

**Lowry Assay Kit**  
**Article number : 39236**

**Safety Data Sheets**  
**of the following Kit Components:**

11926	Albumin bovine Fraction V, Protease-free
39236.A	Solution A
39236.B	Solution B
39236.C	Solution C

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

Printing date 15.12.2023

Version number 3

Revision: 15.12.2023

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

- **1.1 Product identifier**
- **Trade name:** *Albumin bovine Fraction V, Protease-free*
- **Synonyma** BSA
- **Article number:** 11926
- **CAS Number:**  
9048-46-8
- **EC number:**  
232-936-2
- **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:**  
*Emergency medical information in case of poisoning*  
*Poison Information Centre Mainz-Tel: +49 (0) 6131 19240*  
*(Counselling in German and English)*



**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008:**  
*The substance 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.*
- **Determination of endocrine-disrupting properties** *No further relevant information available.*

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

- **3.1 Substances**
- **CAS No. Description:**  
9048-46-8 Albumins, blood serum
- **Identification number(s):**
- **EC number:** 232-936-2
- **Description:**
- **MW:** *ca. 67000*

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**SECTION 4: First aid measures**

- **4.1 Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**  
Wash off immediately with soap and water and rinse thoroughly. In case of complaints, consult a doctor.
- **After eye contact:**  
Rinse opened eye for several minutes with running water. Remove contact lenses, if possible, and continue rinsing. In case of complaints, consult an ophthalmologist.
- **After swallowing:**  
Wash out mouth. Drink plenty of water and supply fresh air. Consult doctor if you feel unwell.
- **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture:**  
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 breathing apparatus.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing.  
Ensure adequate ventilation  
Do not inhale dusts.  
Avoid contact with 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 section 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:**  
Storage at +2 to +8 °C  
Store only in the original receptacle.
- **Information about storage in one common storage facility:** Not required.

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- **Further information about storage conditions:**  
Store containers tightly closed and dry.  
Protect from exposure to the light.
- **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 section 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 through 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  
Chloroprene rubber, CR
- **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:** Solid.
- **Colour:** oyster white
- **Odour:** Characteristic
- **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

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· <b>Decomposition temperature:</b>	No information available
· <b>pH:</b>	6.8-7.2
· <b>Viscosity:</b>	
· <b>Kinematic viscosity:</b>	No information available
· <b>Dynamic viscosity:</b>	No information available
· <b>Solubility:</b>	
· <b>Water:</b>	Soluble
· <b>Partition coefficient n-octanol/water (log value):</b>	No information available
· <b>Vapour pressure:</b>	No information available
· <b>Density and/or relative density:</b>	
· <b>Density:</b>	No information available
· <b>Relative density:</b>	No information available
· <b>Particle characteristics</b>	No information available

· **9.2 Other information**

· <b>Appearance:</b>	
· <b>Form:</b>	lyophilisate
· <b>Important information on protection of health and environment, and on safety:</b>	
· <b>Explosive properties:</b>	The product is not explosive, but the formation of explosive dust/air mixtures is possible.
· <b>Molecular weight</b>	~67,000 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:**  
As the product is supplied it is not capable of dust explosion; however enrichment with fine dust causes risk of dust explosion
- **10.4 Conditions to avoid:**  
High temperatures  
exposure to the light
- **10.5 Incompatible materials:** Avoid contact with strong 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:** No relevant information available

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

**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**
  - **Recommendation** Dispose of in accordance with official regulations.
  - **Uncleaned packagings:**
  - **Recommendation:**
- Uncleaned packaging must be disposed of in the same way as the product in accordance with official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

