SERVALYT™ PRECOTES™ CSF Kit

Cat. No. 42800

Safety Data Sheets
of the following Kit Components:

42800_	SERVALYT™ PRECOTES™ CSF
42984	Anode fluid 3 for IEF
42986	Cathode fluid 10 for IEF

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Safety Data Sheet
acc. to OSHA HCS

Printing date 01/03/2023 *Reviewed on 01/03/2023*

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1 Identification

· **Product identifier**

· **Trade name: SERVALYT™ PRECOTES™ CSF**

· **Article number:** 42800_
· **Application of the substance / the mixture:** ready-to-use horizontal gels for IEF

· **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
· **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)

2 Hazard(s) identification

· **Classification of the substance or mixture**
The product is not classified, according to the Globally Harmonized System (GHS).

· **Label elements**
· **GHS label elements** Void
· **Hazard pictograms:** Void
· **Signal word:** Void
· **Hazard statements:** Void
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 0
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = 0
Fire = 0
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment:**
· **PBT:** PBT - assessment not available.
· **vPvB:** vPvB - assessment not available.

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3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:**
SERVALYT™ PRECOTES™ are thin polyacrylamide layers bound to an inert polyester support film (GEL-FIX™) and covered with a thin polyester film (GEL-FIX™ for Covers).

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· **Dangerous components:**
the product contains no substances which shall be indicated according to Regulation (EC) No. 1907/2006.
· **Additional information:**
SERVALYT™ PRENETS™ are articles according to the Article 3, 3. of the REACH Regulation (Regulation (EC) No 1907/2006). We note that the SVHC substance Acrylamide (residual monomer) is included in this artcle in a concentration below 0,1 %.

4 First-aid measures

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

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO_2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Nitrogen oxides (NOx)
Carbon monoxide and carbon dioxide
· **Advice for firefighters**
· **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up**
Dispose contaminated material as waste according to item 13.
Pick up mechanically.
· **Protective Action Criteria for Chemicals**

· **PAC-1:**
None of the ingredients is listed.

· **PAC-2:**
None of the ingredients is listed.

· **PAC-3:**
None of the ingredients is listed.

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

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See Section 13 for disposal information.

7 Handling and storage

· **Precautions for safe handling:** No special measures required.
· **Information about protection against explosions and fires:** No special measures required.

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

8 Exposure controls/personal protection

· **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.

· **Exposure controls**
· **Additional information about design of technical systems:** No further data; see item 7.
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Store protective clothing separately.
Immediately remove all soiled and contaminated clothing.
Avoid contact with the eyes and skin.
Wash hands before breaks and at the end of work.
· **Breathing equipment:** Suitable respiratory protective device recommended.
· **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves:**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material:**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
Nitrile rubber, NBR
Natural rubber, NR
· **Eye protection:** Safety glasses
· **Body protection:** Protective work clothing

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information:**	
· **Color:**	Colorless
· **Odor:**	Odorless
· **Odor threshold:**	Not determined.
· **Melting point/Melting range:**	no information available
· **Boiling point/Boiling range:**	no information available
· **Flammability (solid, gaseous):**	no information available
· **Explosion limits:**	
· **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 in / Miscibility with:**	
· **Water:**	Insoluble.
· **Partition coefficient (n-octanol/water):**	no information available
· **Vapor pressure:**	no information available
· **Density:**	no information available
· **Relative density:**	no information available

· **Other information**	
· **Appearance:**	
· **Form:**	Gel between two polyester films
· **Important information on protection of health and environment, and on safety:**	
· **Danger of explosion:**	Product does not present an explosion hazard.
· **VOC %:**	
· **VOC content:**	0.00 %

10 Stability and reactivity

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

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11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:** Based on available data, the classification criteria are not met.
· **on the skin:** Based on available data, the classification criteria are not met.
· **on the eye:** Based on available data, the classification criteria are not met.
· **Sensitization:** 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.
· **Specific target organ toxicity - single exposure:**
Based on available data, the classification criteria are not met.

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· **Specific target organ toxicity - 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:**

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

12 Ecological information

· **Toxicity:**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability:** No further relevant information available.
· **Bioaccumulative potential:** No further relevant information available.
· **Mobility in soil:** No further relevant information available.
· **Results of PBT and vPvB assessment:**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects:**
· **Additional ecological information:**
· **General notes:** Water hazard class 2 (Self-assessment): hazardous for water

13 Disposal considerations

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

· **Uncleaned packagings:**
· **Recommendation:**
Disposal of uncleaned packagings must be made according to official regulations in the same manner as the product.

14 Transport information

· **UN-Number**	
· **ADR, IMDG, IATA**	Void
· **UN proper shipping name**	
· **ADR, IMDG, IATA**	Void
· **Transport hazard class(es)**	
· **ADR, IMDG, IATA**	
· **Class:**	Void
· **Label:**	-
· **Packing group**	
· **ADR, IMDG, IATA**	Void
· **Environmental hazards**	Not applicable.

