

SERVA SDS Gel 8-25 % Kit for PhastSystem Cat. No. 43503

Safety Data Sheets of the following Kit Components:

43502	SERVA SDS Gel 8-25 % for PhastSystem
43801	SDS Anode buffer (blue)
43802	SDS Cathode buffer (white)

<i>Revision: 23.04.2021</i>

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· 1.1 Product identifier	x_j x_j x_j x_j x_j x_j	
• Trade name: SERVA SDS Gel	8-25 % for PhastSystem	SERVA
 Article number: 43502 1.2 Relevant identified uses of a No further relevant information Application of the substance / t 	the substance or mixture and uses advised again a available.	nst
 1.3 Details of the supplier of th Manufacturer/Supplier: SERVA Electrophoresis GmbH Carl-Benz-Str. 7 D-69115 Heidelberg Tel.: +49 6221 13840-0 FAX: +49 6221 13840-10 msds.info@serva.de 		SUL
• 1.4 Emergency telephone numl Medical Emergency Information	n in case of poisoning: inz - Phone: +49 (0) 6131 19240	
SECTION 2: Hazards identi		
 2.1 Classification of the substant Classification according to Reg The product is not classified, according to Reg 2.2 Label elements 	gulation (EC) No 1272/2008	
 Hazard pictograms Void Signal word Void Hazard statements Void 		
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 Hazard pictograms Void Signal word Void Hazard statements Void 2.3 Other hazards Results of PBT and vPvB asses PBT: PBT - assessment not ava vPvB: vPvB - assessment not av SECTION 3: Composition/in 3.2 Chemical characterisation: Description: 	ssment uilable. vailable. nformation on ingredients : Mixtures hastSystem are ready-to-use SDS-polyacrylamid	e-gels covalently bound to

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SECTION 4: First aid measures

- 4.1 Description of first aid measures
- General information No special measures required.
- After inhalation Supply fresh air; consult doctor in case of complaints.
- · After skin contact
- Immediately wash with water and soap and rinse thoroughly. Consult doctor if you feel unwell.
- · After eye contact

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

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

SECTION 5: Firefighting measures

- 5.1 Extinguishing media
- Suitable extinguishing agents
- CO_2 , extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. • 5.2 Special hazards arising from the substance or mixture
- In case of fire, the following can be formed, but not limited to: Nitrogen oxides (NOx)
- Carbon monoxide and carbon dioxide
- · 5.3 Advice for firefighters
- · Protective equipment: Wear self-contained respiratory protective device.
- · Additional information

Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

• 6.1 Personal precautions, protective equipment and emergency procedures Wear protective clothing.

- · 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- 6.3 Methods and material for containment and cleaning up: Dispose contaminated material as waste according to item 13. Pick up mechanically.
- 6.4 Reference to other sections
 See Section 7 for information on safe handling
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.

SECTION 7: Handling and storage

• 7.1 Precautions for safe handling No special measures required.

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

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8.1 Control parameters Additional information about design of technical systems: No further data; see item 7. Components with limit values that require monitoring at the workplace: The product does not contain any relevant quantities of materials with critical values that have to monitored at the workplace. Additional information The lists that were valid during the creation were used as basis. 8.2 Exposure controls Personal protective and hygienic measures Keep away from foodstuffs, beverages and feed. Store protective clothing separately. Immediately remove all solied and contaminated clothing Avoid contact with the eyes and skin. Wash hands before breaks and at the end of work. Breathing egioves PVC gloves 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. Due to missing tests no recommendation to the glove material can be given for the product the preparation. Material of gloves Material 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 seve substance, the resistance of the glove material can not be calculated in advance and has therefore to checked prior to the application. Penetration time of glove material Status efforts in a preparation of the manufacturer of the protective gloves and has to observed. Status evends through the has to be found out by the manufacturer of the protective gloves and has therefore to checked prior to the application. Penetration time of glove material Status evends Status evends through them has to be found out by the manufacturer of the protective gloves and has to a preparation of seve substances. He resistance of the glove and the site of the glove site application. Penetration time of glove material properties Status evends trough them has to be found out by the manufacturer of the protective		
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	(Contd. of page 2
Initial boiling point and boiling range	e: 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	no information available
Vapour density	no information available
Evaporation rate	no information available
Solubility in / Miscibility with	
Water:	Insoluble
Partition coefficient: n-octanol/water:	no information available
Viscosity:	
dynamic:	no information available
kinematic:	no information available
9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- · 10.1 Reactivity No further relevant information available.
- · 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions No further relevant informations available.
- · 10.4 Conditions to avoid No further relevant information available.
- · 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: In case of fire: See Section 5