**SECTION 14: Transport information**

<ul style="list-style-type: none"> <li>· <b>14.1 UN number or ID number</b></li> <li>· <b>ADR, ADN, IMDG, IATA</b></li> </ul>	Void
<ul style="list-style-type: none"> <li>· <b>14.2 UN proper shipping name</b></li> <li>· <b>ADR, ADN, IMDG, IATA</b></li> </ul>	Void
<ul style="list-style-type: none"> <li>· <b>14.3 Transport hazard class(es)</b></li> <li>· <b>ADR, ADN, IMDG, IATA</b></li> <li>· <b>Class:</b></li> </ul>	Void
<ul style="list-style-type: none"> <li>· <b>14.4 Packing group</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>	Void
<ul style="list-style-type: none"> <li>· <b>14.5 Environmental hazards</b></li> <li>· <b>Marine pollutant:</b></li> </ul>	No
<ul style="list-style-type: none"> <li>· <b>14.6 Special precautions for user</b></li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>· <b>14.7 Maritime transport in bulk according to IMO instruments</b></li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>· <b>Transport/Additional information:</b></li> </ul>	Not dangerous according to the above specifications.
<ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>	Void

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**SECTION 15: Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** 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 (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:** 04.05.2017
- **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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## according to 1907/2006/EC, Article 31

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### SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Solution A
- **Article number:** 39236.A
- **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:**  
Emergency medical information in case of poisoning  
Poison Information Centre Mainz-Tel: +49 (0) 6131 19240  
(Counselling in German and English)



### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008:**  
Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008:**  
The product is classified and labelled according to the GB CLP regulation.
- **Hazard pictograms:** Void
- **Signal word:** Void
- **Hazard statements:**  
H412 Harmful to aquatic life with long lasting effects.
- **Precautionary statements**  
P273 Avoid release to the environment.
- **Labelling of packages where the contents do not exceed 125 ml**
- **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.
- **Determination of endocrine-disrupting properties** No further relevant information available.

### SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** aqueous solution

· **Dangerous components:**

CAS: 7758-99-8	copper(II) sulfate, pentahydrate	0.5-1.5%
EINECS: 231-847-6	☞ Eye Dam. 1, H318; ☞ Aquatic Chronic 1, H410; ☞ Acute Tox. 4, H302	

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**· Additional information**

The product does not contain any other substances that have to be declared according to UK REACH (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:**

Wash off immediately with soap and water and rinse thoroughly. In case of complaints, consult a doctor.

· **After eye contact:**

Rinse opened eye for several minutes with running water. Remove contact lenses, if possible, and continue rinsing. In case of complaints, consult an ophthalmologist.

· **After swallowing:** Rinse out mouth. In case of complaints, consult a doctor.

**· 4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

**· 4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

**SECTION 5: Firefighting measures****· 5.1 Extinguishing media**· **Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **5.2 Special hazards arising from the substance or mixture:** No further relevant information available.

· **5.3 Advice for firefighters**

· **Protective equipment:** Wear self-contained breathing apparatus.

· **Additional information**

Collect contaminated extinguishing agent separately, must not enter the sewage system.

**SECTION 6: Accidental release measures****· 6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective clothing.

Avoid contact with 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 section 13.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

**· 6.4 Reference to other sections**

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

**SECTION 7: Handling and storage**

· **7.1 Precautions for safe handling:** No special precautions are necessary if used correctly.

· **Information about protection against explosions and fires:** No special measures required.

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**Trade name: Solution A**

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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.  
Storage at +2 to +8 °C
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Store containers tightly closed and dry.
- **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 section 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:**  
Natural rubber, NR  
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 through 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:** Safety glasses
- **Body protection:** Protective work clothing.

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Trade name: Solution A

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### SECTION 9: Physical and chemical properties

#### · 9.1 Information on basic physical and chemical properties

##### · General Information:

- |   |                              |
|---|------------------------------|
| · Physical state:   | Fluid                        |
| · Colour:   | bluish                       |
| · 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:   | The product is not flammable |
| · Lower and upper explosion limit:                          |                              |
| · Lower:  | No information available     |
| · Upper:  | No information available     |
| · Flash point:  | Not applicable               |
| · Decomposition temperature:                                | No information available     |
| · pH:   | 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

- |   |   |
|---|---|
| · Appearance:   |   |
| · Form:   | Solution                                      |
| · Important information on protection of health and 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 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 information 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 information 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.

