

SERVA HPE[™] Silver Staining Kit Cat. No. 43395

Safety Data Sheets of the following Kit Components:

43814	Citric Acid
43815 / 43813	Sodium Thiosulfate / Sodium Thiosulfate dry substance for Solution E
23391	Glycine
43807	Formaldehyde 37 % solution in water
43808	Glutaraldehyde 25 % solution in water
43809	Solution A
43810	Solution B
43811	Solution C
43812	Solution D

Printing date 13.02.2023

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Version number 4

Revision: 13.02.2023

			of the company/undertaking
1.1 Product ide	U U		
Trade name: C	<i>Sitric Acid</i>		SERVA
Article number	:: 43814		serving scientist
CAS Number:			
5949-29-1			
EC number:			
201-069-1 Beninteration		2	
0	umber 01-2119457026-4	z tance or mixture and us	as advised against
	vant information availab		es auviseu againsi
		ure: Laboratory chemica	ls S
1.3 Details of the Manufacturer/	he supplier of the safety Supplier	aata sneet	· Co
	phoresis GmbH		
Carl-Benz-Str.			5
D-69115 Heide		- 55	0.5
<i>Tel.:</i> +49 6221			V
FAX: +49 622		\sim	
msds.info@ser	va.de		
Information de	nartment: Product Safet	ty department Tel.: +496	5221 13840-35
	telephone number:	y department for the try o	
	ency Information in case	e of poisoning:	
	tion Center Mainz - Pho		
(advisory servio	ce in German or English	language)	
SECTION 2.	Haranda identification		
SECTION 2:	Hazards identification	1	
2.1 Classificati	on of the substance or n	nixture	
2.1 Classificati		nixture	
2.1 Classificati Classification	on of the substance or n according to Regulation	nixture	
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2.1 Classificati Classification of GHS	on of the substance or n according to Regulation 07	nixture (EC) No 1272/2008:	
2.1 Classificati Classification of GHS Eye Irrit. 2 H3	on of the substance or n according to Regulation 07 19 Causes serious eye ir	nixture (EC) No 1272/2008:	
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Trade name: Citric Acid

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SECTION 3: Composition/information on ingredients

· 3.1 Substances

- · CAS No. Description:
- 5949-29-1 Citric acid monohydrate
- Identification number(s):
- EC number: 201-069-1
- · Description:
- Empirical formula: C₆H₈O₇*H₂O
- · MW: 210.1 g/mol

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.
- · 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:

Rinse out mouth and then drink plenty of water.

- 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.
- \cdot 5.2 Special hazards arising from the substance or mixture:
- In case of fire, the following can be formed, but not limited to:
- Carbon monoxide and carbon dioxide
- · 5.3 Advice for firefighters
- · Protective equipment: Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

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

See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling: Avoid contact with eyes and skin.

• Information about protection against explosions and fires: Keep ignition sources away - Do not smoke.

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- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage
- · Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
- 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
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.

· 8.2 Exposure controls

- Appropriate engineering controls: No further data; see item 7.
- · Individual protection measures, such as 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.

Avoid contact with the eyes. • **Breathing equipment:**

- Short term filter device: Filter P2.
- Hand protection:

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.

• 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.

 \cdot For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:

Natural rubber, NR

- · Eye/face protection: Safety glasses
- · Body protection: Protective work clothing.

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SECTION 9: Physical and chemical properties

• 9.1 Information on basic physical and chemical properties· General Information:· Physical state:Solid.· Colour:White· Odour:Odourless· Odour threshold:Not determined.· Melting point/freezing point:135-152 °C· Boiling point or initial boiling point and boiling
range:no information available

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· Flammability:	no information available
· Lower and upper explosion limit:	·
· Lower:	no information available
· Upper:	no information available
· Flash point:	no information available
· Ignition temperature:	345 °C
• Decomposition temperature:	no information available
· <i>pH</i> :	1.8
· Viscosity:	
· Kinematic viscosity:	no information available
· Dynamic viscosity:	no information available
· Solubility:	·
· Water at 25 °C:	675 g/l
· Partition coefficient n-octanol/water (log value):	no information available
· Vapour pressure:	Not applicable.
· Density and/or relative density:	
· Density at 20 °C:	1.54 g/cm ³
· Relative density:	Not determined.
· Particle characteristics	No information available
• 9.2 Other information	
· Appearance:	
· Form:	Crystalline
• Important information on protection of health and environment, and on safety:	d
• Explosive properties:	Product does not present an explosion hazard.
· VOC %:	0.00 %
• Molecular weight	210.1 g/mol

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: Possibility of hazardous reactions in contact with: reducing agents strong oxidizing agents strong bases
 10.4 Conditions to avoid: Avoid high temperatures, flames, sparks
 10.5 Incompatible materials: Avoid contact with: Oxidizers reducing agents
- strong bases
- 10.6 Hazardous decomposition products: In case of fire: See Section 5

SECTION 11: Toxicological information

· 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

- Acute toxicity: Based on available data, the classification criteria are not met.
- \cdot LD/LC50 values that are relevant for classification:

5949-29-1 Citric acid monohydrate

Oral LD50 3,000 mg/kg (rat)

· Skin corrosion/irritation: Based on available data, the classification criteria are not met.

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Trade name: Citric Acid

- · Serious eye damage/irritation: Causes serious eye irritation.
- · Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.
- Germ cell mutagenicity: Based on available data, the classification criteria are not met.
- Carcinogenicity: Based on available data, the classification criteria are not met.
- Reproductive toxicity: Based on available data, the classification criteria are not met.
- · STOT-single exposure: Based on available data, the classification criteria are not met.
- · STOT-repeated exposure: Based on available data, the classification criteria are not met.
- · Aspiration hazard: Based on available data, the classification criteria are not met.
- · 11.2 Information on other hazards:
- · Endocrine disrupting properties:

Substance is not listed.

SECTION 12: Ecological information

· 12.1 Toxicity:

- Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability: No further relevant information available.
- Other information: The product is readily biodegradable.
- 12.3 Bioaccumulative potential: No further relevant information available.
- · 12.4 Mobility in soil: No further relevant information available.
- · 12.5 Results of PBT and vPvB assessment:
- · **PBT**: PBT assessment not available.
- · **vPvB**: vPvB assessment not available.
- · 12.6 Endocrine disrupting properties: For information on endocrine disrupting properties see section 11.
- · 12.7 Other adverse effects:
- Additional ecological information:
- · General notes:

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

Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Disposal must be made according to official regulations.

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 or ID number · ADR, ADN, IMDG, IATA	Void	
· 14.2 UN proper shipping name · ADR, ADN, IMDG, IATA	Void	
· 14.3 Transport hazard class(es)		
· ADR, ADN, IMDG, IATA · Class:	Void	
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Trade name: Citric Acid

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· 14.4 Packing group · ADR, IMDG, IATA	Void
· 14.5 Environmental hazards · Marine pollutant:	No
· 14.6 Special precautions for user	Not applicable.
• 14.7 Maritime transport in bulk according instruments	to IMO Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN ''Model Regulation'':	Void

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 Substance is not listed.

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

Substance is not listed.

· REGULATION (EU) 2019/1148

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

Substance is not listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

Substance is not listed.

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

Substance is not listed.

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

Substance is not listed.

· National regulations:

- Water hazard class: Water hazard class 1 (Assessment by list): 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

- Date of previous version: 02.02.2016
- 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 (UK REACH) vPvB: very persistent, very bioaccumulative substance (UK REACH) UK REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals CD CHM Concerning the Concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

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

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Trade name: Citric Acid

(Contd. of page 6) ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

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SECTION 1: Identification o	f the substance/mixture and of the con	npany/undertaking
1.1 Product identifier		
Trade name: <u>Sodium Thiosulfat</u>	<u>e</u>	SERVA
Article number: 43813, 43815		serving scientists
• CAS Number: 7772-98-7		
EC number:		X
231-867-5		
No further relevant information a	ne substance or mixture and uses advised a wailable.	gainsi
Application of the substance / th		
1.3 Details of the supplier of the	safety data sheet	0
Manufacturer/Supplier: SERVA Electrophoresis GmbH		
Carl-Benz-Str. 7		2
D-69115 Heidelberg	S	
<i>Tel.</i> : +49 6221 13840-0 <i>FAX</i> : +49 6221 13840-10	· ()*	
msds.info@serva.de		
Information department: Produc	ct Safety department Tel.: +49 6221 13840-	35
1.4 Emergency telephone number	er:	
Medical Emergency Information Poison Information Center Mainz		
(advisory service in German or E		
SECTION 2: Hazards identif	ication	
Classification according to Regu The substance is not classified, ad	<i>uation (EC) No 1272/2008:</i> ccording to the GB CLP regulation.	
2.2 Label elements		
2.2 Label elements Labelling according to Regulation		
2.2 Label elements Labelling according to Regulation Hazard pictograms: Void Signal word: Void		
2.2 Label elements Labelling according to Regulation Hazard pictograms: Void Signal word: Void Hazard statements: Void		
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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 SECTION 3: Composition/ing 3.1 Substances CAS No. Description: 7772-98-7 sodium thiosulphate Identification number(s): EC number: 231-867-5 SECTION 4: First aid measure General information: No special	on (EC) No 1272/2008: Void ment: able. ilable. formation on ingredients res ures measures required.	
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Trade name: Sodium Thiosulfate

· After skin contact:

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

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

• After swallowing: Wash out mouth. Seek medical advice if discomfort occurs.

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

No further relevant information available.

SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- Suitable extinguishing agents:
- CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- 5.2 Special hazards arising from the substance or mixture: No further relevant information available.
- · 5.3 Advice for firefighters
- · Protective equipment: Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures Wear protective clothing. Ensure adequate ventilation
- 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- \cdot 6.3 Methods and material for containment and cleaning up
- Dispose contaminated material as waste according to item 13.
- **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: Keep ignition sources away Do not smoke.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage
- Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
- · 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
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.

· 8.2 Exposure controls

- Appropriate engineering controls: No further data; see item 7.
- · Individual protection measures, such as personal protective equipment:
- General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Store protective clothing separately.

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Trade name: Sodium Thiosulfate