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· **Special precautions for user** Not applicable.

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**
None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**
None of the ingredients is listed.

· **Hazardous Air Pollutants**
None of the ingredients is listed.

· **Proposition 65**
None of the ingredients is listed.

· **Chemicals known to cause cancer:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**
None of the ingredients is listed.

· **TLV (Threshold Limit Value)**
None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **GHS label elements** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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 preparation / last revision** 01/03/2023
· **Abbreviations and acronyms:**
PBT: persistent, bioaccumulative, toxic substance (REACH)

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vPvB: very persistent, very bioaccumulative substance (REACH)
REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
CLP: Regulation on classification, labelling and packaging of substances and mixtures
bw: body weight
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
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)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit

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1 Identification

· **Product identifier**

· **Trade name: Anode fluid 3 for IEF**

· **Article number:** 42984
· **Application of the substance / the mixture:** Laboratory chemicals

· **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
· **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)

2 Hazard(s) identification

· **Classification of the substance or mixture**
The product is not classified, according to the Globally Harmonized System (GHS).

· **Label elements**
· **GHS label elements** Void
· **Hazard pictograms:** Void
· **Signal word:** Void
· **Hazard statements:** Void
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 0
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = 0
Fire = 0
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment:**
· **PBT:** PBT - assessment not available.
· **vPvB:** vPvB - assessment not available.

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3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** aqueous solution

· **Dangerous components:** Void

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Trade name: Anode fluid 3 for IEF

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· **Additional information:**
the product contains no substances which shall be indicated according to REACH-Regulation (Regulation (EC) No. 1907/2006).

4 First-aid measures

· **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. Seek medical advice if discomfort occurs.
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

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5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO_2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Carbon monoxide and carbon dioxide
· **Advice for firefighters**
· **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Avoid contact with the eyes and skin.
· **Environmental precautions:** No special measures required.
· **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).
· **Protective Action Criteria for Chemicals**

· **PAC-1:**
None of the ingredients is listed.

· **PAC-2:**
None of the ingredients is listed.

· **PAC-3:**
None of the ingredients is listed.

· **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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7 Handling and storage

· **Precautions for safe handling:**
Avoid contact with eyes and skin.
No special measures required.
· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store at +2 to +8 °C
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** Keep receptacle tightly sealed and store in dry conditions.
· **Specific end use(s):** No further relevant information available.

8 Exposure controls/personal protection

· **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.

· **Exposure controls**
· **Additional information about design of technical systems:** No further data; see item 7.
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Store protective clothing separately.
Immediately remove all soiled and contaminated clothing.
Avoid contact with the eyes and skin.
Wash hands before breaks and at the end of work.
· **Breathing equipment:** Suitable respiratory protective device recommended.
· **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves:**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material:**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
Natural rubber, NR
Nitrile rubber, NBR
· **Eye protection:** Safety glasses
· **Body protection:** Protective work clothing

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Trade name: Anode fluid 3 for IEF

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information:**	
· **Color:**	Colorless
· **Odor:**	Odorless
· **Odor threshold:**	Not determined.
· **Melting point/Melting range:**	no information available
· **Boiling point/Boiling range:**	no information available
· **Flammability (solid, gaseous):**	no information available
· **Explosion limits:**	
· **Lower:**	no information available
· **Upper:**	no information available
· **Flash point:**	no information available
· **Decomposition temperature:**	no information available
· **pH-value at 20 °C (68 °F):**	2.8-3.8
· **Viscosity:**	
· **Kinematic viscosity:**	no information available
· **Dynamic viscosity:**	no information available
· **Solubility in / Miscibility with:**	
· **Water:**	Fully miscible.
· **Partition coefficient (n-octanol/water):**	no information available
· **Vapor pressure:**	no information available
· **Density:**	no information available
· **Relative density:**	no information available

· **Other information**	
· **Appearance:**	
· **Form:**	Solution
· **Important information on protection of health and environment, and on safety:**	
· **Danger of explosion:**	Product does not present an explosion hazard.
· **VOC %:**	
· **VOC content:**	0.00 %

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10 Stability and reactivity

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

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11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:** Based on available data, the classification criteria are not met.
· **on the skin:** Based on available data, the classification criteria are not met.
· **on the eye:** Based on available data, the classification criteria are not met.
· **Sensitization:** 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.

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· **Specific target organ toxicity - single exposure:**
Based on available data, the classification criteria are not met.
· **Specific target organ toxicity - 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:**

· **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)
None of the ingredients is listed.

· NTP (National Toxicology Program)
None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.