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- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards:**
- **Endocrine disrupting properties:** No relevant information available

**SECTION 12: Ecological information**

- **12.1 Toxicity:**
  - **Aquatic toxicity:** Harmful to aquatic organisms, with long lasting effects.
  - **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 2 (German Regulation) (Self-assessment): hazardous for water.

**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**
  - **Recommendation**
- Dispose of in accordance with official regulations.  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
  - **Recommendation:**
- Uncleaned packaging must be disposed of in the same way as the product in accordance with official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

**SECTION 14: Transport information**

- |  |           |
|--|-----------|
| · <b>14.1 UN number or ID number</b><br>· <b>ADR, IMDG, IATA</b>   | Void      |
| · <b>14.2 UN proper shipping name</b><br>· <b>ADR, IMDG, IATA</b>  | Void      |
| · <b>14.3 Transport hazard class(es)</b><br>· <b>ADR, IMDG, IATA</b><br>· <b>Class:</b><br>· <b>Label:</b> | Void<br>- |
| · <b>14.4 Packing group</b><br>· <b>ADR, IMDG, IATA</b>  | Void      |
| · <b>14.5 Environmental hazards</b><br>· <b>Marine pollutant:</b>  | Yes       |

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- |   |  |
|---|--|
| · <b>14.6 Special precautions for user</b>                            | Not applicable.                                      |
| · <b>14.7 Maritime transport in bulk according to IMO instruments</b> | Not applicable.                                      |
| · <b>Transport/Additional information:</b>                            | Not dangerous according to the above specifications. |
| · <b>ADR</b>  |  |
| · <b>Transport category</b>   | -  |

**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.

· **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 2 (Self-assessment): hazardous for water.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

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

· **Relevant phrases**

- H302 Harmful if swallowed.
- H318 Causes serious eye damage.
- H410 Very toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Product Safety Department

· **Contact:** +49 6221 13840-35

· **Date of previous version:** 22.10.2020

· **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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*bw: body weight**ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Acute Tox. 4: Acute toxicity – Category 4**Eye Dam. 1: Serious eye damage/eye irritation – Category 1**Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1**Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3*

GB

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.12.2023

Version number 6

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Solution B
- **Article number:** 39236.B
- **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:**  
Emergency medical information in case of poisoning  
Poison Information Centre Mainz-Tel: +49 (0) 6131 19240  
(Counselling in German and English)



## 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.
- **Determination of endocrine-disrupting properties** No further relevant information 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	1-3%
EINECS: 207-838-8			
Reg.nr.: 01-2119485498-19			

### Additional information

The product does not contain any other substances that have to be declared according to UK REACH (Regulation (EC) No 1907/2006).

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**Trade name: Solution B**

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**SECTION 4: First aid measures**

- **4.1 Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**  
Wash off immediately with soap and water and rinse thoroughly. In case of complaints, consult a doctor.
- **After eye contact:**  
Rinse opened eye for several minutes with running water. Remove contact lenses if possible and continue rinsing. Consult an ophthalmologist immediately.
- **After swallowing:**  
Rinse out mouth immediately. Drink plenty of water and provide fresh air. Call a 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<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture:** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing.  
Avoid contact with 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 section 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.  
No special measures required.
- **Information about protection against explosions and fires:** The product is not flammable
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**  
Storage at +2 to +8 °C  
Unsuitable material for receptacle: aluminium.  
Store only in the original receptacle.
- **Information about storage in one common storage facility:** Store away from oxidising agents.