	lothing
Immediately remove all soiled and contaminated c Avoid contact with the eyes and skin.	ioming
Wash hands before breaks and at the end of work.	
	ting device recommonded
Breathing equipment: Suitable respiratory protect	uve device recommended.
Hand protection:	istant to the number of the substance of the number quation
Due to missing tests no recommendation to the gl	istant to the product/ the substance/ the preparation. ove material can be given for the product/ the preparatio
	ion of the penetration times, rates of diffusion and t
degradation	
Material of gloves:	
The selection of the suitable gloves does not only a and varies from manufacturer to manufacturer.	depend on the material, but also on further marks of qual
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
observed.	
For the permanent contact of a maximum of suitable:	15 minutes gloves made of the following materials a
Natural rubber, NR	
Nitrile rubber, NBR	
Eye/face protection: Safety glasses	
Body protection: Protective work clothing.	
body protection: Frotective work clothing.	
SECTION 9: Physical and chemical propert	ies
9.1 Information on basic physical and chemical p	properties
General Information:	•
Colour:	Colourless
Odour:	Odourless
Odour threshold:	Not determined.
Melting point/freezing point:	no information available
Boiling point or initial boiling point and boiling	
range:	no information available
Flammability:	no information available
Lower and upper explosion limit:	
Lower:	
	no information available
Upper:	no information available
Upper: Flash point:	no information available no information available
Upper: Flash point: Ignition temperature:	no information available no information available no information available
Upper: Flash point: Ignition temperature: Decomposition temperature:	no information available no information available
Upper: Flash point: Ignition temperature: Decomposition temperature: Viscosity:	no information available no information available no information available Not determined.
Upper: Flash point: Ignition temperature: Decomposition temperature: Viscosity: Kinematic viscosity:	no information available no information available no information available Not determined. no information available
Upper: Flash point: Ignition temperature: Decomposition temperature: Viscosity: Kinematic viscosity: Dynamic viscosity:	no information available no information available no information available Not determined.
Upper: Flash point: Ignition temperature: Decomposition temperature: Viscosity: Kinematic viscosity: Dynamic viscosity: Solubility:	no information available no information available no information available Not determined. no information available no information available
Upper: Flash point: Ignition temperature: Decomposition temperature: Viscosity: Kinematic viscosity: Dynamic viscosity: Solubility: Water:	no information available no information available no information available Not determined. no information available no information available Fully miscible
Upper: Flash point: Ignition temperature: Decomposition temperature: Viscosity: Kinematic viscosity: Dynamic viscosity: Solubility: Water: Partition coefficient n-octanol/water (log value):	no information available no information available no information available Not determined. no information available no information available Fully miscible no information available
Upper: Flash point: Ignition temperature: Decomposition temperature: Viscosity: Kinematic viscosity: Dynamic viscosity: Solubility: Water: Partition coefficient n-octanol/water (log value): Vapour pressure:	no information available no information available no information available Not determined. no information available no information available Fully miscible
Upper: Flash point: Ignition temperature: Decomposition temperature: Viscosity: Kinematic viscosity: Dynamic viscosity: Solubility: Water: Partition coefficient n-octanol/water (log value): Vapour pressure:	no information available no information available no information available Not determined. no information available no information available Fully miscible no information available
Upper: Flash point: Ignition temperature: Decomposition temperature: Viscosity: Kinematic viscosity: Dynamic viscosity: Solubility: Water: Partition coefficient n-octanol/water (log value): Vapour pressure: Density and/or relative density:	no information available no information available no information available Not determined. no information available no information available Fully miscible no information available
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Upper: Flash point: Ignition temperature: Decomposition temperature: Viscosity: Kinematic viscosity: Dynamic viscosity: Solubility: Water: Partition coefficient n-octanol/water (log value): Vapour pressure: Density and/or relative density: Density: Relative density:	no information available no information available no information available Not determined. no information available no information available no information available no information available
Upper: Flash point: Ignition temperature: Decomposition temperature: Viscosity: Kinematic viscosity: Dynamic viscosity: Solubility: Water: Partition coefficient n-octanol/water (log value): Vapour pressure: Density and/or relative density: Density: Relative density: 9.2 Other information	no information available no information available no information available Not determined. no information available no information available no information available no information available Not determined
Upper: Flash point: Ignition temperature: Decomposition temperature: Viscosity: Kinematic viscosity: Dynamic viscosity: Solubility: Water: Partition coefficient n-octanol/water (log value): Vapour pressure: Density and/or relative density: Density: Relative density: 9.2 Other information Appearance:	no information available no information available no information available Not determined. no information available no information available no information available no information available Not determined no information available
Upper: Flash point: Ignition temperature: Decomposition temperature: Viscosity: Kinematic viscosity: Dynamic viscosity: Dynamic viscosity: Solubility: Water: Partition coefficient n-octanol/water (log value): Vapour pressure: Density and/or relative density: Density: Relative density: 9.2 Other information Appearance: Form:	no information available no information available no information available Not determined. no information available no information available no information available no information available Not determined
Upper: Flash point: Ignition temperature: Decomposition temperature: Viscosity: Kinematic viscosity: Dynamic viscosity: Solubility: Water: Partition coefficient n-octanol/water (log value): Vapour pressure: Density and/or relative density: Density: Relative density: 9.2 Other information Appearance:	no information available no information available no information available Not determined. no information available no information available no information available no information available Not determined no information available
Upper: Flash point: Ignition temperature: Decomposition temperature: Viscosity: Kinematic viscosity: Dynamic viscosity: Solubility: Water: Partition coefficient n-octanol/water (log value): Vapour pressure: Density and/or relative density: Density: Relative density: 9.2 Other information Appearance: Form: Important information on protection of health an	no information available no information available no information available Not determined. no information available no information available no information available no information available Not determined no information available
Upper: Flash point: Ignition temperature: Decomposition temperature: Viscosity: Kinematic viscosity: Dynamic viscosity: Dynamic viscosity: Solubility: Water: Partition coefficient n-octanol/water (log value): Vapour pressure: Density and/or relative density: Density: Relative density: 9.2 Other information Appearance: Form: Important information on protection of health an environment, and on safety:	no information available no information available no information available Not determined. no information available ro information available no information available no information available Not determined no information available
Upper: Flash point: Ignition temperature: Decomposition temperature: Viscosity: Kinematic viscosity: Dynamic viscosity: Solubility: Water: Partition coefficient n-octanol/water (log value): Vapour pressure: Density and/or relative density: Density: Relative density: 9.2 Other information Appearance: Form: Important information on protection of health an	no information available no information available no information available Not determined. no information available no information available no information available no information available Not determined no information available

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Trade name: Sodium Thiosulfate

· Molecular weight

158.11 g/mol

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:
- Hazardous reactions possible in contact with: strong oxidizing agents acids
- 10.4 Conditions to avoid: high ttemperatures
- 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: No further relevant informations available.

SECTION 11: Toxicological information

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

SECTION 12: Ecological information

- · 12.1 Toxicity:
- Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability: No further relevant information available.
- · 12.3 Bioaccumulative potential: No further relevant information available.
- · 12.4 Mobility in soil: No further relevant information available.
- 12.5 Results of PBT and vPvB assessment:
- · PBT: PBT assessment not available.
- · **vPvB**: vPvB assessment not available.
- 12.6 Endocrine disrupting properties: For information on endocrine disrupting properties see section 11.
- · 12.7 Other adverse effects:
- · Additional ecological information:
- · General notes:

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

Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water.

SECTION 13: Disposal considerations

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

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Trade name: Sodium Thiosulfate

· 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

Void		
Void		
Void		
Void		
No		
Not applicable.		
· 14.7 Maritime transport in bulk according to IMO		
Not applicable.		
Void		
	Void Void Void No Not applicable. to IMO 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 Substance is not listed.
- DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II
- Substance is not listed.
- · REGULATION (EU) 2019/1148
- · Annex I RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3)) Substance is not listed.
- · Annex II REPORTABLE EXPLOSIVES PRECURSORS Substance is not listed.
- Regulation (EC) No 273/2004 on drug precursors Substance is not listed.
- Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors Substance is not listed.
- · National regulations:
- · Water hazard class: Water hazard class 1 (Assessment by list): 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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Revision: 10.02.2023

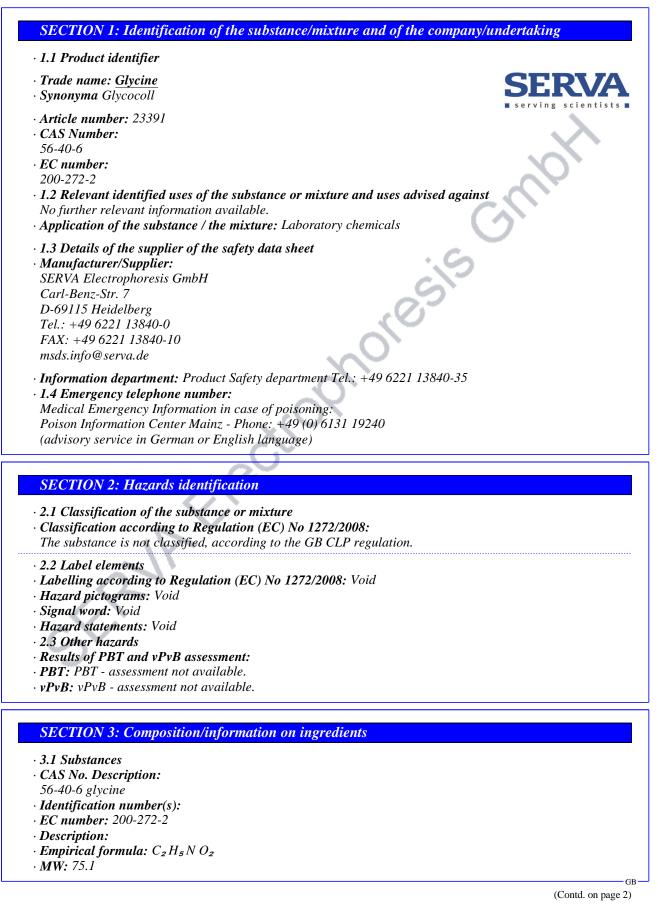
Trade name: Sodium Thiosulfate

	(Contd. of pag
Depa	rtment issuing SDS: Product safety department
-	<i>act:</i> +49 6221 13840-35
Date	of previous version: 02.02.2016
	eviations and acronyms:
	versistent, bioaccumulative, toxic substance (UK REACH)
	very persistent, very bioaccumulative substance (UK REACH)
	ACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
GB CI	P: Regulation on classification, labelling and packaging of substances and mixtures
bw: bo	dy weight
ADR:	Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning
Intern	utional 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
EINE	S: European Inventory of Existing Commercial Chemical Substances
CAS:	Chemical Abstracts Service (division of the American Chemical Society)
PBT:	Persistent, Bioaccumulative and Toxic
vPvB	very Persistent and very Bioaccumulative

Printing date 10.02.2023

Version number 2

Revision: 10.02.2023



Printing date 10.02.2023

Version number 2

Revision: 10.02.2023

Trade name: Glycine

(Contd. of page 1)

SECTION 4: First aid measures

- 4.1 Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact:
- 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. Do not induce vomiting!

• 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 Ammonia (NH₃)

 $\frac{1}{52} \int duice for fire$

• 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
 Avoid formation of dust.
 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- \cdot 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: Keep ignition sources away Do not smoke.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage

- Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
- · Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep receptacle tightly sealed and store in dry conditions.

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Printing date 10.02.2023

Version number 2

Revision: 10.02.2023

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Trade name: Glycine

· 7.3 Specific end use(s): No further relevant information available.

SECTION 8: Exposure controls/personal protection

- · 8.1 Control parameters
- Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · 8.2 Exposure controls
- · Appropriate engineering controls: No further data; see item 7.
- · Individual protection measures, such as 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.
- Hand protection:

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.

• *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
- Eye/face protection: Safety glasses
- **Body protection:** Protective work clothing.

*

SECTION 9: Physical and chemical properties

• General Information:		
· Physical state:	Solid.	
· Colour:	White	
· Odour:	Odourless	
· Odour threshold:	Not determined.	
 Melting point/freezing point: 	no information available	
· Boiling point or initial boiling point an	d boiling	
range:	no information available	
· Flammability:	no information available	
• Lower and upper explosion limit:		
· Lower:	no information available	
· Upper:	no information available	
· Flash point:	no information available	
· Decomposition temperature:	> 233 °C	
· <i>pH</i> :	5.9-6.4	
· Viscosity:		
· Kinematic viscosity:	no information available	

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Trade name: Glycine
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	(Contd. of page 3
· Dynamic viscosity:	no information available
· Solubility:	·
• Water at 20 •C:	min. 5 g/l
· Partition coefficient n-octanol/water (log value):	Not determined.
· Vapour pressure:	Not applicable.
· Density and/or relative density:	
· Density at 20 °C:	1.16 g/cm ³
· Relative density:	Not determined.
· Particle characteristics	No information available
· 9.2 Other information	
· Appearance:	
· Form:	Crystalline
· Important information on protection of health and	l
environment, and on safety:	
· Explosive properties:	Product is not explosive. However, formation o explosive dust-/air mixtures are possible.
· Molecular weight	75.1 g/mol

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:

Avoid contact with: Strong acids strong bases

Oxidizers

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

SECTION 11: Toxicological information

· 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

• Acute toxicity: Based on available data, the classification criteria are not met.

- Skin corrosion/irritation: Based on available data, the classification criteria are not met.
- Serious eye damage/irritation: Based on available data, the classification criteria are not met.
- Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.
- · Germ cell mutagenicity: Based on available data, the classification criteria are not met.
- · Carcinogenicity: Based on available data, the classification criteria are not met.
- Reproductive toxicity: Based on available data, the classification criteria are not met.
- STOT-single exposure: Based on available data, the classification criteria are not met.
- · STOT-repeated exposure: Based on available data, the classification criteria are not met.
- · Aspiration hazard: Based on available data, the classification criteria are not met.
- 11.2 Information on other hazards:
- Endocrine disrupting properties: Substance is not listed.

SECTION 12: Ecological information

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

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Trade name: Glycine

· 12.4 Mobility in soil: No further relevant information available.

· 12.5 Results of PBT and vPvB assessment:

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

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

· 12.6 Endocrine disrupting properties: For information on endocrine disrupting properties see section 11.