12 Ecological information

· **Toxicity:**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability:** No further relevant information available.
· **Bioaccumulative potential:** No further relevant information available.
· **Mobility in soil:** No further relevant information available.
· **Results of PBT and vPvB assessment:**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects:**
· **Additional ecological information:**
· **General notes:** Not hazardous for water.

13 Disposal considerations

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

· **Uncleaned packagings:**
· **Recommendation:**
Disposal of uncleaned packagings must be made according to official regulations in the same manner as the product.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· UN-Number · DOT, ADR, ADN, IMDG, IATA	Void
· UN proper shipping name · DOT, ADR, ADN, IMDG, IATA	Void
· Transport hazard class(es) · DOT, ADR, ADN, IMDG, IATA · Class	Void
· Packing group · DOT, ADR, IMDG, IATA	Void

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· **Environmental hazards**	
· **Marine pollutant:**	No
· **Special precautions for user**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	Not dangerous according to the above specifications.
· **UN "Model Regulation":**	Void

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**
None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

56-86-0	glutamic acid	ACTIVE

· **Hazardous Air Pollutants**
None of the ingredients is listed.

· **Proposition 65**
None of the ingredients is listed.

· **Chemicals known to cause cancer:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**
None of the ingredients is listed.

· **TLV (Threshold Limit Value)**
None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **GHS label elements** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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Trade name: Anode fluid 3 for IEF

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*
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 preparation / last revision** 01/03/2023
· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
PBT: persistent, bioaccumulative, toxic substance (REACH)
vPvB: very persistent, very bioaccumulative substance (REACH)
REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
CLP: Regulation on classification, labelling and packaging of substances and mixtures
bw: body weight
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
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)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit

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1 Identification

· **Product identifier**

· **Trade name: Cathode fluid 10 for IEF**

· **Article number:** 42986
· **Application of the substance / the mixture:** Laboratory chemicals

· **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
· **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)

*
2 Hazard(s) identification

· **Classification of the substance or mixture**

GHS08

Sensitization - Respiratory 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

GHS05

Skin Corrosion 1B H314 Causes severe skin burns and eye damage.

GHS07

Sensitization - Skin 1 H317 May cause an allergic skin reaction.

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms:** GHS05, GHS08
· **Signal word:** Danger

· **Hazard-determining components of labeling:**
ethylenediamine
· **Hazard statements:**
Causes severe skin burns and eye damage.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
· **Precautionary statements**
Avoid breathing mist/vapours/spray.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Rinse mouth. Do NOT induce vomiting.

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If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 3
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = *3
Fire = 0
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment:**
· **PBT:** PBT - assessment not available.
· **vPvB:** vPvB - assessment not available.

*
3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** aqueous solution

· **Dangerous components:**		
107-15-3	ethylenediamine	5-15%

· **Additional information:**
the product contains no further substances which shall be indicated according to REACH-Regulation (Regulation (EC) No. 1907/2006).
For the wording of the listed hazard phrases refer to section 16.

*
4 First-aid measures

· **Description of first aid measures**
· **General information:** Immediately remove any clothing soiled by the product.
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly. Consult doctor if you feel unwell.
· **After eye contact:**
Rinse opened eye for several minutes under running water. Remove present contact lenses, if easy to do, and continue rinsing. Consult ophthalmologist immediately.
· **After swallowing:**
Wash out mouth. Call a doctor immediately.
Do not induce vomiting!
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

*
5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO_2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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· **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 released:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)
· **Advice for firefighters**
· **Protective equipment:** Wear self-contained respiratory protective device.

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6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Ensure adequate ventilation
Do not inhale vapours.
Avoid contact with the eyes and skin.
· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **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).
· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
107-15-3	ethylenediamine	0.88 ppm

· **PAC-2:**		
107-15-3	ethylenediamine	9.7 ppm

· **PAC-3:**		
107-15-3	ethylenediamine	20 ppm

· **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.

*
7 Handling and storage

· **Precautions for safe handling:**
Avoid contact with eyes and skin.
Ensure good ventilation/exhaustion at the workplace.
· **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store at +2 to +8 °C
· **Information about storage in one common storage facility:** Do not store together with oxidizing materials.
· **Further information about storage conditions:** Keep receptacle tightly sealed and store in dry conditions.
· **Specific end use(s):** No further relevant information available.