SECTION 11: Toxicological information

- · 11.1 Information on toxicological effects
- · Acute toxicity Based on available data, the classification criteria are not met.
- · Primary irritant effect:
- Skin corrosion/irritation Based on available data, the classification criteria are not met.
- · Serious eye damage/irritation Based on available data, the classification criteria are not met.
- · Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- · Additional toxicological information:
- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- · Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- STOT-single exposure Based on available data, the classification criteria are not met.
- · STOT-repeated exposure Based on available data, the classification criteria are not met.

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

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SECTION 12: Ecological information

· 12.1 Toxicity

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

Do not allow product to reach ground water, water course or sewage system, even in small quantities. 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.

14.1 UN-Number	
ADR, ADN, IMDG, IATA	Void
14.2 UN proper shipping name	
ADR, ADN, IMDG, IATA	Void
· 14.3 Transport hazard class(es)	
· ADR, ADN, IMDG, IATA	
· Class	Void
· 14.4 Packing group	
· ADR, IMDĞ, IATA	Void
· 14.5 Environmental hazards:	
• Marine pollutant:	No
· 14.6 Special precautions for user	Not applicable.
· 14.7 Transport in bulk according to Anne	ex II of
Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN "Model Regulation":	Void

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SECTION 15: Regulatory information

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

· Directive 2012/18/EU

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

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

None of the ingredients is listed.

· 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:

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

ICAO: International Civil Aviation Organisation PBT: persistent, bioaccumulative, toxic substance (REACH)

vPvB: very persistent, very bioaccumulative substance (REACH)

- REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
- CLP: Regulation on classification, labelling and packaging of substances and mixtures
- bw: body weight

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative

	Version number 3	Revision: 16.10.2020
SECTION 1: Identification	of the substance/mixture and of the co	mpany/undertaking
· 1.1 Product identifier		CFD\/A
· Trade name: <u>SDS Anode buff</u> e	er (blue)	serving scientists
No further relevant information	the substance or mixture and uses advised a available. the mixture Laboratory chemicals	l against
 1.3 Details of the supplier of the Manufacturer/Supplier: SERVA Electrophoresis GmbH Carl-Benz-Str. 7 D-69115 Heidelberg Tel.: +49 6221 13840-0 FAX: +49 6221 13840-10 msds.info@serva.de 		Saulo
• 1.4 Emergency telephone num Medical Emergency Informatio	n in case of poisoning: inz - Phone: +49 (0) 6131 19240	40-35
SECTION 2: Hazards ident	ification	
• 2.1 Classification of the substa • Classification according to Reg The product is not classified, ac		
	for (EC) No 1272/2008 Void	
 2.2 Label elements Labelling according to Regula Hazard pictograms Void Signal word Void Hazard statements Void 2.3 Other hazards Results of PBT and vPvB asses PBT: PBT - assessment not ava vPvB; vPvB - assessment not ava 	ssment ailable.	
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SECTION 4: First aid measures

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

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Trade name: SDS Anode buffer (blue)

· After skin contact

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

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

- \cdot After swallowing Wash out mouth. Seek medical advice if discomfort occurs.
- **4.2** *Most important symptoms and effects, both acute and delayed No further relevant information available.*
- **4.3 Indication of any immediate medical attention and special treatment needed** *No further relevant information available.*

SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- · Suitable extinguishing agents
- *CO₂*, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. • 5.2 Special hazards arising from the substance or mixture
- In case of fire, the following can be formed, but not limited to: Carbon monoxide and carbon dioxide Nitrogen oxides (NOx)
- · 5.3 Advice for firefighters
- · Protective equipment: Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

- · 6.1 Personal precautions, protective equipment and emergency procedures Wear protective clothing.
- · 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- 6.3 Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to item 13. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

- **6.4 Reference to other sections** See Section 7 for information on safe handling
- See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

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

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

• Additional information about design of technical systems: No further data; see item 7.