· 12.7 Other adverse effects:

· Additional ecological information:

· General notes:

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

Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

• *Recommendation Disposal must be made according to official regulations.*

· Uncleaned packagings:

· Recommendation:

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

product.

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

SECTION 14: Transport information

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

*

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 Substance is not listed.

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

Substance is not listed.

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Version number 2

Revision: 10.02.2023

Trade name: Glycine

Printing date 10.02.2023

- · REGULATION (EU) 2019/1148
- Annex I RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))
- Substance is not listed. • Annex II - REPORTABLE EXPLOSIVES PRECURSORS Substance is not listed.
- Regulation (EC) No 273/2004 on drug precursors Substance is not listed.
- Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors Substance is not listed.

· National regulations:

- Water hazard class: Water hazard class 1 (Assessment by list): 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
- · Date of previous version: 06.03.2014
- 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 (UK REACH)

- vPvB: very persistent, very bioaccumulative substance (UK REACH) UK REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
- *GB CLP: Regulation on classification, labelling and packaging of substances and mixtures*
- bw: body weight

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

- EINECS: European Inventory of Existing Commercial Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)

PBT: Persistent, Bioaccumulative and Toxic

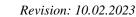
vPvB: very Persistent and very Bioaccumulative

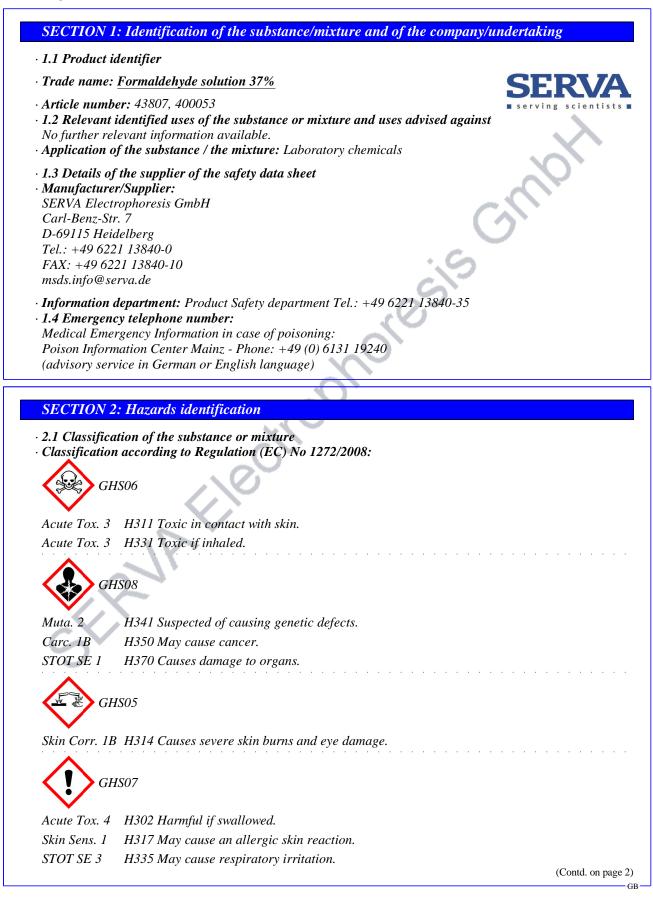
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Version number 7

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Printing date 10.02.2023

Version number 7

Trade name: Formaldehyde solution 32	7%
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	(Contd. of page
2.2 Label	elements
	according to Regulation (EC) No 1272/2008:
	ict is classified and labelled according to the GB CLP regulation.
	ictograms: GHS05, GHS06, GHS08
Signal wo	ord: Danger
Hazard-d	etermining components of labelling:
formaldel	
, methanol	
Hazard st	tatements:
H302	Harmful if swallowed.
H311+H.	331 Toxic in contact with skin or if inhaled.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H370	Causes damage to organs.
H335	May cause respiratory irritation.
Precautio	onary statements
P260	Avoid breathing mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing/eye protection/heari
	protection.
P301+P3	10 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P302+P3	52 IF ON SKIN: Wash with plenty of soap and water.
P304+P3	40 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P3 Labelling	 51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing. of packages where the contents do not exceed 125 ml
P305+P3 Labelling Hazard p	51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing. of packages where the contents do not exceed 125 ml ictograms GHS05, GHS06, GHS08
P305+P3 Labelling Hazard p	51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing. of packages where the contents do not exceed 125 ml
P305+P3 Labelling Hazard p Signal wo	51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing. of packages where the contents do not exceed 125 ml ictograms GHS05, GHS06, GHS08
P305+P3 Labelling Hazard p Signal wo	51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing. of packages where the contents do not exceed 125 ml ictograms GHS05, GHS06, GHS08 ord Danger etermining components of labelling:
P305+P3 Labelling Hazard p Signal wo Hazard-d	51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing. of packages where the contents do not exceed 125 ml ictograms GHS05, GHS06, GHS08 ord Danger etermining components of labelling:
P305+P3 Labelling Hazard p Signal wo Hazard-d formaldel	51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing. of packages where the contents do not exceed 125 ml ictograms GHS05, GHS06, GHS08 ord Danger letermining components of labelling: hyde
P305+P3 Labelling Hazard p Signal we Hazard-d formaldel methanol Hazard su	 51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing. of packages where the contents do not exceed 125 ml ictograms GHS05, GHS06, GHS08 ord Danger ietermining components of labelling: hyde tatements 331 Toxic in contact with skin or if inhaled.
P305+P3 Labelling Hazard p Signal we Hazard-d formaldel methanol Hazard su	51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing. of packages where the contents do not exceed 125 ml ictograms GHS05, GHS06, GHS08 ord Danger determining components of labelling: hyde
P305+P3 Labelling Hazard p Signal wo Hazard-d formaldei methanol Hazard si H311+H3 H314 H317	 51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing. of packages where the contents do not exceed 125 ml ictograms GHS05, GHS06, GHS08 ord Danger etermining components of labelling: hyde byde battements B31 Toxic in contact with skin or if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction.
P305+P3 Labelling Hazard p Signal wo Hazard-d formaldel methanol Hazard si H311+H3 H314	 51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing. of packages where the contents do not exceed 125 ml ictograms GHS05, GHS06, GHS08 ord Danger ietermining components of labelling: hyde batements 831 Toxic in contact with skin or if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Suspected of causing genetic defects.
P305+P3 Labelling Hazard p Signal we Hazard-d formaldel methanol Hazard si H311+H3 H314 H317 H341 H350	 51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing. of packages where the contents do not exceed 125 ml ictograms GHS05, GHS06, GHS08 ord Danger ietermining components of labelling: hyde byde tatements 331 Toxic in contact with skin or if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Suspected of causing genetic defects. May cause cancer.
P305+P3 Labelling Hazard p Signal we Hazard-d formaldel methanol Hazard si H311+H3 H314 H317 H341	 51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing. of packages where the contents do not exceed 125 ml ictograms GHS05, GHS06, GHS08 ord Danger ietermining components of labelling: hyde batements 831 Toxic in contact with skin or if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Suspected of causing genetic defects.
P305+P3 Labelling Hazard p Signal we Hazard-d formaldel methanol Hazard st H311+H3 H314 H317 H341 H350 H370	 51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing. of packages where the contents do not exceed 125 ml ictograms GHS05, GHS06, GHS08 ord Danger ietermining components of labelling: hyde teterments 331 Toxic in contact with skin or if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Suspected of causing genetic defects. May cause cancer. Causes damage to organs. mary statements
P305+P3 Labelling Hazard p Signal we Hazard-d formaldel methanol Hazard st H311+H3 H314 H317 H341 H350 H370	 51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing. of packages where the contents do not exceed 125 ml ictograms GHS05, GHS06, GHS08 ord Danger ietermining components of labelling: hyde teterments 331 Toxic in contact with skin or if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Suspected of causing genetic defects. May cause cancer. Causes damage to organs. mary statements
P305+P3 Labelling Hazard p Signal we Hazard-d formaldel methanol Hazard su H311+H3 H314 H314 H317 H341 H350 H370 Precautic	 51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing. cof packages where the contents do not exceed 125 ml ictograms GHS05, GHS06, GHS08 ord Danger betermining components of labelling: hyde Ratements 831 Toxic in contact with skin or if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Suspected of causing genetic defects. May cause cancer. Causes damage to organs. mary statements Wear protective gloves/protective clothing/eye protection/face protection/hearin protection.
P305+P3 Labelling Hazard p Signal we Hazard-d formaldel methanol Hazard su H311+H3 H314 H317 H341 H350 H370 Precautio P280 P301+P3	 51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing. of packages where the contents do not exceed 125 ml ictograms GHS05, GHS06, GHS08 ord Danger etermining components of labelling: hyde ratements 831 Toxic in contact with skin or if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Suspected of causing genetic defects. May cause cancer. Causes damage to organs. mary statements Wear protective gloves/protective clothing/eye protection/face protection/hearin protection. 10 IF SWALLOWED: Immediately call a POISON CENTER/doctor
P305+P3 Labelling Hazard p Signal we Hazard-d formaldel methanol Hazard si H311+H3 H314 H317 H341 H350 H370 Precautio P280 P301+P3 P302+P3	 51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing. a of packages where the contents do not exceed 125 ml ictograms GHS05, GHS06, GHS08 b ord Danger etermining components of labelling: hyde ratements 831 Toxic in contact with skin or if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Suspected of causing genetic defects. May cause cancer. Causes damage to organs. mary statements 10 IF SWALLOWED: Immediately call a POISON CENTER/doctor 10 IF SWALLOWED: Immediately call a POISON CENTER/doctor 15 IF ON SKIN: Wash with plenty of soap and water.
P305+P3 Labelling Hazard p Signal we Hazard-d formaldel methanol Hazard si H311+H3 H314 H317 H341 H350 H370 Precautio P280 P301+P3 P302+P3	 51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing. cof packages where the contents do not exceed 125 ml ictograms GHS05, GHS06, GHS08 ord Danger etermining components of labelling: hyde ratements 17 Toxic in contact with skin or if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Suspected of causing genetic defects. May cause cancer. Causes damage to organs. 10 IF SWALLOWED: Immediately call a POISON CENTER/doctor 12 IF ON SKIN: Wash with plenty of soap and water. 51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do.
P305+P3 Labelling Hazard p Signal we Hazard-d formaldel methanol Hazard si H311+H3 H314 H317 H341 H350 H370 Precautio P280 P301+P3 P302+P3	 51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing. a of packages where the contents do not exceed 125 ml ictograms GHS05, GHS06, GHS08 b ord Danger b etermining components of labelling: hyde tatements 1531 Toxic in contact with skin or if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Suspected of causing genetic defects. May cause cancer. Causes damage to organs. mary statements Wear protective gloves/protective clothing/eye protection/face protection/hearin protection. 10 IF SWALLOWED: Immediately call a POISON CENTER/doctor 15 IF ON SKIN: Wash with plenty of soap and water. 51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing.
P305+P3 Labelling Hazard p Signal wo Hazard-d formaldel methanol Hazard su H311+H3 H314 H317 H341 H350 H370 Precautio P280 P301+P3 P302+P3 P305+P3 2.3 Other	 51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing. a of packages where the contents do not exceed 125 ml ictograms GHS05, GHS06, GHS08 brd Danger betermining components of labelling: hyde tatements 15 Toxic in contact with skin or if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Suspected of causing genetic defects. May cause cancer. Causes damage to organs. mary statements 10 IF SWALLOWED: Immediately call a POISON CENTER/doctor 15 IF ON SKIN: Wash with plenty of soap and water. 51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing.
P305+P3 Labelling Hazard p Signal we Hazard-d formaldel methanol Hazard st H311+H3 H314 H317 H341 H350 H370 Precautio P280 P301+P3 P302+P3 P305+P3 2.3 Other Results of	 51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing. a of packages where the contents do not exceed 125 ml ictograms GHS05, GHS06, GHS08 b ord Danger b etermining components of labelling: hyde tatements 1531 Toxic in contact with skin or if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Suspected of causing genetic defects. May cause cancer. Causes damage to organs. mary statements Wear protective gloves/protective clothing/eye protection/face protection/hearin protection. 10 IF SWALLOWED: Immediately call a POISON CENTER/doctor 15 IF ON SKIN: Wash with plenty of soap and water. 51+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing.

SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

*

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

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· Dangerous compone	ents:	
CAS: 50-00-0	formaldehyde	37%
EINECS: 200-001-8	-8 Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; & Muta. 2, H341; Carc. 1B, H350; Acute Tox. 1B, H314; Acute Tox. 3, H317	
	Specific concentration limits: Skin Corr. 1B; H314: $C \ge 25 \%$	
	<i>Skin Irrit.</i> 2; <i>H315:</i> 5 % ≤ C < 25 %	
	<i>Eye Irrit.</i> 2; <i>H319:</i> $5 \% \le C < 25 \%$	
	Skin Sens. 1; H317: C ≥0.2 %	
	STOT SE 3; H335: C ≥ 5 %	
CAS: 67-56-1	methanol	5-15%
EINECS: 200-659-6	 Flam. Liq. 2, H225; Acute Tox. 3, H301; Acute Tox. 3, H331; STOT SE 1, H370 	

· Additional information

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

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:

Immediate wash with copious amounts of water and soap; rinse thoroughly; seek medical advice.

• After eye contact:

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

• After swallowing:

Wash out mouth instantly. Drink copious amounts of water and provide fresh air. Call for doctor immediately.

Do not induce vomiting!

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

SECTION 5: Firefighting measures

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

SECTION 6: Accidental release measures

 6.1 Personal precautions, protective equipment and emergency procedures Wear protective clothing.
 Ensure adequate ventilation Avoid contact with the eyes and skin.

• 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.

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Disn	lethods and material for containment and cleaning up ose contaminated material as waste according to item 13.
-	rb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
	eference to other sections
	ection 7 for information on safe handling
	ection 8 for information on personal protection equipment.
See S	ection 13 for disposal information.
SEC	TION 7: Handling and storage
7.1 P	recautions for safe handling:
	l contact with eyes and skin.
	re good ventilation/exhaustion at the workplace.
	and handle receptacle with care.
	<i>mation about protection against explosions and fires:</i> ignition sources away - Do not smoke.
	respiratory protective device available.
-	
7.2 C Stora	onditions for safe storage, including any incompatibilities
	ge irements to be met by storerooms and receptacles: Store only in the original receptacle.
	mation about storage in one common storage facility: Store away from oxidising agents.
	ner information about storage conditions:
	under lock and key and with access restricted to technical experts or their assistants only.
	receptacle tightly sealed and store in dry conditions.
	receptacle tightly sealed and store in dry conditions. pecific end use(s): No further relevant information available.
7.3 S	
7.3 S SEC	pecific end use(s): No further relevant information available.
7.3 S SEC 8.1 C Comp	pecific end use(s): No further relevant information available. TION 8: Exposure controls/personal protection fontrol parameters ponents with limit values that require monitoring at the workplace:
7.3 S SEC 8.1 C Comp 50-00	pecific end use(s): No further relevant information available. TION 8: Exposure controls/personal protection fontrol parameters ponents with limit values that require monitoring at the workplace: 0-0 formaldehyde (37%)
7.3 S SEC 8.1 C Comp 50-00	pecific end use(s): No further relevant information available. TION 8: Exposure controls/personal protection fontrol parameters ponents with limit values that require monitoring at the workplace: 0-0 formaldehyde (37%) Short-term value: 2.5 mg/m ³ , 2 ppm
7.3 S SEC 8.1 C Comp 50-00	pecific end use(s): No further relevant information available. TION 8: Exposure controls/personal protection fontrol parameters ponents with limit values that require monitoring at the workplace: 0-0 formaldehyde (37%)
7.3 S SEC 8.1 C Comp 50-00 WEL	pecific end use(s): No further relevant information available. TION 8: Exposure controls/personal protection Control parameters conents with limit values that require monitoring at the workplace: -0 formaldehyde (37%) Short-term value: 2.5 mg/m ³ , 2 ppm Long-term value: 2.5 mg/m ³ , 2 ppm
7.3 S SEC 8.1 C Comp 50-00 WEL 67-50	pecific end use(s): No further relevant information available. TION 8: Exposure controls/personal protection fontrol parameters ponents with limit values that require monitoring at the workplace: D-0 formaldehyde (37%) Short-term value: 2.5 mg/m ³ , 2 ppm Long-term value: 2.5 mg/m ³ , 2 ppm Carc
7.3 S SEC 8.1 C Comp 50-00 WEL 67-50	pecific end use(s): No further relevant information available. TION 8: Exposure controls/personal protection Control parameters ponents with limit values that require monitoring at the workplace: D-0 formaldehyde (37%) Short-term value: 2.5 mg/m ³ , 2 ppm Long-term value: 2.5 mg/m ³ , 2 ppm Carc 5-1 methanol (5-15%)
7.3 S SEC 8.1 C Comp 50-00 WEL 67-50	pecific end use(s): No further relevant information available. TION 8: Exposure controls/personal protection ontrol parameters control parameters control with limit values that require monitoring at the workplace: -0 formaldehyde (37%) Short-term value: 2.5 mg/m³, 2 ppm Long-term value: 2.5 mg/m³, 2 ppm Carc 5-1 methanol (5-15%) Short-term value: 333 mg/m³, 250 ppm
7.3 S SEC 8.1 C Comp 50-00 WEL 67-50 WEL	pecific end use(s): No further relevant information available. TION 8: Exposure controls/personal protection Control parameters conents with limit values that require monitoring at the workplace: -0 formaldehyde (37%) Short-term value: 2.5 mg/m³, 2 ppm Long-term value: 2.5 mg/m³, 2 ppm Carc 5-1 methanol (5-15%) Short-term value: 333 mg/m³, 250 ppm Long-term value: 266 mg/m³, 200 ppm
7.3 S SEC 8.1 C Comp 50-00 WEL 67-50 WEL	pecific end use(s): No further relevant information available. TION 8: Exposure controls/personal protection fontrol parameters ponents with limit values that require monitoring at the workplace: D-0 formaldehyde (37%) Short-term value: 2.5 mg/m ³ , 2 ppm Long-term value: 2.5 mg/m ³ , 2 ppm Carc 5-1 methanol (5-15%) Short-term value: 333 mg/m ³ , 250 ppm Long-term value: 266 mg/m ³ , 200 ppm Sk
7.3 S SEC 8.1 C Comp 50-00 WEL 67-50 WEL Addiu 8.2 E Appr	pecific end use(s): No further relevant information available. TION 8: Exposure controls/personal protection Control parameters ponents with limit values that require monitoring at the workplace: -0 formaldehyde (37%) Short-term value: 2.5 mg/m ³ , 2 ppm Long-term value: 2.5 mg/m ³ , 2 ppm Carc 5-1 methanol (5-15%) Short-term value: 333 mg/m ³ , 250 ppm Long-term value: 266 mg/m ³ , 200 ppm Sk ional information: The lists that were valid during the creation were used as basis.

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work.

Store protective clothing separately. Avoid contact with the eyes and skin.

• **Breathing equipment:** Short term filter device: Filter P3.

• Hand protection:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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Protective gloves.

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.

 \cdot For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:

Rubber gloves PVA gloves

- Eye/face protection: Tightly sealed goggles.
- · Body protection: Protective work clothing.

SECTION 9: Physical and chemical properties

• 9.1 Information on basic physical and chemical p	ronerties	
· General Information:	opennes	
· Physical state:	Fluid	
· Colour:	Colourless	
· Odour:	Pungent	
• Odour threshold:	Not determined.	
· Melting point/freezing point:	no information available	
• Boiling point or initial boiling point and boiling		
range:	no information available	
· Flammability:	no information available	
· Lower and upper explosion limit:	5	
· Lower:	no information available	
· Upper:	no information available	
· Flash point:	no information available	
· Decomposition temperature:	no information available	
· Viscosity:	·	
· Kinematic viscosity:	no information available	
· Dynamic viscosity:	no information available	
· Solubility:	•	
· Water:	Fully miscible	
· Partition coefficient n-octanol/water (log value):	no information available	
· Vapour pressure:	no information available	
· Density and/or relative density:		
· Density:	no information available	
· Relative density:	no information available	
• 9.2 Other information	There are no more data available.	
· Appearance:		
· Form:	Solution	
· Important information on protection of health and	d	
environment, and on safety:		
• Explosive properties:	Not determined.	
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· Solvent content:

• Organic solvents:

52.0 %

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: heat, flames and sparks
- \cdot 10.5 Incompatible materials:
- Avoid contact with strong oxidizers, reducing agents, strong acids, strong bases.
- 10.6 Hazardous decomposition products: In case of fire: See Section 5

SECTION 11: Toxicological information

· 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

- Acute toxicity:
- Harmful if swallowed.
- Toxic in contact with skin or if inhaled.
- · LD/LC50 values that are relevant for classification:
- 50-00-0 formaldehyde
- *Oral LD50* >200 mg/kg (rat)
- · Skin corrosion/irritation: Causes severe skin burns and eye damage.
- · Serious eye damage/irritation: Based on available data, the classification criteria are not met.
- · Respiratory or skin sensitisation: May cause an allergic skin reaction.
- · Germ cell mutagenicity: Suspected of causing genetic defects.
- · Carcinogenicity: May cause cancer.
- Reproductive toxicity: Based on available data, the classification criteria are not met.
- STOT-single exposure:
- Causes damage to organs.
- 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.
- · Additional toxicological information:
- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction): Suspected of causing cancer.
- · 11.2 Information on other hazards:
- · Endocrine disrupting properties:
- None of the ingredients is listed.

SECTION 12: Ecological information

- · 12.1 Toxicity:
- Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability: No further relevant information available.
- 12.3 Bioaccumulative potential: No further relevant information available.
- · 12.4 Mobility in soil: No further relevant information available.
- · 12.5 Results of PBT and vPvB assessment:
- · **PBT:** PBT assessment not available.
- · **vPvB**: vPvB assessment not available.

• 12.6 Endocrine disrupting properties: For information on endocrine disrupting properties see section 11.

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• 12.7 Other adverse effects:

• Additional ecological information:

• General notes:

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

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

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Disposal must be made according to official regulations.

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.

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

SECTION 14: Transport information	
· 14.1 UN number or ID number · ADR, IMDG, IATA	UN2209
· 14.2 UN proper shipping name · ADR · IMDG, IATA	2209 FORMALDEHYDE SOLUTION FORMALDEHYDE SOLUTION
· 14.3 Transport hazard class(es)	
· ADR, IMDG, IATA	
· Class:	8 Corrosive substances.
· Label:	8
· 14.4 Packing group · ADR, IMDG, IATA	III
 14.5 Environmental hazards Marine pollutant: 	No
· 14.6 Special precautions for user	Warning: Corrosive substances.
· Hazard identification number (Kemler code):	80
· EMS Number:	F-A, S-B
· Stowage Category	A
· 14.7 Maritime transport in bulk according to IM	
instruments	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5L
\cdot Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 ml
T c c	Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
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· Tunnel restriction code	E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
· UN ''Model Regulation'':	UN 2209 FORMALDEHYDE SOLUTION, 8, III

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.
- Seveso category H2 ACUTE TOXIC
- · Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t

• REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 28, 69, 72

· 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.

· REGULATION (EU) 2019/1148

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

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

· National regulations:

· Information about limitation of use:

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

• Technical instructions (air):

Class	Share in %
Wasser	30-50
Ι	20-40
III	5-15

- 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.