*
8 Exposure controls/personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
107-15-3 ethylenediamine (5-15%)	
PEL	Long-term value: 25 mg/m³, 10 ppm
REL	Long-term value: 25 mg/m³, 10 ppm

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TLV	Long-term value: 10 ppm Skin, A4

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

· **Exposure controls**
· **Additional information about design of technical systems:** No further data; see item 7.
· **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.
Do not inhale gases / fumes / aerosols.
· **Breathing equipment:**
Short term filter device:
Filter A/P2
· **Protection of hands:**
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:**
Butyl rubber, BR
· **Eye protection:** Tightly sealed goggles
· **Body protection:** Protective work clothing

*
9 Physical and chemical properties

· **Information on basic physical and chemical properties**
· **General Information:**

· **Color:**	colorless to slightly yellowish
· **Odor:**	Odorless
· **Odor threshold:**	Not determined.
· **Melting point/Melting range:**	no information available
· **Boiling point/Boiling range:**	no information available
· **Flammability (solid, gaseous):**	no information available
· **Explosion limits:**	
· **Lower:**	no information available
· **Upper:**	no information available
· **Flash point:**	no information available
· **Decomposition temperature:**	no information available
· **pH-value at 20 °C (68 °F):**	11.5-12.5

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· **Viscosity:**	
· **Kinematic viscosity:**	no information available
· **Dynamic viscosity:**	no information available
· **Solubility in / Miscibility with:**	
· **Water:**	Fully miscible.
· **Partition coefficient (n-octanol/water):**	no information available
· **Vapor pressure:**	no information available
· **Density:**	no information available
· **Relative density:**	no information available
· **Other information**	There are no more data available.
· **Appearance:**	
· **Form:**	Solution
· **Important information on protection of health and environment, and on safety:**	
· **Danger of explosion:**	no information available
· **Solvent content:**	
· **Organic solvents:**	10.0 %
· **VOC %:**	
· **VOC content:**	10.00 %

*
10 Stability and reactivity

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

*
11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:** Based on available data, the classification criteria are not met.
· **on the skin:** Causes severe skin burns and eye damage.
· **Sensitization:**
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
· **Other information (about experimental toxicology)**
Ethylenediamine is identified as a substance of very high concern in accordance with Article 57(f) of Regulation (EC) 1907/2006 (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 REACH.
(ECHA SVHC Support Document - Ethylendiamine; 6.3.1)
· **Additional toxicological information:**

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

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· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

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12 Ecological information

· **Toxicity:**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability:** No further relevant information available.
· **Bioaccumulative potential:** No further relevant information available.
· **Mobility in soil:** No further relevant information available.
· **Results of PBT and vPvB assessment:**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **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 (Self-assessment): hazardous for water

*
13 Disposal considerations

· **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 Transport information

· **UN-Number**
· **DOT, ADR, IMDG, IATA** UN3267

· **UN proper shipping name**
· **DOT** Corrosive liquid, basic, organic, n.o.s. (Ethylenediamine solution)
· **ADR** 3267 CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (ETHYLENEDIAMINE SOLUTION)
· **IMDG** CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (ETHYLENEDIAMINE SOLUTION)
· **IATA** CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (ETHYLENEDIAMINE solution)

· **Transport hazard class(es)**

· **DOT**

· **Class** 8 Corrosive substances

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· **Label**	8
· **ADR, IMDG, IATA**	
	
· **Class:**	8 Corrosive substances
· **Label:**	8
· **Packing group**	
· **DOT, ADR, IMDG, IATA**	III
· **Environmental hazards**	
· **Marine pollutant:**	No
· **Special precautions for user**	Warning: Corrosive substances
· **Hazard identification number (Kemler code):**	80
· **EMS Number:**	F-A,S-B
· **Segregation groups**	(SGG18) Alkalis
· **Stowage Category**	A
· **Stowage Code**	SW2 Clear of living quarters.
· **Segregation Code**	SG35 Stow "separated from" SGG1-acids
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **UN "Model Regulation":**	UN 3267 CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (ETHYLENEDIAMINE SOLUTION), 8, III

*
15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.

· **Section 355 (extremely hazardous substances):**

107-15-3	ethylenediamine

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

7732-18-5	water, distilled, conductivity or of similar purity	ACTIVE
107-15-3	ethylenediamine	ACTIVE
74-79-3	Arginine	ACTIVE

· **Hazardous Air Pollutants**

None of the ingredients is listed.

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· **Proposition 65**
None of the ingredients is listed.

· **Chemicals known to cause cancer:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**

107-15-3	ethylenediamine	D

· **TLV (Threshold Limit Value)**

107-15-3	ethylenediamine	A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms** GHS05, GHS08
· **Signal word** Danger

· **Hazard-determining components of labeling:**
ethylenediamine
· **Hazard statements**
Causes severe skin burns and eye damage.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
· **Precautionary statements**
Avoid breathing mist/vapours/spray.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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 preparation / last revision** 12/22/2022
· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
PBT: persistent, bioaccumulative, toxic substance (REACH)
vPvB: very persistent, very bioaccumulative substance (REACH)
REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
CLP: Regulation on classification, labelling and packaging of substances and mixtures

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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
DOT: US Department of Transportation
IATA: International Air Transport Association
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)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Skin Corrosion 1B: Skin corrosion/irritation – Category 1B
Sensitization - Respiratory 1: Respiratory sensitisation – Category 1
Sensitization - Skin 1: Skin sensitisation – Category 1