cause an allergic skin reaction.
· Precaution	ary statements
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	C IF ON SKIN: Wash with plenty of soap and water.
P304+P340	) IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P501	Dispose of contents/container in accordance with local/regional/national/international
	regulations.
• 2.3 Other h	azards
· Results of I	PBT and vPvB assessment
• <b>PBT:</b> PBT -	assessment not available.
• <b>vPvB:</b> vPvE	3 - assessment not available.

#### **SECTION 3: Composition/information on ingredients**

· 3.2 Chemical characterisation: Mixtures

• Description: Mixture of the substances listed below with harmless additions.

· Dangerous components:

contains > 50% CAS 9014-01-1 Subtilisin

this product is classified according to Regulation (EC) No. 1272/2008 (CLP) as follows: Resp. Sens. 1 H334; Skin Sens. 1 H317; Skin Irrit. 2 H315; Eye Irrit. 2 H319; STOT SE 3 H335.

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

#### **SECTION 4: First aid measures**

- · 4.1 Description of first aid measures
- · 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 In case of complaints.

· After swallowing

Wash out mouth. Drink plenty of water and supply fresh air. Consult doctor if you feel unwell.

- · 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.

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#### **SECTION 5: Firefighting measures**

- · 5.1 Extinguishing media
- Suitable extinguishing agents
- CO<sub>2</sub>, 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 precautions are necessary if used correctly.

- · 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: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- Additional information: The lists that were valid during the creation were used as basis.
- · 8.2 Exposure controls
- · Personal protective equipment
- General protective and hygienic measures Keep away from foodstuffs, beverages and feed. 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.

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#### · Protection of hands:

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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:

Natural rubber, NR

Nitrile rubber, NBR

• Eye protection: Safety glasses

· Body protection: Protective work clothing.

#### **SECTION 9: Physical and chemical properties**

General Information	
Appearance:	
Form:	Fluid
Colour:	yellowish
Odour:	Nearly odourless Not determined.
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
Decomposition temperature:	no information available
Self igniting:	Product is not selfigniting.
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	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.

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		(Contd. of page 4
· Solubility in / Miscibility with		
Water at 25 °C:	100 g/l	
· 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:
- No further relevant informations available. 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 Causes skin irritation.
- Serious eye damage/irritation Causes serious eye irritation.
- · Respiratory or skin sensitisation
- May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- · Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- · STOT-single exposure
- May cause respiratory irritation.
- · STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard Based on available data, the classification criteria are not met.

#### **SECTION 12: Ecological information**

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

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.

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#### · 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

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · 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	n	
· 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	Void	
· Label	-	
· 14.4 Packing group		
· ADR, IMDĞ, IATA	Void	
· 14.5 Environmental hazards:	Not applicable.	
· 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.

#### **SECTION 16: Other information**

*The following Hazard phrases are relevant for this product according to Regulation (EC) No. 1272/2008 (CLP):* 

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H317 May cause an allergic skin reaction.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

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(Contd. of page 6) H335 May cause respiratory irritation. 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: 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 Skin Irrit. 2: Skin corrosion/irritation - Category 2 Eye Irrit. 2: Serious eye damage/eye irritation - Category 2 Resp. Sens. 1: Respiratory sensitisation - Category 1 Skin Sens. 1: Skin sensitisation – Category 1 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  $\cdot$  \* Data compared to the previous version altered. GR