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Trade name: SDS Anode buffer (blue)

I ampanante with limit values	(Contd. of page
-	that require monitoring at the workplace:
107-21-1 Ethanediol (5-15%)	
WEL Short-term value: 104**	
Long-term value: 10* 52	
Sk *particulate **vapour	
64-19-7 acetic acid 100 % (1-3	•
WEL Short-term value: 50 mg/	
Long-term value: 25 mg/n	
• Additional information: The lis	sts that were valid during the creation were used as basis.
· 8.2 Exposure controls	
· Personal protective equipment	
\cdot General protective and hygieni	
Keep away from foodstuffs, bev	
Store protective clothing separa	•
Immediately remove all soiled of	
Avoid contact with the eyes and	
Wash hands before breaks and	at the end of work.
Breathing equipment:	
Short term filter device:	
Filter P2. Protection of hands	
• Protection of hands:	permeable and resistant to the product/ the substance/ the preparation.
	nendation to the glove material can be given for the product/ the preparation.
the chemical mixture.	endation to the glove material can be given for the product/ the preparation
	al on consideration of the penetration times, rates of diffusion and t
degradation	at on consideration of the penetration times, rates of all as on and t
· Material of gloves	
	gloves does not only depend on the material, but also on further marks
quality and varies from manufa	
	gloves does not only depend on the material, but also on further marks
	ufacturer to manufacturer. As the product is a preparation of seve
· · ·	he glove material can not be calculated in advance and has therefore to
checked prior to the application	
· Penetration time of glove mate	
	as to be found out by the manufacturer of the protective gloves and has to
observed.	
· For the permanent contact of	f a maximum of 15 minutes gloves made of the following materials a
suitable:	
Natural rubber, NR	
• Eye protection: Safety glasses	
• Body protection: Protective wo	rk clothing.
SECTION 9: Physical and c	homical properties
SECTION 7. Thysical and c	
	cal and chemical properties
· 9.1 Information on basic physi	
• 9.1 Information on basic physi • General Information	
· General Information	
	Solution
• General Information • Appearance:	Solution Blue
• General Information • Appearance: Form:	
• General Information • Appearance: Form: Colour:	Blue
• General Information • Appearance: Form: Colour: • Odour:	Blue Recognisable

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• Change in condition Melting point/freezing point: Initial boiling point and boiling range	undetermined : undetermined
· Flash point:	no information available
· Flammability (solid, gaseous)	Not applicable.
· Decomposition temperature:	Not determined.
· Self igniting:	Product is not selfigniting.
· Explosive properties:	Product does not present an explosion hazard.
· Explosion limits: Lower: Upper:	Not determined. Not determined.
· Vapour pressure:	Not determined.
 Density: Relative density Vapour density Evaporation rate 	Not determined Not determined. Not determined. Not determined.
• Solubility in / Miscibility with Water:	Fully miscible
· Partition coefficient: n-octanol/water:	Not determined.
 Viscosity: dynamic: kinematic: 	Not determined. Not determined.
· Solvent content: Organic solvents:	9.2 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant informations available

- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions No further relevant informations available.
- · 10.4 Conditions to avoid No further relevant information available.
- · 10.5 Incompatible materials: No further relevant information available.
- · 10.6 Hazardous decomposition products: In case of fire: See Section 5

SECTION 11: Toxicological information

· 11.1 Information on toxicological effects

- Acute toxicity Based on available data, the classification criteria are not met.
- · Primary irritant effect:
- · Skin corrosion/irritation Based on available data, the classification criteria are not met.
- Serious eye damage/irritation Based on available data, the classification criteria are not met.
- · Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- · Additional toxicological information:
- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- · Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity Based on available data, the classification criteria are not met.