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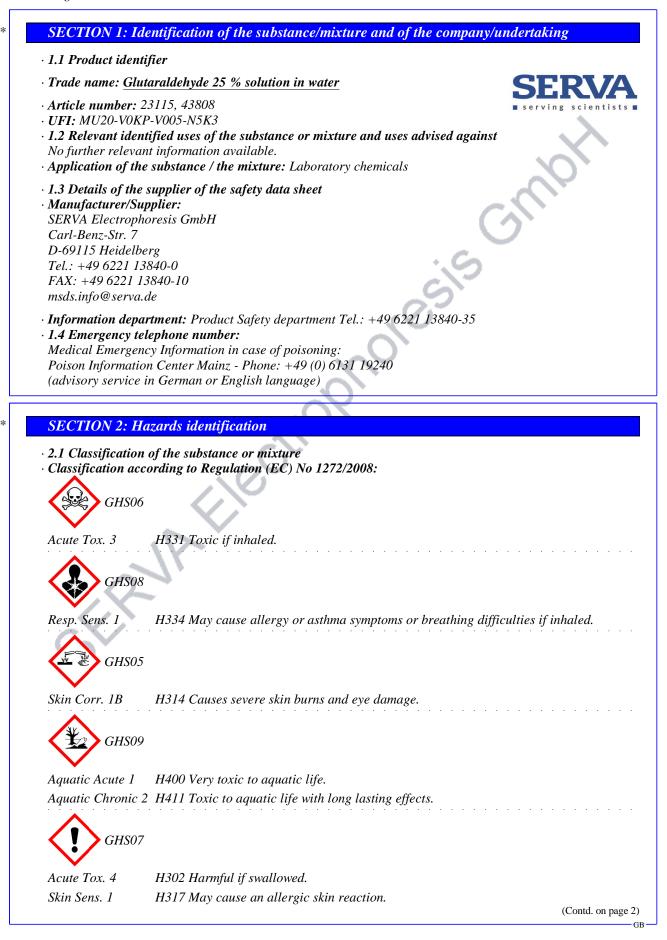
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Relevant phrases	
H225 Highly flammable liquid and vapour.	
H301 Toxic if swallowed.	
H311 Toxic in contact with skin.	
H314 Causes severe skin burns and eye damage.	
H317 May cause an allergic skin reaction.	
H331 Toxic if inhaled.	
H341 Suspected of causing genetic defects.	
H350 May cause cancer.	
H370 Causes damage to organs.	
Department issuing SDS: Product safety depart	ment
Contact: +49 6221 13840-35	
Date of previous version: 01.02.2016	
Abbreviations and acronyms:	
	narchandises dangereuses par chemin de fer (Regulations Concerning t
International Transport of Dangerous Goods by Rail) ICAO: International Civil Aviation Organisation	
PBT: persistent, bioaccumulative, toxic substance (UK REAC	H
vPvB: very persistent, very bioaccumulative substance (UK REAC	
UK REACH: Regulation concerning the Registration, Evaluat	
GB CLP: Regulation on classification, labelling and packagin	
bw: body weight	
	handises dangereuses par route (European Agreement Concerning t
International Carriage of Dangerous Goods by Road)	
IMDG: International Maritime Code for Dangerous Goods	
IATA: International Air Transport Association	alling of Chamicala
GHS: Globally Harmonised System of Classification and Lab EINECS: European Inventory of Existing Commercial Chemic	
ELINCS: European List of Notified Chemical Substances	ai buosiances
CAS: Chemical Abstracts Service (division of the American C	hemical Society)
LC50: Lethal concentration, 50 percent	
LD50: Lethal dose, 50 percent	
PBT: Persistent, Bioaccumulative and Toxic	
vPvB: very Persistent and very Bioaccumulative	
Flam. Liq. 2: Flammable liquids – Category 2	
Acute Tox. 3: Acute toxicity – Category 3	
Acute Tox. 4: Acute toxicity – Category 4 Skin Corr. 1B: Skin corrosion/irritation – Category 1B	
Skin Corr. 1B: Skin corrosion/irritation – Category 1B Skin Sens. 1: Skin sensitisation – Category 1	
Muta. 2: Germ cell mutagenicity – Category 2	
Carc. 1B: Carcinogenicity – Category 1B	
STOT SE 1: Specific target organ toxicity (single exposure) –	Category 1

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Printing date 20.12.2022

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Trade name: Glutaraldehyde 25 % solution in water

STOT SE 3	(Contd. of page H335 May cause respiratory irritation.
2.2 Label eleme	
	rding to Regulation (EC) No 1272/2008:
	classified and labelled according to the GB CLP regulation.
	ams: GHS05, GHS06, GHS08, GHS09
Signal word: D	anger
	ining components of labelling:
glutaral	
Hazard stateme	
H302 Harmful i	
H331 Toxic if in	
	evere skin burns and eye damage.
	e allergy or asthma symptoms or breathing difficulties if inhaled.
	e an allergic skin reaction.
	e respiratory irritation.
H400 Very toxic	1 0
	iquatic life with long lasting effects.
Precautionary s	
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/heari
	protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P303+P361+P3	353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin w
	water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses present and easy to do. Continue rinsing.
Additional info	
	sive to the respiratory tract.
	ckages where the contents do not exceed 125 ml
	ams GHS05, GHS06, GHS08, GHS09
Signal word Da	nger
Hazard-determ	ining components of labelling:
glutaral	
Hazard stateme	nts
H331 Toxic if in	ıhaled.
H314 Causes se	vere skin burns and eye damage.
H334 May caus	e allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May caus	e an allergic skin reaction.
Precautionary s	statements
P280	Wear protective gloves/protective clothing/eye protection/face protection/heari protection.
P303 + P361 + P361	353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin w
1000 11001 110	water [or shower].
P305+P351+P3	338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do. Continue rinsing.
2.3 Other hazar	1
	as and vPvB assessment:
	essment not available.
IDI. IDI - USS	
vPvB: vPvB - a	seesment not available

SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

×

· Description: aqueous solution

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• Dangerous components:15-30%CAS: 111-30-8 EINECS: 203-856-5glutaral 		(C	Contd. of page 2)
EINECS: 203-856-5 Acute Tox. 3, H301; Acute Tox. 2, H330; Resp. Sens. 1, H334; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 2, H411; Skin Sens. 1A, H317; STOT SE 3, H335, EUH071	· Dangerous compone	ents:	
EINECS: 203-856-5 O Acute Tox. 3, H301; Acute Tox. 2, H330; O Resp. Sens. 1, H334; O Skin Corr. 1B, H314; O Aquatic Acute 1, H400; Aquatic Chronic 2, H411; \textcircled{O} Skin Sens. 1A, H317; STOT SE 3, H335, EUH071 Specific concentration limit: STOT SE 3; H335: $C \ge 0.5 \%$			15-30%
	EINECS: 203-856-5	Acute Tox. 3, H301; Acute Tox. 2, H330; Resp. Sens. 1, H334; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 2, H411; Skin Sens. 1A, H317; STOT SE 3, H335, EUH071 Specific concentration limit: STOT SE 3; H335: $C \ge 0.5 \%$	

Additional information

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

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

SECTION 4: First aid measures

- 4.1 Description of first aid measures
- · General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Remove contaminated clothing.

Remove breathing apparatus only after contaminated clothing have been completely removed. In case of irregular breathing or respiratory arrest provide artificial respiration.

- *After inhalation: Supply fresh air and to be sure call for a doctor.*
- · After skin contact:

Immediate wash with copious amounts of water and soap; rinse thoroughly; seek medical advice.

• After eye contact:

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

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

Do not induce vomitting - risc of chemical burns!

- **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: Formation of dangerous gases or vapours is possible in case of fire. In case of fire, the following can be formed, but not limited to: Carbon monoxide and carbon dioxide
- · 5.3 Advice for firefighters
- Protective equipment: Wear self-contained respiratory protective device.
- · Additional information

Collect contaminated fire fighting agent separately. It must not enter the sewage system. Dispose of fire debris and contaminated fire fighting media in accordance with official regulations.

SECTION 6: Accidental release measures

 • 6.1 Personal precautions, protective equipment and emergency procedures Wear protective clothing.
 Ensure adequate ventilation Avoid contact with the eyes and skin.

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• 6.2 Environmental precautions: Inform respective authorities in case of seepage into water course or sewage system. 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:

- Ensure good ventilation/exhaustion at the workplace. *Open and handle receptacle with care.* · Information about protection against explosions and fires:
- Keep ignition sources away Do not smoke. Keep respiratory protective device available.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage
- · Requirements to be met by storerooms and receptacles: Store at +2 to +8 $^{\circ}C$
- Store only in the original receptacle.
- Information about storage in one common storage facility: Store away from oxidising agents.
- · Further information about storage conditions: Store under lock and key and with access restricted to technical experts or their assistants only. *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

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

111-30-8 glutaral (15-30%)

WEL Short-term value: 0.2 mg/m³, 0.05 ppm Long-term value: 0.2 mg/m³, 0.05 ppm Sen

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

- · 8.2 Exposure controls
- Appropriate engineering controls: No further data; see item 7.
- · Individual protection measures, such as 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 A/P3

• Hand protection:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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(Contd. of page 4)

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Protective gloves.

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.

 \cdot For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:

Neoprene gloves Nitrile rubber, NBR

- · Eye/face protection: Tightly sealed goggles.
- · Body protection: Protective work clothing.

SECTION 9: Physical and chemical properties

• 9.1 Information on basic physical and chemical p	roperties
· General Information:	
· Physical state:	Fluid
· Colour:	Colourless
· Odour:	Unpleasant
• Odour threshold:	no information available
· Melting point/freezing point:	no information available
· Boiling point or initial boiling point and boiling	
range:	no information available
· Flammability:	no information available
· Lower and upper explosion limit:	
· Lower:	no information available
· Upper:	no information available
· Flash point:	no information available
· Decomposition temperature:	no information available
· pH at 20 °C:	3-4
· Viscosity:	
· Kinematic viscosity:	no information available
· Dynamic viscosity:	no information available
· Solubility:	
· Water:	Fully miscible
· Partition coefficient n-octanol/water (log value):	no information available
· Vapour pressure:	no information available
· Density and/or relative density:	
· Density:	no information available
· Relative density:	no information available
• 9.2 Other information	
· Appearance:	
· Form:	Solution
	(Contd. on page 6)

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(Contd. of page 5)

- Important information on protection of health and environment, and on safety:
- Explosive properties:

no 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: Vapours can form flammable and explosive mixtures with air.
- · 10.4 Conditions to avoid: high ttemperatures
- \cdot 10.5 Incompatible materials:

Avoid contact with:

Oxidizers, acids, bases

Amines

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

SECTION 11: Toxicological information

· 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

• Acute toxicity:

Harmful if swallowed.

Toxic if inhaled.

· LD/LC50 values that are relevant for classification:

	LD50	77 mg/kg (rat)
Inhalative	LC50/4h	0.28-0.39 mg/l (rat)
	LC50/96h	12.2 mg/l (trout)

· Skin corrosion/irritation: Causes severe skin burns and eye damage.

· Serious eye damage/irritation: Based on available data, the classification criteria are not met.

· Respiratory or skin sensitisation:

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

· 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.

· Other information (about experimental toxicology)

Glutaraldehyde is identified as a substance of very high concern in accordance with Article 57(f) of Regulation (EC) 1907/2006 (UK REACH) because it is a substance with respiratory sensitising properties for which there is scientific evidence of probable serious effects to human health which

gives rise to an equivalent level of concern to those substances listed in points (a) to (e) of Article 57 of the UK REACH regulation. (ECHA SVHC Support Document - Glutaral, CAS-No. 111-30-8; page 4)

• Additional toxicological information:

• Acute effects (acute toxicity, irritation and corrosivity) Corrosive to the respiratory tract.

 \cdot 11.2 Information on other hazards:

· Endocrine disrupting properties:

None of the ingredients is listed.

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^{· 10.2} Chemical stability:

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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.
- · 12.5 Results of PBT and vPvB assessment:
- · **PBT:** PBT assessment not available.
- · **vPvB**: vPvB assessment not available.
- 12.6 Endocrine disrupting properties: For information on endocrine disrupting properties see section 11.
- · 12.7 Other adverse effects:
- · Additional ecological information:
- · General notes:

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

Water danger class 3 (German Regulation) (Self-assessment): extremely hazardous for water.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Disposal must be made according to official regulations.

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.