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1.1 Product identifier	CEDI/A
Trade name: <u>RNase</u>	serving scientists
Article number:	
58550_5	
58551_5	
58552_5	
1.2 Relevant identified uses of the substance or mixture and uses advised a	igainst and a second
No further relevant information available.	
Application of the substance / the mixture Laboratory chemicals	
1.2 Details of the sumplice of the safety data sheet	C
1.3 Details of the supplier of the safety data sheet	
Manufacturer/Supplier:	
SERVA Electrophoresis GmbH	the second s
Carl-Benz-Str. 7	<b>D</b>
D-69115 Heidelberg	
Tel.: +49 6221 13840-0	
FAX: +49 6221 13840-10	
msds.info@serva.de	
Medical Emergency Information in case of poisoning: Poison Information Center Mainz - Phone: +49 (0) 6131 19240 (advisory service in German or English language)	
XC	
SECTION 2: Hazards identification	
2.1 Classification of the substance or mixture	
Classification according to Regulation (EC) No 1272/2008	
The product is not classified, according to the CLP regulation.	
2.2 Label elements	
Labelling according to Regulation (EC) No 1272/2008 Void	
Hazard pictograms Void	
Signal word Void	
Hazard statements Void	
2.3 Other hazards	
Results of PBT and vPvB assessment	
<b>PBT:</b> PBT - assessment not available.	
<b>vPvB:</b> vPvB - assessment not available.	

#### · 3.2 Chemical characterisation: Mixtures

· Description:

the product contains no substances which shall be indicated according to Regulation (EC) No. 1907/2006.

· Dangerous components: Void

## **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.

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#### Trade name: RNase

· 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. Drink plenty of water and supply fresh air. Consult doctor if you feel unwell.

• **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 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: 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:

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

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	(Contd. of page 2 at were valid during the creation were used as basis.
8.2 Exposure controls	
Personal protective equipment	
General protective and hygienic med	asures
Keep away from foodstuffs, beverage	es and feed.
Store protective clothing separately.	
Immediately remove all soiled and co	0
Avoid contact with the eyes and skin.	
Wash hands before breaks and at the	
<b>Protection of hands:</b>	iratory protective device recommended.
	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.	
Selection of the glove material on	n consideration of the penetration times, rates of diffusion and the
degradation	
Material of gloves	
	s does not only depend on the material, but also on further marks o
quality and varies from manufacture	0
	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
substances, the resistance of the glo checked prior to the application.	ove material can not be calculated in advance and has therefore to be
Penetration time of glove material	
	be found out by the manufacturer of the protective gloves and has to be
observed.	se journe our by the manufacturer of the protective gioves and has to be
	aximum of 15 minutes gloves made of the following materials are
suitable:	
Natural rubber, NR	
Nitrile rubber, NBR	
Eye protection: Safety glasses	
<b>Body protection:</b> Protective work clo	nning.
Body protection: Protective work clo	
Body protection: Protective work clo SECTION 9: Physical and chemi	ical properties
<b>Body protection:</b> Protective work clo SECTION 9: Physical and chemi 9.1 Information on basic physical and	ical properties
<b>Body protection:</b> Protective work clo SECTION 9: Physical and chemi 9.1 Information on basic physical an General Information	ical properties
<b>Body protection:</b> Protective work clo SECTION 9: Physical and chemi 9.1 Information on basic physical and	ical properties
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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: pH-value: Change in condition	ical properties and chemical properties Fluid Colourless not determined Not determined. no information available
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: Change in condition Melting point/freezing point:	ical properties nd chemical properties Fluid Colourless not determined Not determined. no information available no information available
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: pH-value: Change in condition	ical properties nd chemical properties Fluid Colourless not determined Not determined. no information available no information available
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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: Change in condition Melting point/freezing point: Initial boiling point and boiling ra Flash point: Flammability (solid, gaseous)	ical properties ind chemical properties Fluid Colourless not determined Not determined. no information available no information available inge: no information available Not applicable.
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: Change in condition Melting point/freezing point: Initial boiling point and boiling rat Flash point: Flammability (solid, gaseous) Decomposition temperature:	ical properties nd chemical properties Fluid Colourless not determined Not determined. no information available no information available no information available no information available 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:	Not miscible or difficult to mix
· 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:
- No further relevant informations available. 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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Printing date 25.11.2019

Version number 1

Revision: 22.10.2019

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#### Trade name: RNase

- · 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, IMDG, IATA	Void	
· 14.2 UN proper shipping name		
· ADR, IMDG, IATA	Void	
· 14.3 Transport hazard class(es)		
· ADR, IMDG, IATA		
· Class	Void	
· Label	-	
· 14.4 Packing group		
· ADR, IMDĞ, IATA	Void	
· 14.5 Environmental hazards:	Not applicable.	
· 14.6 Special precautions for user	Not applicable.	
· 14.7 Transport in bulk according to Ann	ex II of	
Marpol and the IBC Code	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.