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^{· 10.2} Chemical stability

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- · Reproductive toxicity Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- · 12.1 Toxicity
- Aquatic toxicity: No further relevant information available.
- · 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- · 12.4 Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes:
- Do not allow product to reach ground water, water course or sewage system. Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.
- · 12.5 Results of PBT and vPvB assessment
- · **PBT:** PBT assessment not available.
- · **vPvB**: vPvB assessment not available.
- 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

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

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

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

SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG, IATA	Void	
· 14.2 UN proper shipping name · ADR, IMDG, IATA	Void	
· 14.3 Transport hazard class(es)		
· ADR, IMDG, IATA · Class · Label	Void -	
· 14.4 Packing group · ADR, IMDG, IATA	Void	
· 14.5 Environmental hazards: · Marine pollutant:	No	
· 14.6 Special precautions for user	Not applicable.	
· 14.7 Transport in bulk according to Ann Marpol and the IBC Code	ex II of Not applicable.	

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SECTION 15: Regulatory information

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

· Directive 2012/18/EU

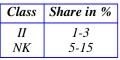
· Named dangerous substances - ANNEX I None of the ingredients is listed.

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

None of the ingredients is listed.

· National regulations

· Technical instructions (air):



• Water hazard class: Water hazard class 2 (Self-assessment): hazardous for water.

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

SECTION 16: Other information

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

· Relevant phrases

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

· Department issuing SDS: Product safety department

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

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) ICAO: International Civil Aviation Organisation PBT: persistent, bioaccumulative, toxic substance (REACH) vPvB: very persistent, very bioaccumulative substance (REACH) REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals CLP: Regulation on classification, labelling and packaging of substances and mixtures bw: body weight ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Flam. Liq. 3: Flammable liquids - Category 3 Acute Tox. 4: Acute toxicity - oral - Category 4 Skin Corr. 1A: Skin corrosion/irritation - Category 1A STOT RE 2: Specific target organ toxicity (repeated exposure) - Category 2

SECTION 1: Identification of th · 1.1 Product identifier	he substance/mixture and of the c	ompany/undertaking
· 1.1 Product identifier		
		CFD\/A
· Trade name: <u>SDS Cathode buffer (</u>	(white)	serving scientists
 Article number: 43802 1.2 Relevant identified uses of the s No further relevant information ava Application of the substance / the mathematical states 		ed against
 1.3 Details of the supplier of the say Manufacturer/Supplier: SERVA Electrophoresis GmbH Carl-Benz-Str. 7 D-69115 Heidelberg Tel.: +49 6221 13840-0 FAX: +49 6221 13840-10 msds.info@serva.de 	ıfety data sheet	Suno.
• Information department: Product S • 1.4 Emergency telephone number: Medical Emergency Information in Poison Information Center Mainz - (advisory service in German or Eng	case of poisoning: Phone: +49 (0) 6131 19240	340-35
SECTION 2: Hazards identifica • 2.1 Classification of the substance • Classification according to Regular The product is not classified, accord	or mixture tion (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 assessme PBT: PBT - assessment not availab vPvB: vPvB - assessment not availab 	e nt ole.	
SECTION 3: Composition/infor • 3.2 Chemical characterisation: Mix • Description: Mixture of the substan		ons.
· Dangerous components:		
CAS: 107-21-1 Ethanediol EINECS: 203-473-3	🚸 STOT RE 2, H373;	: () Acute Tox. 4, H302 5-10%
SECTION 4: First aid measures	<i>s</i>	

· 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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· After eye contact

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

- · After swallowing Wash out mouth. Seek medical advice if discomfort occurs.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed** No further relevant information available.

SECTION 5: Firefighting measures

- 5.1 Extinguishing media
- · Suitable extinguishing agents
- CO_2 , extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. • 5.2 Special hazards arising from the substance or mixture
- In case of fire, the following can be formed, but not limited to: Carbon monoxide and carbon dioxide Nitrogen oxides (NOx)
- · 5.3 Advice for firefighters
- · Protective equipment: Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

- · 6.1 Personal precautions, protective equipment and emergency procedures Wear protective clothing.
- · 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.

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

- Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- · 6.4 Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

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

SECTION 8: Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see item 7.