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

SECTION 14: Transport information	
· 14.1 UN number or ID number · ADR, IMDG, IATA	UN2927
 · 14.2 UN proper shipping name · ADR · IMDG, IATA 	2927 TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (glutaral solution), ENVIRONMENTALLY HAZARDOUS TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S.
· 14.3 Transport hazard class(es)	(glutaral solution)
· Class: · Label:	6.1 Toxic substances. 6.1+8
	(Contd. on page 8

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	(Contd. of page
IMDG	
Class Label	6.1 Toxic substances. 6.1/8
IATA	
Class Label	6.1 Toxic substances. 6.1 (8)
14.4 Packing group ADR, IMDG, IATA	П
14.5 Environmental hazards	Product contains environmentally hazardou substances: glutaral
Special marking (ADR):	Symbol (fish and tree)
14.6 Special precautions for user	Warning: Toxic substances.
Hazard identification number (Kemler code): EMS Number:	68 F-A,S-B
Stowage Category	В
Stowage Code	SW2 Clear of living quarters.
14.7 Maritime transport in bulk according to IM	
instruments	Not applicable.
Transport/Additional information:	
ADR	
Limited quantities (LQ) Excepted quantities (EQ)	100 ml Code: E4
Excepted quantities (EQ)	Maximum net quantity per inner packaging: 1 ml
	Maximum net quantity per outer packaging: 500 ml
Transport category	2
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ)	100 ml Code: E4
Excepted quantities (EQ)	Code: E4 Maximum net quantity per inner packaging: 1 ml
	Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 2927 TOXIC LIQUID, CORROSIVE, ORGANIC
-	N.O.S. (GLUTARAL SOLUTION), 6.1 (8), I.
	ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

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

· Directive 2012/18/EU

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

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(Contd. of page 8)
· Seveso category
H2 ACUTE TOXIC
E1 Hazardous to the Aquatic Environment
• Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t • Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t • REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
• DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II
None of the ingredients is listed.
· REGULATION (EU) 2019/1148
• Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))
None of the ingredients is listed.
· Annex II - REPORTABLE EXPLOSIVES PRECURSORS
None of the ingredients is listed.
· Regulation (EC) No 273/2004 on drug precursors
None of the ingredients is listed.
• Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors
None of the ingredients is listed.
· National regulations:
• Technical instructions (air):
Class Share in %
Wasser 60-80
I 15-30

• Water hazard class: Water danger class 3 (Self-assessment): extremely 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

- H301 Toxic if swallowed.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H330 Fatal if inhaled.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335 May cause respiratory irritation.
- *H400 Very toxic to aquatic life.*
- H411 Toxic to aquatic life with long lasting effects.

EUH071 Corrosive to the respiratory tract.

· Department issuing SDS: Product safety department

· Contact: +49 6221 13840-35

- Date of previous version: 06.08.2021
- · 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 (UK REACH)

vPvB: very persistent, very bioaccumulative substance (UK REACH)

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

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

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Trade name: Glutaraldehyde 25 % solution in water

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bw: body weight	
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the	
International Carriage of Dangerous Goods by Road)	
IMDG: International Maritime Code for Dangerous Goods	
IATA: International Air Transport Association	
GHS: Globally Harmonised System of Classification and Labelling of Chemicals	
EINECS: European Inventory of Existing Commercial Chemical Substances	
ELINCS: European List of Notified Chemical Substances	
CAS: Chemical Abstracts Service (division of the American Chemical Society)	
LC50: Lethal concentration, 50 percent	
LD50: Lethal dose, 50 percent	
PBT: Persistent, Bioaccumulative and Toxic	
vPvB: very Persistent and very Bioaccumulative	
Acute Tox. 3: Acute toxicity – Category 3	
Acute Tox. 4: Acute toxicity – Category 4	
Acute Tox. 2: Acute toxicity – Category 2	
Skin Corr. 1B: Skin corrosion/irritation – Category 1B	
Resp. Sens. 1: Respiratory sensitisation – Category 1	
Skin Sens. 1: Skin sensitisation – Category 1	
Skin Sens. 1A: Skin sensitisation – Category 1A	
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3	
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1	
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2	
- GR	

*

*

Description: aqueous solution Dangerous components: Void	ion: 10.02.202
 Trade name: Solution A for SERVA HPE™ Silver Staining Kit Article number: 43809 1.2 Relevant identified uses of the substance or mixture and uses advised against No further relevant information available. Application of the substance / the mixture: Laboratory chemicals 1.3 Details of the supplier of the safety data sheet Manufacturer/Supplier: 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 telephone number: Medical Emergency telephone number: Medical Emergency telephone number: Medical Emergency telephone number: 2.1 Classification of the substance or mixture 2.2 Label elements 2.2 Label elements 2.2 Label elements 3.2 Mixtures Bescription: aqueous solution Dengerous components: Void 3.2 Mixtures Description: aqueous solution <	ng
 Article number: 43809 1.2 Relevant identified uses of the substance or mixture and uses advised against No further relevant information available. Application of the substance / the mixture: Laboratory chemicals 1.3 Details of the supplier of the safety data sheet Manufacturer/Supplier: 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 GB CLP regulation. 2.2 Label elements Label lements Label ling according to Regulation (EC) No 1272/2008: Void Hazard pictograms: Void Signal word: Void Bizard pictograms: Void Signal word: Void Hazards istatements: Void 2.3 Other hazards Results of PBT and VPB assessment: PBT: PBT - assessment not available. VPVB: vPvB - assessment not available. VPVB: vPvB - assessment not available. SECTION 3: Composition/information on ingredients 3.2 Mixtures Description: aqueous solution Dangerous components: Void Additional information the product contains no substances which shall be indicated according to UK REA 	
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 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 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 GB CLP regulation. 2.2 Label elements Labell ing according to Regulation (EC) No 1272/2008: Void Hazard pictograms: Void Signal word: Void Hazards Results of PBT and vPvB assessment: PBT : PBT - assessment not available. vPvB: vPvB - assessment not available. SECTION 3: Composition/information on ingredients Saz Mixtures Description: aqueous solution Dangerous components: Void Additional information the product contains no substances which shall be indicated according to UK REA 	ng scientists
 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 GB 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: PBT: PBT - assessment not available. vPvB: vPvB - assessment not available. SECTION 3: Composition/information on ingredients 3.2 Mixtures Description: aqueous solution Dangerous components: Void Additional information the product contains no substances which shall be indicated according to UK REA 	Ċ.
 2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008: The product is not classified, according to the GB 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: PBT: PBT - assessment not available. vPvB: vPvB - assessment not available. SECTION 3: Composition/information on ingredients Description: aqueous solution Dangerous components: Void Additional information the product contains no substances which shall be indicated according to UK REA 	
 2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008: The product is not classified, according to the GB 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: PBT: PBT - assessment not available. vPvB: vPvB - assessment not available. SECTION 3: Composition/information on ingredients Description: aqueous solution Dangerous components: Void Additional information the product contains no substances which shall be indicated according to UK REA 	
• 3.2 Mixtures • Description: aqueous solution • Dangerous components: Void • Additional information the product contains no substances which shall be indicated according to UK REA	
• 3.2 Mixtures • Description: aqueous solution • Dangerous components: Void • Additional information the product contains no substances which shall be indicated according to UK REA	
• Dangerous components: Void • Additional information the product contains no substances which shall be indicated according to UK REA	
	CH-Regulatic
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: 	

After skin contact. Immediately wash with water and soap and rinse thoroughly. Consult doctor if you feel unwell. (Contd. on page 2)

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Trade name: Solution A for SERVA HPE™ Silver Staining Kit

· 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:
- CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- 5.2 Special hazards arising from the substance or mixture: No further relevant information available.
- · 5.3 Advice for firefighters
- · Protective equipment: Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures Wear protective clothing. Ensure adequate ventilation Avoid contact with the eyes and skin.
 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)
- 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
- 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

• Appropriate engineering controls: No further data; see item 7.

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Trade name: Solution A for SERVA HPE[™] Silver Staining Kit

(Contd. of page 2) · Individual protection measures, such as 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 Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin. · Breathing equipment: Suitable respiratory protective device recommended. • Hand protection: 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 · Eye/face protection: Safety glasses · Body protection: Protective work clothing. **SECTION 9: Physical and chemical properties** · 9.1 Information on basic physical and chemical properties • General Information: · Physical state: Fluid Colourless

- · Colour:
- · Odour:
- · Odour threshold:
- · Melting point/freezing point:
- · Boiling point or initial boiling point and boiling range:
- · Flammability:
- · Lower and upper explosion limit:
- · Lower:
- · Upper:
- · Flash point:
- · Ignition temperature:
- Decomposition temperature:
- · pH at 20 •C:
- · Viscosity:
- · Kinematic viscosity:
- · Dynamic viscosity:
- · Solubility:
- · Water:
- · Partition coefficient n-octanol/water (log value):
- · Vapour pressure:

no information available no information available

no information available

no information available

Characteristic

no information available no information available

7.5-9.2

Fully miscible no information available no information available

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Trade name: Solution A for SERVA HPETM Silver Staining Kit

	(Contd. of page
· Density and/or relative density:	
· Density:	no information available
· Relative density:	no information available
· 9.2 Other information	
Appearance:	
· Form:	Solution
Important information on protection of	health and
environment, and on safety:	
• Explosive properties:	Product does not present an explosion hazard.
· VÔC %:	0.00 %

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: No further relevant informations available.

SECTION 11: Toxicological information

· 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

• Acute toxicity: Based on available data, the classification criteria are not met.

- · Skin corrosion/irritation: Based on available data, the classification criteria are not met.
- Serious eye damage/irritation: Based on available data, the classification criteria are not met.
- Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.
- · Germ cell mutagenicity: Based on available data, the classification criteria are not met.
- · Carcinogenicity: Based on available data, the classification criteria are not met.
- · Reproductive toxicity: Based on available data, the classification criteria are not met.
- · STOT-single exposure: Based on available data, the classification criteria are not met.
- STOT-repeated exposure: Based on available data, the classification criteria are not met.
- Aspiration hazard: Based on available data, the classification criteria are not met.
- 11.2 Information on other hazards:

• Endocrine disrupting properties:

None of the ingredients is listed.

SECTION 12: Ecological information

· 12.1 Toxicity:

- Aquatic toxicity: No further relevant information available.
- · 12.2 Persistence and degradability: No further relevant information available.
- 12.3 Bioaccumulative potential: No further relevant information available.
- 12.4 Mobility in soil: No further relevant information available.
- · 12.5 Results of PBT and vPvB assessment:
- · **PBT:** PBT assessment not available.
- · **vPvB**: vPvB assessment not available.
- 12.6 Endocrine disrupting properties: For information on endocrine disrupting properties see section 11.
- · 12.7 Other adverse effects:
- · Additional ecological information:
- · General notes:

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

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Trade name: Solution A for SERVA HPETM Silver Staining Kit

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

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SECTION 13: Disposal considerations

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

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

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

SECTION 14: Transport information	
· 14.1 UN number or ID number · ADR, 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 Maritime transport in bulk according instruments	to IMO Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.

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.