#### **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.

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Printing date 25.11.2019

Version number 1

Revision: 22.10.2019

#### Trade name: RNase

	(Contd. of pag
Department issuing SDS: Product safety department	
Contact: +49 6221 13840-35	
Abbreviations and acronyms:	
PBT: persistent, bioaccumulative, toxic substance (REACH)	
vPvB: very persistent, very bioaccumulative substance (REACH)	
REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Cl	hemicals
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 A	Agreement concerning the Internation
Carriage of Dangerous Goods by Road)	
IMDG: International Maritime Code for Dangerous Goods	
IATA: International Air Transport Association	
GHS: Globally Harmonised System of Classification and Labelling of Chemicals	
EINECS: European Inventory of Existing Commercial Chemical Substances	
ELINCS: European List of Notified Chemical Substances	
CAS: Chemical Abstracts Service (division of the American Chemical Society)	
PBT: Persistent, Bioaccumulative and Toxic	
vPvB: very Persistent and very Bioaccumulative	
* Data compared to the previous version altered.	

Version number 1

Revision: 22.10.2019

1.1 Product identifier	CFD1/A
Trade name: Grinding Suspension	serving scientists
Article number: 58550_6 58551_6 58552_6 • 1.2 Relevant identified uses of the substance or mixture and uses advise No further relevant information available. • Application of the substance / the mixture Laboratory chemicals	ed against
1.3 Details of the supplier of the safety data sheet 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	SIS
<ul> <li>Information department: Product Safety department Tel.: +49 6221 138</li> <li>1.4 Emergency telephone number: Medical Emergency Information in case of poisoning: Poison Information Center Mainz - Phone: +49 (0) 6131 19240 (advisory service in German or English language)</li> </ul>	40-35
SECTION 2: Hazards identification	
<b>2.1 Classification of the substance or mixture</b> <b>Classification according to Regulation (EC) No 1272/2008</b> The product is not classified, according to the CLP regulation.	

· Hazard pictograms Void

- · Signal word Void
- · Hazard statements Void
- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- **PBT:** PBT assessment not available.
- · **vPvB**: vPvB assessment not available.

#### **SECTION 3: Composition/information on ingredients**

· 3.2 Chemical characterisation: Mixtures

- · Description: Mixture of the substances listed below with harmless additions.
- · Dangerous components:

contains < 20% EC No. 233-252-7 ZrSiO<sub>4</sub>. This substance is classified according to Regulation (EC) No. 1272/2008 (CLP) as follows: Acute Tox. 4 H302.

### **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.

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Trade name: Grinding Suspension

· 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. Drink plenty of water and supply fresh air. Consult doctor if you feel unwell.

- **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 No further relevant information available.

· 5.3 Advice for firefighters

• Protective equipment: Wear self-contained respiratory protective device.

#### **SECTION 6: Accidental release measures**

- · 6.1 Personal precautions, protective equipment and emergency procedures Wear protective clothing.
- · 6.2 Environmental precautions: 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:

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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Printing date 25.11.2019