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**Trade name: Solution B**

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- **Further information about storage conditions:** Store containers tightly closed and dry.
- **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 section 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.  
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 through 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:** 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
- **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:** The product is not flammable

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<b>· Lower and upper explosion limit:</b>	
· <b>Lower:</b>	No information available
· <b>Upper:</b>	No information available
· <b>Flash point:</b>	Not applicable
· <b>Decomposition temperature:</b>	No information available
· <b>pH:</b>	No information available
· <b>Viscosity:</b>	
· <b>Kinematic viscosity:</b>	No information available
· <b>Dynamic viscosity:</b>	No information available
· <b>Solubility:</b>	
· <b>Water:</b>	Fully miscible
· <b>Partition coefficient n-octanol/water (log value):</b>	No information available
· <b>Vapour pressure:</b>	No information available
· <b>Density and/or relative density:</b>	
· <b>Density:</b>	No information available
· <b>Relative density:</b>	No information available

**· 9.2 Other information**

· <b>Appearance:</b>	
· <b>Form:</b>	Solution
· <b>Important information on protection of health and environment, and on safety:</b>	
· <b>Explosive properties:</b>	Product does not present an explosion hazard.
· <b>VOC %:</b>	0.00 %

**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 information available.
- **10.4 Conditions to avoid:** No further relevant information available.
- **10.5 Incompatible materials:** various plastics, metals, metal alloys
- **10.6 Hazardous decomposition products:** No further relevant information 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:** No relevant information available

**SECTION 12: Ecological information**

- **12.1 Toxicity:**
- **Aquatic toxicity:** No further relevant information available.

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- **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 2 (German Regulation) (Self-assessment): hazardous for water.

**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**
- **Recommendation** Dispose of in accordance with official regulations.
- **Uncleaned packagings:**
- **Recommendation:**
  - Uncleaned packaging must be disposed of in the same way as the product in accordance with official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

**SECTION 14: Transport information**

· <b>14.1 UN number or ID number</b> · <b>ADR, IMDG, IATA</b>	Void
· <b>14.2 UN proper shipping name</b> · <b>ADR</b> · <b>IMDG, IATA</b>	1824 SODIUM HYDROXIDE SOLUTION Void
· <b>14.3 Transport hazard class(es)</b> · <b>ADR, IMDG, IATA</b> · <b>Class:</b> · <b>Label:</b>	Void -
· <b>14.4 Packing group</b> · <b>ADR, IMDG, IATA</b>	Void
· <b>14.5 Environmental hazards</b> · <b>Marine pollutant:</b>	No
· <b>14.6 Special precautions for user</b> · <b>Hazard identification number (Kemler code):</b>	Not applicable. -
· <b>14.7 Maritime transport in bulk according to IMO instruments</b>	Not applicable.
· <b>Transport/Additional information:</b>	Not dangerous according to the above specifications.
· <b>UN "Model Regulation":</b>	UN 1824 SODIUM HYDROXIDE SOLUTION, 8, II

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**Trade name: Solution B**

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**SECTION 15: Regulatory information**

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

· **Directive 2012/18/EU**

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

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

None of the ingredients is listed.

· **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 hazard class 2 (Self-assessment): hazardous for water.

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

**SECTION 16: Other information**

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

· **Relevant phrases**

H319 Causes serious eye irritation.

· **Department issuing SDS:** Product Safety Department

· **Contact:** +49 6221 13840-35

· **Date of previous version:** 22.10.2020

· **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

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

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.12.2023

Version number 7

Revision: 12.12.2023

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Solution C
- **Article number:** 39236.C
- **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:**  
Emergency medical information in case of poisoning  
Poison Information Centre Mainz-Tel: +49 (0) 6131 19240  
(Counselling in German and English)



## 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.
- **Determination of endocrine-disrupting properties** No further relevant information available.

## SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** aqueous solution

· **Dangerous components:**

CAS: 10377-48-7	lithium sulfate	5-15%
	⚠ Acute Tox. 4, H302	

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CAS: 7647-01-0 EINECS: 231-595-7	hydrogen chloride ⚠ Skin Corr. 1B, H314; Eye Dam. 1, H318; ⚠ STOT SE 3, H335 Specific concentration limits: Skin Corr. 1B; H314: $C \geq 25\%$ Skin Irrit. 2; H315: $10\% \leq C < 25\%$ Eye Irrit. 2; H319: $10\% \leq C < 25\%$ STOT SE 3; H335: $C \geq 10\%$	2.5-7%
CAS: 7664-38-2 EINECS: 231-633-2	phosphoric acid 85 % ⚠ Skin Corr. 1B, H314 Specific concentration limits: Skin Corr. 1B; H314: $C \geq 25\%$ Skin Irrit. 2; H315: $10\% \leq C < 25\%$ Eye Irrit. 2; H319: $10\% \leq C < 25\%$	2.5-7%
CAS: 10213-10-2 EINECS: 236-743-4	Disodium wolframate dihydrate ⚠ Acute Tox. 4, H302	1-3%