· REGULATION (EU) 2019/1148

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

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

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Trade name: Solution A for SERVA HPETM Silver Staining Kit

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- · Regulation (EC) No 273/2004 on drug precursors
- None of the ingredients is listed.
- \cdot Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

· National regulations:

- Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.
- · 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

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

· Department issuing SDS: Product safety department

- · Contact: +49 6221 13840-35
- Date of previous version: 02.02.2016
- 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 (UK REACH) vPvB: very persistent, very bioaccumulative substance (UK REACH)

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

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

bw: body weight

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

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SECTION 1: Iden	tification of the substand	ce/mixture and of the company/u	ndertaking
· 1.1 Product identifi	er		
· Trade name: Solution	on B for SERVA HPETM Si	lver Staining Kit	SFR\/A
No further relevant		r mixture and uses advised against boratory chemicals	serving scientists
 1.3 Details of the support of the supp	esis GmbH 0-0	eet	Sulp
• 1.4 Emergency telep Medical Emergency Poison Information		(0) 6131 19240	
		\mathbf{O}	
SECTION 2: Haze	ards identification		
	the substance or mixture ting to Regulation (EC) No	o 1272/2008:	
Classification accor The product is not co 2.2 Label elements	ding to Regulation (EC) No lassified, according to the C to Regulation (EC) No 12 Void Void vPvB assessment: ent not available.	GB CLP regulation.	
 Classification accor The product is not control 2.2 Label elements Labelling according Hazard pictograms: Signal word: Void Hazard statements: 2.3 Other hazards Results of PBT and PBT: PBT - assessment vPvB: vPvB - assess 	ding to Regulation (EC) No lassified, according to the C to Regulation (EC) No 12 Void Void vPvB assessment: ent not available. ment not available.	GB CLP regulation. 72/2008: Void	
 Classification accor The product is not control 2.2 Label elements Labelling according Hazard pictograms: Signal word: Void Hazard statements: 2.3 Other hazards Results of PBT and PBT: PBT - assessment vPvB: vPvB - assess 	ding to Regulation (EC) No lassified, according to the C to Regulation (EC) No 12 Void Void vPvB assessment: ent not available. ment not available. position/information on	GB CLP regulation. 72/2008: Void	
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 Classification accor The product is not car Labelling according Labelling according Hazard pictograms: Signal word: Void Hazard statements: 2.3 Other hazards Results of PBT and PBT: PBT - assess vPvB: vPvB - assess SECTION 3: Com 3.2 Mixtures Description: aqueou Dangerous compone CAS: 64-17-5 EINECS: 200-578-6 Additional informat 	ding to Regulation (EC) No lassified, according to the C to Regulation (EC) No 12 Void Void Void vPvB assessment: ent not available. ment not available. position/information on s solution ents: ethanol ion s no further substances wh	GB CLP regulation. 72/2008: Void ingredients	
 Classification accor The product is not car Labelling according Labelling according Hazard pictograms: Signal word: Void Hazard statements: 2.3 Other hazards Results of PBT and PBT: PBT - assessm vPvB: vPvB - assess SECTION 3: Com 3.2 Mixtures Description: aqueou Dangerous compone CAS: 64-17-5 EINECS: 200-578-6 Additional informat the product contain (Regulation (EC) No 	ding to Regulation (EC) No lassified, according to the C to Regulation (EC) No 12 Void Void Void vPvB assessment: ent not available. ment not available. position/information on s solution ents: ethanol ion s no further substances wh 1907/2006).	GB CLP regulation. 72/2008: Void ingredients Flam. Liq. 2, H225; () Eye I	
 Classification accor The product is not car Labelling according Labelling according Hazard pictograms: Signal word: Void Hazard statements: 2.3 Other hazards Results of PBT and PBT: PBT - assessming vPvB: vPvB - assessming SECTION 3: Common CAS: 64-17-5 EINECS: 200-578-6 Additional information (Regulation (EC) Notesting) SECTION 4: Firsting 4.1 Description of fit 	ding to Regulation (EC) No lassified, according to the C to Regulation (EC) No 12 Void Void Void vPvB assessment: ent not available. ment not available. position/information on s solution ents: ethanol ion s no further substances wh 1907/2006).	GB CLP regulation. 72/2008: Void ingredients	

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Trade name: Solution B for SERVA HPETM Silver Staining Kit

- 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. 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:
- Formation of dangerous gases or vapours is possible in case of fire.
- 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 Avoid contact with the eyes and skin.
- 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.

Ensure good ventilation/exhaustion at the workplace.

- · Information about protection against explosions and fires: Keep ignition sources away Do not smoke.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage
- Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
- · Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep receptacle tightly sealed and store in dry conditions.
- 7.3 Specific end use(s): No further relevant information available.

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Trade name: Solution B for SERVA HPETM Silver Staining Kit

(Contd. of page 2)

SECTION 8: Exposure controls/personal protection

- · 8.1 Control parameters
- · Components with limit values that require monitoring at the workplace:
- 64-17-5 ethanol (5-15%)
- WEL Long-term value: 1920 mg/m³, 1000 ppm
- Additional information: The lists that were valid during the creation were used as basis.

· 8.2 Exposure controls

- Appropriate engineering controls: No further data; see item 7.
- · Individual protection measures, such as 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.
- Hand protection:
- The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Protective gloves.
- 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.
- \cdot For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:
- Natural rubber, NR
- · Eye/face protection: Safety glasses
- · Body protection: Protective work clothing.

SECTION 9: Physical and chemical properties

• 9.1 Information on basic physical and c	hemical properties	
· General Information:		
· Physical state:	Fluid	
· Colour:	Colourless	
· Odour:	Characteristic	
· Odour threshold:	no information available	
• Melting point/freezing point:	no information available	
· Boiling point or initial boiling point and	l boiling	
range:	no information available	
· Flammability:	no information available	
· Lower and upper explosion limit:	v	
· Lower:	no information available	

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	(Contd. of page
· Upper:	no information available
· Flash point:	no information available
· Decomposition temperature:	no information available
· pH at 20 •C:	<2
· Viscosity:	
· Kinematic viscosity:	no information available
· Dynamic viscosity:	no information available
· Solubility:	
· Water:	Fully miscible
· Partition coefficient n-octanol/water (log value):	no information available
· Vapour pressure:	no information available
· Density and/or relative density:	
· Density:	no information available
· Relative density:	no information available
• 9.2 Other information	
· Appearance:	
· Form:	Solution
• Important information on protection of health and environment, and on safety:	d
· Explosive properties:	Not determined.
· VOC %:	10.00 %

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 hazard classes as defined in Regulation (EC) No 1272/2008:

• Acute toxicity: Based on available data, the classification criteria are not met.

- Skin corrosion/irritation: Based on available data, the classification criteria are not met.
- Serious eye damage/irritation: Based on available data, the classification criteria are not met.
- Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.
- Germ cell mutagenicity: Based on available data, the classification criteria are not met.
- · Carcinogenicity: Based on available data, the classification criteria are not met.
- · Reproductive toxicity: Based on available data, the classification criteria are not met.
- STOT-single exposure: Based on available data, the classification criteria are not met.
- · STOT-repeated exposure: Based on available data, the classification criteria are not met.
- · Aspiration hazard: Based on available data, the classification criteria are not met.
- 11.2 Information on other hazards:

• Endocrine disrupting properties:

None of the ingredients is listed.

SECTION 12: Ecological information

· 12.1 Toxicity:

• Aquatic toxicity: No further relevant information available.

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Trade name: Solution B for SERVA HPETM Silver Staining Kit

· 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.

· 12.5 Results of PBT and vPvB assessment:

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

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

• 12.6 Endocrine disrupting properties: For information on endocrine disrupting properties see section 11.

· 12.7 Other adverse effects:

· Additional ecological information:

· General notes:

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

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

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation Disposal must be made according to official regulations.

· Uncleaned packagings:

· Recommendation:

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

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

SECTION 14: Transport information	
· 14.1 UN number or ID number · ADR, 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 Maritime transport in bulk according instruments	to IMO Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.

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.

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· 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.

· REGULATION (EU) 2019/1148

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

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

 \cdot Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

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

None of the ingredients is listed.

· National regulations:

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

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

SECTION 16: Other information

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

• **Relevant phrases** H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation.

· Department issuing SDS: Product safety department

· Contact: +49 6221 13840-35

- Date of previous version: 02.02.2016
- 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 (UK REACH)

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

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

bw: body weight

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

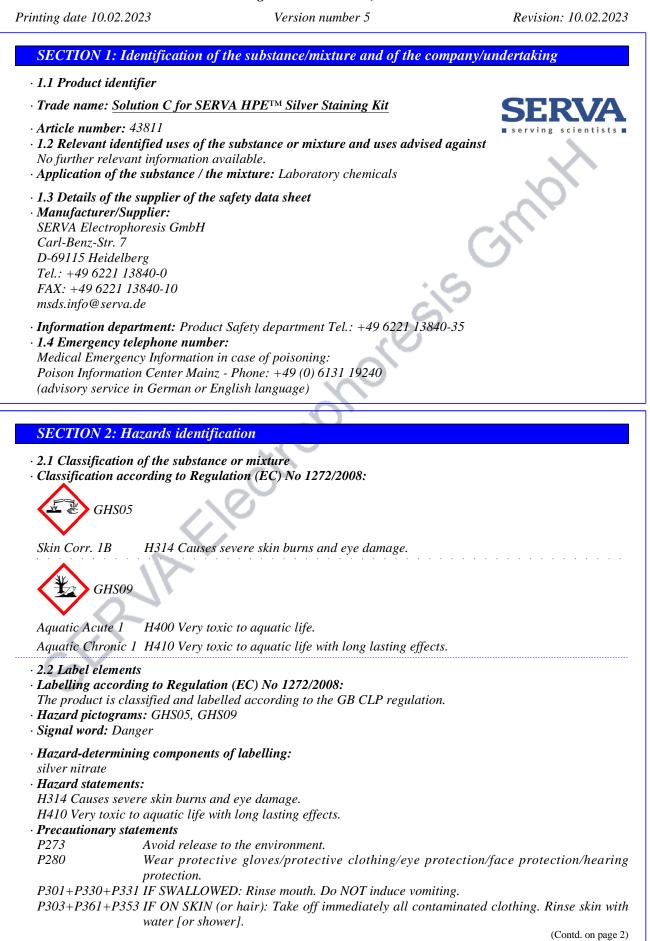
CAS: Chemical Abstracts Service (division of the American Chemical Society)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

GB



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(Contd. of page 1) *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. · Labelling of packages where the contents do not exceed 125 ml · Hazard pictograms GHS05, GHS09 · Signal word Danger · Hazard-determining components of labelling: silver nitrate · Hazard statements H314 Causes severe skin burns and eye damage. · Precautionary statements Wear protective gloves/protective clothing/eye protection/face protection/hearing P280 protection. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. · 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 Mixtures · Description: aqueous solution · Dangerous components: CAS: 7761-88-8 5-15% silver nitrate 🚸 Ox. Sol. 2, H272; 🔶 Skin Corr. 1B, H314; 🚯 Aquatic Acute 1, H400; EINECS: 231-853-9 Aquatic Chronic 1, H410

· Additional information

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

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 the mouth and call a doctor. Do not induce vomiting!
- **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:
- CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- 5.2 Special hazards arising from the substance or mixture: No further relevant information available.
- · 5.3 Advice for firefighters
- · Protective equipment: Wear self-contained respiratory protective device.
- · 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.
 Ensure adequate ventilation Avoid contact with the eyes and skin.
- 6.2 Environmental precautions: Inform respective authorities in case of seepage into water course or sewage system. 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: Avoid contact with eyes and skin. Ensure good ventilation/exhaustion at the workplace.

- · 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 only in the original receptacle.
- · 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
- · 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

- Appropriate engineering controls: No further data; see item 7.
- · Individual protection measures, such as personal protective equipment:
- General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Store protective clothing separately.

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(Contd. of page 3) Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin. · Breathing equipment: Short term filter device: Filter P3. • Hand protection: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Protective gloves. 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/face protection: Tightly sealed goggles. · Body protection: Protective work clothing. **SECTION 9: Physical and chemical properties** · 9.1 Information on basic physical and chemical properties · General Information: · Physical state: Fluid · Colour: Colourless · Odour: **Odourless** · Odour threshold: Not determined. · Melting point/freezing point: no information available · Boiling point or initial boiling point and boiling no information available range: · Flammability: no information available · Lower and upper explosion limit: · Lower: no information available · Upper: no information available no information available · Flash point: · Decomposition temperature: no information available $\cdot pH$: no information available · Viscosity: · Kinematic viscosity: no information available · Dynamic viscosity: no information available · Solubility:

Fully miscible

no information available

no information available

• Water:

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- · Partition coefficient n-octanol/water (log value):
- · Vapour pressure:

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	(Contd. of page
· Density and/or relative density:	
· Density:	no information available
· Relative density:	no information available
· 9.2 Other information	
· Appearance:	
· Form:	Solution
· Important information on protection of	f health and
environment, and on safety:	
• Explosive properties:	Product does not present an explosion hazard.
· VÔC %:	0.00 %

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: exposure to the light
- 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: No further relevant informations available.

SECTION 11: Toxicological information

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

• Endocrine disrupting properties:

None of the ingredients is listed.

SECTION 12: Ecological information

· 12.1 Toxicity:

- · Aquatic toxicity: No further relevant information available.
- · 12.2 Persistence and degradability: No further relevant information available.
- · 12.3 Bioaccumulative potential: No further relevant information available.
- · 12.4 Mobility in soil: No further relevant information available.
- · 12.5 Results of PBT and vPvB assessment:
- · **PBT:** PBT assessment not available.
- · **vPvB**: vPvB assessment not available.
- 12.6 Endocrine disrupting properties: For information on endocrine disrupting properties see section 11.
- 12.7 Other adverse effects:
- Additional ecological information:
- General notes:

Very toxic for aquatic organisms

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Water danger class 3 (German Regulation) (Self-assessment): extremely hazardous for water.