Version number 1

Revision: 22.10.2019

### Trade name: Grinding Suspension

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	(Contd. of page 2
8.2 Exposure controls	
Personal protective equipmen	t
General protective and hygier	
Keep away from foodstuffs, be	
Store protective clothing separation of the sepa	
Immediately remove all soiled	
Avoid contact with the eyes an	
Wash hands before breaks and	
	e respiratory protective device recommended.
Protection of hands:	e respiratory protective device recommended.
	mpermeable and resistant to the product/ the substance/ the preparation.
0	mendation to the glove material can be given for the product/ the preparation.
the chemical mixture.	mendation to the glove material can be given for the product/ the preparation
	mial on consideration of the non-struction times, nates of diffusion and th
	rial on consideration of the penetration times, rates of diffusion and th
degradation	
Material of gloves	
	gloves does not only depend on the material, but also on further marks of
quality and varies from manuf	
•	gloves does not only depend on the material, but also on further marks
	nufacturer to manufacturer. As the product is a preparation of sever
	the glove material can not be calculated in advance and has therefore to a
checked prior to the application	on.
Penetration time of glove mat	erial
The exact break trough time h	has to be found out by the manufacturer of the protective gloves and has to l
observed.	
For the permanent contact	of a maximum of 15 minutes gloves made of the following materials a
suitable:	
Natural rubber, NR	
Nitrile rubber, NBR	
Eye protection: Safety glasses	
Body protection: Protective w	
SECTION 9: Physical and	chemical properties
9.1 Information on basic phys	sical and chemical properties
General Information	ica ana enemica properaes
Appearance:	
Form:	Suspension
Colour:	Not determined.
Odour:	Odourless
Odour: Odour threshold:	Not determined.
pH-value:	no information available
Change in condition	
change in conduion	

Change in condition Melting point/freezing point:

Melting point/freezing point: Initial boiling point and boiling range:	no information available no information available		
· Flash point:	no information available		
· Flammability (solid, gaseous)	Not applicable.		
· Decomposition temperature:	no information available		
· Self igniting:	Product is not selfigniting.		
· Explosive properties:	Product does not present an explosion hazard.		
		(0 1	

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Printing date 25.11.2019

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Revision: 22.10.2019

Trade name: Grinding Suspension

	(Contd. of pa	age 3
· 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:	no information available	
· 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:
- No further relevant informations available. 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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Printing date 25.11.2019

Version number 1

Revision: 22.10.2019

#### Trade name: Grinding Suspension

- · 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, IMDG, IATA	Void	
· 14.2 UN proper shipping name		
· ADR, IMDG, IATA	Void	
· 14.3 Transport hazard class(es)		
· ADR, IMDG, IATA		
· Class	Void	
· Label	-	
· 14.4 Packing group		
· ADR, IMDĞ, IATA	Void	
· 14.5 Environmental hazards:	Not applicable.	
· 14.6 Special precautions for user	Not applicable.	
· 14.7 Transport in bulk according to Ann	ex II of	
Marpol and the IBC Code	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.

#### **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.

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Printing date 25.11.2019

Version number 1

Revision: 22.10.2019

### Trade name: Grinding Suspension

D	epartment issuing SDS: Product safety department
	ontact: +49 6221 13840-35
A	bbreviations and acronyms:
	BT: persistent, bioaccumulative, toxic substance (REACH)
	PvB: very persistent, very bioaccumulative substance (REACH)
R	EACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
C.	LP: Regulation on classification, labelling and packaging of substances and mixtures
bv	v: body weight
A	DR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the Internati
С	arriage of Dangerous Goods by Road)
IN	IDG: International Maritime Code for Dangerous Goods
IA	TA: International Air Transport Association
G	HS: Globally Harmonised System of Classification and Labelling of Chemicals
E	INECS: European Inventory of Existing Commercial Chemical Substances
E	LINCS: European List of Notified Chemical Substances
C	AS: Chemical Abstracts Service (division of the American Chemical Society)
Pl	BT: Persistent, Bioaccumulative and Toxic
vł	PvB: very Persistent and very Bioaccumulative

Version number 1

Revision: 23.10.2019

1.1 Product identifier		CFD1/A
Trade name: <u>10x TRIS buffer</u>		serving scientists
Article number: 58550_7 58551_7 58552_7 1.2 Relevant identified uses of the No further relevant information of Application of the substance / the		ainst
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	6
Information department: Product 1.4 Emergency telephone number Medical Emergency Information Poison Information Center Mains (advisory service in German or E	in case of poisoning: z - Phone: +49 (0) 6131 19240	5
SECTION 2: Hazards identif	ication	
2.1 Classification of the substan Classification according to Regu The product is not classified, acc	ce or mixture ulation (EC) No 1272/2008	
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 assess PBT: PBT - assessment not avail vPvB: vPvB - assessment not avail	m <b>ent</b> lable.	
SECTION 3: Composition/inj	formation on ingredients	

· Dangerous components: Void

Printing date 25.11.2019

\*

## **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.

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#### Printing date 25.11.2019

Version number 1

Revision: 23.10.2019

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Trade name: 10x TRIS buffer

· 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. Drink plenty of water and supply fresh air. Consult doctor if you feel unwell.