**Additional information**

The product does not contain any other substances that have to be declared according to UK REACH (Regulation (EC) No 1907/2006).

**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:**  
Wash off immediately with soap and water and rinse thoroughly. In case of complaints, consult a doctor.
- **After eye contact:**  
Rinse opened eye for several minutes with running water. Remove contact lenses if possible and continue rinsing. Consult an ophthalmologist immediately.
- **After swallowing:**  
Rinse out mouth. Call a 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<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture:**  
In case of fire, the following can be formed, but not limited to:  
Sulphur oxides (SO<sub>x</sub>)  
Phosphorous oxides (e.g. P<sub>2</sub>O<sub>5</sub>)  
Hydrogen chloride (HCl)
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

- Wear protective clothing.
- Ensure adequate ventilation
- Avoid contact with eyes and skin.

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**Trade name: Solution C**

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- **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 section 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.  
No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**  
Store only in the original receptacle.  
Storage at +2 to +8 °C
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Store containers tightly closed and dry.
- **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:**

**7647-01-0 hydrogen chloride (2.5-7%)**

WEL	Short-term value: 8 mg/m <sup>3</sup> , 5 ppm Long-term value: 2 mg/m <sup>3</sup> , 1 ppm (gas and aerosol mists)
-----	--

**7664-38-2 phosphoric acid 85 % (2.5-7%)**

WEL	Short-term value: 2 mg/m <sup>3</sup> Long-term value: 1 mg/m <sup>3</sup>
-----	---

- **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 section 7.
- **Individual protection measures, such as personal protective equipment:**
- **General protective and hygienic measures:**  
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:** 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

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- **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 through 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:**

Fluorocarbon rubber (Viton)

Nitrile rubber, NBR

- **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

- **Colour:**

Yellow

- **Odour:**

Characteristic

- **Odour threshold:**

Not determined.

- **Melting point/freezing point:**

No information available

- **Boiling point or initial boiling point and boiling range:**

No information available

- **Flammability:**

The product is not flammable

- **Lower and upper explosion limit:**

- **Lower:**

No information available

- **Upper:**

No information available

- **Flash point:**

Not applicable

- **Decomposition temperature:**

No information available

- **pH:**

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):**

Not determined.

- **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:**

- **Explosive properties:**

Product does not present an explosion hazard.

- **VOC %:**

0.00 %

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**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 information available.
- **10.4 Conditions to avoid:** No further relevant information available.
- **10.5 Incompatible materials:** Avoid contact with: metals
- **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:** No relevant information available

**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 2 (German Regulation) (Self-assessment): hazardous for water.

**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**
- **Recommendation** Dispose of in accordance with official regulations.
- **Uncleaned packagings:**
- **Recommendation:**  
Uncleaned packaging must be disposed of in the same way as the product in accordance with official regulations.

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· **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	3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROCHLORIC ACID, PHOSPHORIC ACID, SOLUTION)
· 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 · Hazard identification number (Kemler code):	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":	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROCHLORIC ACID, PHOSPHORIC ACID, 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.

· **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**

7647-01-0 | hydrogen chloride

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

7647-01-0 | hydrogen chloride

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- **National regulations:**
- **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

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

- **Relevant phrases**

H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H318 Causes serious eye damage.  
H335 May cause respiratory irritation.

- **Department issuing SDS:** Product Safety Department

- **Contact:** +49 6221 13840-35

- **Date of previous version:** 22.10.2020

- **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

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

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

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