· 8.1 Control parameters

· Components with limit values that require monitoring at the workplace:

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

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

Sk *particulate **vapour

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8.2 Exposure controls	
Personal protective equipment	
General protective and hygienic me	easures
Keep away from foodstuffs, beverage	es and feed.
Store protective clothing separately.	
Immediately remove all soiled and c	contaminated clothing
Avoid contact with the eyes and skin	
Wash hands before breaks and at the	e end of work.
Breathing equipment:	
Short term filter device:	
Filter P2.	
Protection of hands:	
	neable and resistant to the product/ the substance/ the preparation.
the chemical mixture.	ation to the glove material can be given for the product/ the preparation
	n consideration of the penetration times, rates of diffusion and t
degradation	n consideration of the penetration times, rates of alfusion and t
Material of gloves	
	es does not only depend on the material, but also on further marks
quality and varies from manufacture	
	es does not only depend on the material, but also on further marks
	turer to manufacturer. As the product is a preparation of seven
	ove material can not be calculated in advance and has therefore to
checked prior to the application.	·
observed. For the permanent contact of a m suitable:	
The exact break trough time has to observed. For the permanent contact of a m	naximum of 15 minutes gloves made of the following materials a
The exact break trough time has to observed. For the permanent contact of a m suitable: Natural rubber, NR Eye protection: Safety glasses	
The exact break trough time has to observed. For the permanent contact of a m suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work cla SECTION 9: Physical and chem	naximum of 15 minutes gloves made of the following materials a othing. nical properties
The exact break trough time has to observed. For the permanent contact of a m suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work cla SECTION 9: Physical and chem 9.1 Information on basic physical a	naximum of 15 minutes gloves made of the following materials a othing. nical properties
The exact break trough time has to observed. For the permanent contact of a m suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work cla SECTION 9: Physical and chem 9.1 Information on basic physical a General Information	naximum of 15 minutes gloves made of the following materials a othing. nical properties
The exact break trough time has to observed. For the permanent contact of a m suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work cla SECTION 9: Physical and chem 9.1 Information on basic physical a General Information Appearance:	naximum of 15 minutes gloves made of the following materials a othing. nical properties and chemical properties
The exact break trough time has to observed. For the permanent contact of a m suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work cla SECTION 9: Physical and chem 9.1 Information on basic physical a General Information Appearance: Form:	naximum of 15 minutes gloves made of the following materials a othing. nical properties and chemical properties Solution
The exact break trough time has to observed. For the permanent contact of a m suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work cla SECTION 9: Physical and chem 9.1 Information on basic physical a General Information Appearance:	naximum of 15 minutes gloves made of the following materials a othing. nical properties and chemical properties
The exact break trough time has to observed. For the permanent contact of a m suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work cla SECTION 9: Physical and chem 9.1 Information on basic physical a General Information Appearance: Form: Colour:	naximum of 15 minutes gloves made of the following materials a othing. nical properties and chemical properties Solution Colourless
The exact break trough time has to observed. For the permanent contact of a m suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work cla SECTION 9: Physical and chem 9.1 Information on basic physical a General Information Appearance: Form: Colour: Odour:	naximum of 15 minutes gloves made of the following materials a othing. nical properties and chemical properties Solution Colourless Odourless
The exact break trough time has to observed. For the permanent contact of a m suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work cla SECTION 9: Physical and chem 9.1 Information on basic physical a General Information Appearance: Form: Colour: Odour: Odour threshold: pH-value at 20 °C:	naximum of 15 minutes gloves made of the following materials a othing. nical properties und chemical properties Solution Colourless Odourless Not determined.
The exact break trough time has to observed. For the permanent contact of a m suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work cla SECTION 9: Physical and chem 9.1 Information on basic physical a General Information Appearance: Form: Colour: Odour: Odour threshold: pH-value at 20 °C: Change in condition	naximum of 15 minutes gloves made of the following materials a othing. nical properties and chemical properties Solution Colourless Odourless Not determined. 7.4-7.6
The exact break trough time has to observed. For the permanent contact of a m suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work cla SECTION 9: Physical and chem 9.1 Information on basic physical a General Information Appearance: Form: Colour: Odour: Odour: Dodour threshold: pH-value at 20 °C: Change in condition Melting point/freezing point:	naximum of 15 minutes gloves made of the following materials a othing. nical properties und chemical properties Solution Colourless Odourless Not determined. 7.4-7.6 undetermined
The exact break trough time has to observed. For the permanent contact of a m suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work cla SECTION 9: Physical and chem 9.1 Information on basic physical a General Information Appearance: Form: Colour: Odour: Odour: Odour threshold: pH-value at 20 °C: Change in condition Melting point/freezing point: Initial boiling point and boiling re	naximum of 15 minutes gloves made of the following materials a othing. mical properties and chemical properties Solution Colourless Odourless Not determined. 7.4-7.6 undetermined ange: undetermined
The exact break trough time has to observed. For the permanent contact of a m suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work cla SECTION 9: Physical and chem 9.1 Information on basic physical a General Information Appearance: Form: Colour: Odour: Odour: Odour threshold: pH-value at 20 °C: Change in condition Melting point/freezing point: Initial boiling point and boiling ra	naximum of 15 minutes gloves made of the following materials a othing. sical properties mical properties Solution Colourless Odourless Not determined. 7.4-7.6 undetermined ange: undetermined no information available
The exact break trough time has to observed. For the permanent contact of a m suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work cla SECTION 9: Physical and chem 9.1 Information on basic physical a General Information Appearance: Form: Colour: Odour: Odour: Odour threshold: pH-value at 20 °C: Change in condition Melting point/freezing point: Initial boiling point and boiling ra Flash point: Flammability (solid, gaseous)	naximum of 15 minutes gloves made of the following materials a othing. ical properties ind chemical properties Solution Colourless Odourless Not determined. 7.4-7.6 undetermined ange: undetermined no information available Not applicable.
The exact break trough time has to observed. For the permanent contact of a m suitable: Natural rubber, NR Eye protection: Safety glasses Body protection: Protective work cla SECTION 9: Physical and chem 9.1 Information on basic physical a General Information Appearance: Form: Colour: Odour: Odour: Odour threshold: pH-value at 20 °C: Change in condition Melting point/freezing point: Initial boiling point and boiling ra	naximum of 15 minutes gloves made of the following materials a othing. sical properties und chemical properties Solution Colourless Odourless Not determined. 7.4-7.6 undetermined ange: undetermined no information available