- · 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<sub>2</sub>, 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.
- 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:

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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Printing date 25.11.2019

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Revision: 23.10.2019

## Trade name: 10x TRIS buffer

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	(Conta. of page 2
8.2 Exposure controls	
Personal protective equipment	
General protective and hygienic measure	25
Keep away from foodstuffs, beverages and	
Store protective clothing separately.	<b>J</b>
Immediately remove all soiled and contan	ninated clothing
Avoid contact with the eyes and skin.	
Wash hands before breaks and at the end	of work.
Breathing equipment: Suitable respirator	
Protection of hands:	
v	e and resistant to the product/ the substance/ the preparation.
	to the glove material can be given for the product/ the preparation
the chemical mixture.	
	sideration of the penetration times, rates of diffusion and th
degradation	
Material of gloves	
	es not only depend on the material, but also on further marks o
quality and varies from manufacturer to n	
	es not only depend on the material, but also on further marks of
	to manufacturer. As the product is a preparation of severa
	naterial can not be calculated in advance and has therefore to b
checked prior to the application.	
Penetration time of glove material	
	und out by the manufacturer of the protective gloves and has to b
Eye protection: Safety glasses	
Body protection: Protective work clothing	
~ .	, 

Appearance:		
Form:	Fluid	
Colour:	Not determined.	
Odour:	not determined	
Odour threshold:	Not determined.	
pH-value:	no information available	
Change in condition		
Melting point/freezing point: Initial boiling point and boiling range:	no information available no information available	
Flash point:	no information available	
Flammability (solid, gaseous)	Not applicable.	
Decomposition temperature:	no information available	
Self igniting:	Product is not selfigniting.	
Explosive properties:	Product does not present an explosion hazard.	
Explosion limits:		
Lower:	no information available	
Upper:	no information available	
Vapour pressure:	no information available	

Printing date 25.11.2019

Version number 1

Revision: 23.10.2019

Trade name: 10x TRIS buffer

	(Contd. of page
· Density:	no information available
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix
· 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:
- No further relevant informations available.
- 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.
- $\cdot \textit{Reproductive toxicity Based on available data, the classification criteria are not met.}$
- $\cdot \textit{STOT-single exposure Based on available data, the classification criteria are not met.}$
- 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.
- · 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.

(Contd. on page 5)

Printing date 25.11.2019

Version number 1

Revision: 23.10.2019

Trade name: 10x TRIS buffer

#### · 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.

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	Void	
Label	-	
14.4 Packing group		
ADR, IMDĞ, IATA	Void	
14.5 Environmental hazards:	Not applicable.	
14.6 Special precautions for user	Not applicable.	
14.7 Transport in bulk according to Ann	ex II of	
Marpol and the IBC Code	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.

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

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GB

Printing date 25.11.2019

Version number 1

Revision: 23.10.2019

## Trade name: 10x TRIS buffer

(Contd. of pag	ge 5)
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 Concer	onal
Carriage of Dangerous Goods by Road)	
IMDG: International Maritime Code for Dangerous Goods	
IATA: International Air Transport Association	
GHS: Globally Harmonised System of Classification and Labelling of Chemicals	
EINECS: European Inventory of Existing Commercial Chemical Substances	
ELINCS: European List of Notified Chemical Substances	
CAS: Chemical Abstracts Service (division of the American Chemical Society)	
PBT: Persistent, Bioaccumulative and Toxic	
vPvB: very Persistent and very Bioaccumulative	
* Data compared to the previous version altered.	
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