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SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Disposal must be made according to official regulations. 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.

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

· 14.1 UN number or ID number	
· ADR, IMDG, IATA	UN3082
· 14.2 UN proper shipping name	
ADR	3082 ENVIRONMENTALLY HAZARDOUS
	SUBSTANCE, LIQUID, N.O.S. (SILVER NITRATE)
· IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID, N.O.S. (SILVER NITRATE), MARINE
	POLLUTANT
·IATA	ENVIRONMENTALLY HAZARDOUS SUBSTANCE
	LIQUID, N.O.S. (SILVER NITRATE solution)
14.3 Transport hazard class(es)	
· ADR, IMDG, IATA	
· Class: · Label:	9 Miscellaneous dangerous substances and articles. 9
· 14.4 Packing group	
· ADR, IMDG, IATA	III
14.5 Environmental hazards	Product contains environmentally hazardous
Marine pollutant	substances: silver nitrate
Marine pollutant:	substances: silver nitrate Yes
Special marking (ADR):	substances: silver nitrate Yes Symbol (fish and tree) Symbol (fish and tree)
• Marine pollutant: • Special marking (ADR): • Special marking (IATA):	substances: silver nitrate Yes Symbol (fish and tree)
- Special marking (ADR): - Special marking (IATA):	substances: silver nitrate Yes Symbol (fish and tree) Symbol (fish and tree) Symbol (fish and tree) Warning: Miscellaneous dangerous substances and
• Special marking (ADR): • Special marking (IATA): • 14.6 Special precautions for user	substances: silver nitrate Yes Symbol (fish and tree) Symbol (fish and tree) Symbol (fish and tree) Warning: Miscellaneous dangerous substances and articles.
 Special marking (ADR): Special marking (IATA): 14.6 Special precautions for user Hazard identification number (Kemler code): 	substances: silver nitrate Yes Symbol (fish and tree) Symbol (fish and tree) Symbol (fish and tree) Warning: Miscellaneous dangerous substances and articles. 90
 Special marking (ADR): Special marking (IATA): 14.6 Special precautions for user Hazard identification number (Kemler code): EMS Number: 	substances: silver nitrate Yes Symbol (fish and tree) Symbol (fish and tree) Symbol (fish and tree) Warning: Miscellaneous dangerous substances and articles. 90 F-A,S-F
 Special marking (ADR): Special marking (IATA): 14.6 Special precautions for user Hazard identification number (Kemler code): 	substances: silver nitrate Yes Symbol (fish and tree) Symbol (fish and tree) Symbol (fish and tree) Warning: Miscellaneous dangerous substances and articles. 90

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 14.7 Maritime transport in bulk according instruments 	ng to IMO Not applicable.
· Transport/Additional information:	
· ADR	
\cdot Limited quantities (LQ)	5L
\cdot Excepted quantities (EQ)	Code: El
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	(-)
· IMDG	
· Limited quantities (LQ)	5L
\cdot Excepted quantities (\widetilde{EQ})	Code: El
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 3082 ENVIRONMENTALLY HAZARDOU
0	SUBSTANCE, LIQUID, N.O.S. (SILVER NITRATE),
	III

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.

· Seveso category E1 Hazardous to the Aquatic Environment

· Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t

 \cdot Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t

• REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

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

None of the ingredients is listed.

· REGULATION (EU) 2019/1148

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

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

· National regulations:

• Water hazard class: Water danger class 3 (Self-assessment): extremely hazardous for water.

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

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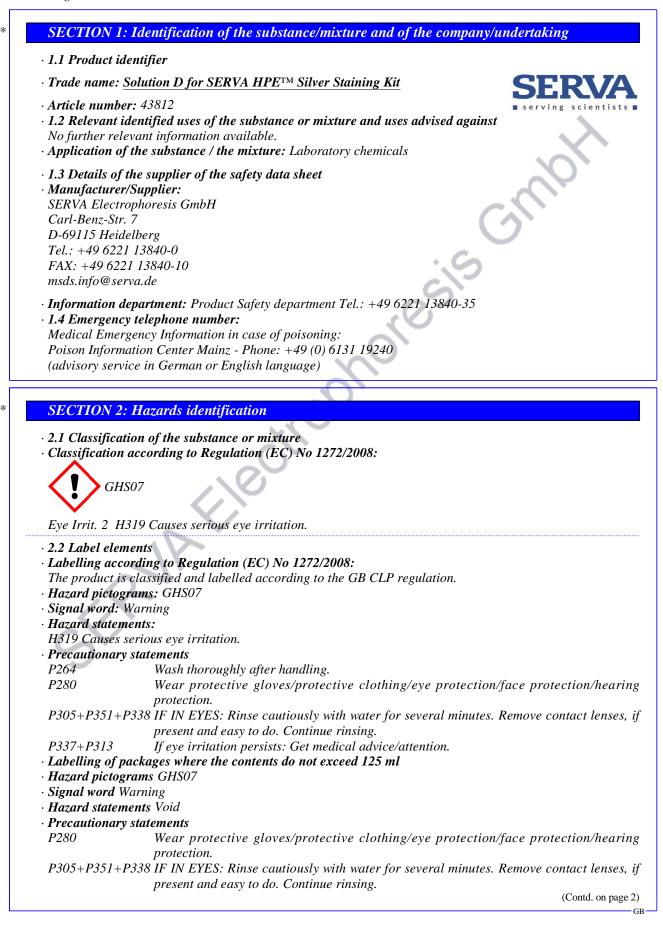
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Th	E <mark>CTION 16: Other information</mark> is information is based on our present knowledge. However, this shall not constitute a guarantee for an <u></u> ecific product features and shall not establish a legally valid contractual relationship.
•	levant phrases
	272 May intensify fire; oxidiser.
	814 Causes severe skin burns and eye damage.
	100 Very toxic to aquatic life.
H_{4}	10 Very toxic to aquatic life with long lasting effects.
De	partment issuing SDS: Product safety department
Ca	ntact: +49 6221 13840-35
	te of previous version: 02.02.2016
	breviations and acronyms:
	D: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning th
	ernational Transport of Dangerous Goods by Rail)
	O: International Civil Aviation Organisation
	T: persistent, bioaccumulative, toxic substance (UK REACH)
	B: very persistent, very bioaccumulative substance (UK REACH)
UK	REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
GB	CLP: Regulation on classification, labelling and packaging of substances and mixtures
	body weight
	R: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning th
	ernational Carriage of Dangerous Goods by Road)
	DG: International Maritime Code for Dangerous Goods
	A: International Air Transport Association
	IS: Globally Harmonised System of Classification and Labelling of Chemicals
	VECS: European Inventory of Existing Commercial Chemical Substances INCS: European List of Notified Chemical Substances
	S: Chemical Abstracts Service (division of the American Chemical Society)
	T: Persistent, Bioaccumulative and Toxic
	B: very Persistent and very Bioaccumulative
	Sol. 2: Oxidizing solids – Category 2
	n Corr. 1B: Skin corrosion/irritation – Category 1B
	atic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
	tatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

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- · 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 Mixtures

· Description: aqueous solution

· Dangerous components:

CAS: 497-19-8	sodium carbonate	() Eye Irrit. 2, H319	15-30%
EINECS: 207-838-8		• •	

· Additional information

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

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 immediately.
- After swallowing: Wash out mouth. 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:
- CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- 5.2 Special hazards arising from the substance or mixture: No further relevant information available.
- · 5.3 Advice for firefighters
- · Protective equipment: Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

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

- 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.

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SECTION 7: Handling and storage

- 7.1 Precautions for safe handling: Ensure good ventilation/exhaustion at the workplace. • Information about protection against explosions and fires: No special measures required.
- Thjormation about protection against explosions and fires. We special measure
- \cdot 7.2 Conditions for safe storage, including any incompatibilities
- · Storage
- Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
- 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
- · 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

- · Appropriate engineering controls: No further data; see item 7.
- · Individual protection measures, such as 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.

Avoid contact with the eyes.

- **Breathing equipment:** Short term filter device: Filter P2.
- Hand protection:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Protective gloves.

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.

- \cdot For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:
- Natural rubber, NR
- Eye/face protection: Tightly sealed goggles.

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· Body protection: Protective work clothing.

SECTION 9: Physical and chemical propertie	28			
• 9.1 Information on basic physical and chemical properties				
· General Information:				
· Physical state:	Fluid			
· Colour:	Colourless			
· Odour:	Odourless			
• Odour threshold:	Not determined.			
• Melting point/freezing point:	no information available			
· Boiling point or initial boiling point and boiling	•			
range:	no information available			
· Flammability:	no information available			
· Lower and upper explosion limit:	•			
· Lower:	no information available			
· Upper:	no information available			
· Flash point:	no information available			
· Decomposition temperature:	no information available			
· pH at 20 •C:	11.1-12.1			
· Viscosity:				
· Kinematic viscosity:	no information available			
· Dynamic viscosity:	no information available			
· Solubility:				
· Water:	Fully miscible			
· Partition coefficient n-octanol/water (log value):	no information available			
· Vapour pressure:	no information available			
· Density and/or relative density:				
· Density:	no information available			
· Relative density:	no information available			
· 9.2 Other information				
· Appearance:				
· Form:	Solution			
· Important information on protection of health an	d			
environment, and on safety:				
· Explosive properties:	Product does not present an explosion hazard.			
· VOC %:	0.00 %			

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: No further relevant informations available.

SECTION 11: Toxicological information

- · 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:
- Acute toxicity: Based on available data, the classification criteria are not met.
- · Skin corrosion/irritation: Based on available data, the classification criteria are not met.
- · Serious eye damage/irritation: Causes serious eye irritation.

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- Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.
- Germ cell mutagenicity: Based on available data, the classification criteria are not met.
- Carcinogenicity: Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- STOT-single exposure: Based on available data, the classification criteria are not met.
- STOT-repeated exposure: Based on available data, the classification criteria are not met.
- $\cdot \textit{Aspiration hazard: } Based on available data, the classification criteria are not met.$

 \cdot 11.2 Information on other hazards:

· Endocrine disrupting properties:

None of the ingredients is listed.

SECTION 12: Ecological information

- · 12.1 Toxicity:
- · Aquatic toxicity: No further relevant information available.
- · 12.2 Persistence and degradability: No further relevant information available.
- · 12.3 Bioaccumulative potential: No further relevant information available.
- 12.4 Mobility in soil: No further relevant information available.
- · 12.5 Results of PBT and vPvB assessment:
- · **PBT:** PBT assessment not available.
- · **vPvB**: vPvB assessment not available.
- 12.6 Endocrine disrupting properties: For information on endocrine disrupting properties see section 11.
- · 12.7 Other adverse effects:
- · Additional ecological information:
- · General notes: Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation

Disposal must be made according to official regulations.

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.

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

· 14.1 UN number or ID number		
· ADR, IMDG, IATA	Void	
· 14.2 UN proper shipping name		
· ADR, IMDĜ, IATÂ	Void	
· 14.3 Transport hazard class(es)		
· ADR, IMDG, IATA		
· Class:	Void	
· Label:	-	
· 14.4 Packing group		
· ADR, IMDĞ, IATA	Void	

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	(Contd. of page 5)
 14.5 Environmental hazards Marine pollutant: 	No
· 14.6 Special precautions for user	Not applicable.
• 14.7 Maritime transport in bulk according to IMO instruments Not applicable.	
· Transport/Additional information:	Not dangerous according to the above specifications.

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.

• REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

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

None of the ingredients is listed. • **REGULATION (EU) 2019/1148**

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

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

· National regulations:

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

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

SECTION 16: Other information

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

· Relevant phrases

H319 Causes serious eye irritation.

- · Department issuing SDS: Product safety department
- · Contact: +49 6221 13840-35
- Date of previous version: 02.02.2016
- 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 (UK REACH) vPvB: very persistent, very bioaccumulative substance (UK REACH)

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

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

bw: body weight

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GB

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

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Version number 5

Revision: 13.02.2023

Trade name: Solution D for SERVA HPE[™] Silver Staining Kit

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ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the
International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2