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· Explosive properties:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure:	Not determined.
· Density:	Not determined
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
Water:	Fully miscible
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
dynamic:	Not determined.
kinematic:	Not determined.
· Solvent content:	
Organic solvents:	5-10 %
• 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant informations available

- · 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions No further relevant informations available.
- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: In case of fire: See Section 5

SECTION 11: Toxicological information

- · 11.1 Information on toxicological effects
- Acute toxicity Based on available data, the classification criteria are not met.
- · Primary irritant effect:
- · Skin corrosion/irritation Based on available data, the classification criteria are not met.
- Serious eye damage/irritation Based on available data, the classification criteria are not met.
- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- · Germ cell mutagenicity Based on available data, the classification criteria are not met.
- Carcinogenicity Based on available data, the classification criteria are not met.
- $\cdot \textit{Reproductive toxicity Based on available data, the classification criteria are not met.}$
- $\cdot \textit{STOT-single exposure Based on available data, the classification criteria are not met.}$
- 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.

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Trade name: SDS Cathode buffer (white)

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

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

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

• 12.5 Results of PBT and vPvB assessment

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

SECTION 13: Disposal considerations

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

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

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

SECTION 14: Transport information

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

SECTION 15: Regulatory information

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

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

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[·] Directive 2012/18/EU

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· National regulations

• Technical instructions (air):



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

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

SECTION 16: Other information

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

· Relevant phrases

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

· Department issuing SDS: Product safety department

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

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

PBT: persistent, bioaccumulative, toxic substance (REACH)

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

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

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

PBT: Persistent, Bioaccumulative and Toxic

 $vPvB: very \ Persistent \ and \ very \ Bioaccumulative$

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

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

GB -