

31.01.2012

### Kit Components

Product code	Description
<b>39225</b>	<b>ProtaQuant™ Assay Kit</b>

Components:

400130	10x Dye concentrate
400131	0,1 M NaOH Solution
39225-1	Albumin bovine Fraction V, Protease-free

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

Printing date 31.01.2012

Version number 1

Revision: 19.12.2011

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

### 1.1. Product identifier

· Trade name: 10x Dye concentrate

· Article number: 400130

· 1.2. Relevant identified uses of the substance or mixture and uses advised against

· Application of the substance / the preparation 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: +49 6131 19240 (university hospital Mainz)

**SERVA**  
Electrophoresis

## 2 Hazards identification

### 2.1. Classification of the substance or mixture

· Classification according to Regulation (EC) No 1272/2008



GHS02

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS06

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 3 H311 Toxic in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08

STOT SE 1 H370 Causes damage to organs.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

· Classification according to Directive 67/548/EEC or Directive 1999/45/EC



T; Toxic

R23/24/25-39/23/24/25: Toxic by inhalation, in contact with skin and if swallowed. Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.



Xi; Irritant

R36/38: Irritating to eyes and skin.

(Contd. on page 2)

GB

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

Printing date 31.01.2012

Version number 1

Revision: 19.12.2011

**Trade name: 10x Dye concentrate**

(Contd. of page 1)

**F+; Highly flammable****R11:***Highly flammable.***· Information concerning particular hazards for human and environment:***The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.***· Classification system:***The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.***· 2.2. Label elements****· Labelling according to Regulation (EC) No 1272/2008***The product is classified and labelled according to the CLP regulation.***· Hazard pictograms GHS02, GHS06, GHS08****· Signal word Danger****· Hazard-determining components of labelling:***methanol***· Hazard statements***H225 Highly flammable liquid and vapour.**H301 Toxic if swallowed.**H311 Toxic in contact with skin.**H331 Toxic if inhaled.**H315 Causes skin irritation.**H319 Causes serious eye irritation.**H370 Causes damage to organs.***· Precautionary statements***P281 Use personal protective equipment as required.**P243 Take precautionary measures against static discharge.**P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.**P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.**P302+P352 IF ON SKIN: Wash with plenty of soap and water.***· 2.3. Other hazards****· Results of PBT and vPvB assessment****· PBT:** *Not applicable.***· vPvB:** *Not applicable.***3 Composition/information on ingredients****· 3.2. Chemical characterization: Mixtures****· Description:** *Mixture of the substances listed below with harmless additions.***· Dangerous components:**

CAS: 67-56-1 EINECS: 200-659-6	methanol T R23/24/25-39/23/24/25;  F R11 ----- Flam. Liq. 2, H225;  Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331;  STOT SE 1, H370	80-100%
CAS: 64-19-7 EINECS: 200-580-7	acetic acid C R35 R10 ----- Flam. Liq. 3, H226;  Skin Corr. 1A, H314	5-15%

**· Additional information** *For the wording of the listed risk phrases refer to section 16.*

GB

(Contd. on page 3)

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

Printing date 31.01.2012

Version number 1

Revision: 19.12.2011

Trade name: 10x Dye concentrate

(Contd. of page 2)

#### 4 First aid measures

- **4.1. Description of first aid measures**
- **General information** Remove contaminated clothing.
- **After inhalation** Supply fresh air and to be sure call for a doctor.
- **After skin contact** Immediately rinse with water.
- **After eye contact** Rinse opened eye for several minutes under running water. Then consult doctor.
- **After swallowing**  
Rinse out mouth and then drink plenty of water.  
Call a doctor immediately.
- **Information for 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.

#### 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.
- **For safety reasons unsuitable extinguishing agents** Water with full jet.
- **5.2. Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
Carbon monoxide and carbon dioxide  
In certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:  
Formaldehyde
- **5.3. Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

#### 6 Accidental release measures

- **6.1. Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **6.2. Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3. Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **6.4. Reference to other sections**  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

#### 7 Handling and storage

- **Handling**
- **7.1. Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Keep respiratory protective device available.

(Contd. on page 4)

GB

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

Printing date 31.01.2012

Version number 1

Revision: 19.12.2011

**Trade name: 10x Dye concentrate**

(Contd. of page 3)

- **7.2. Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **7.3. Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

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

### · 8.1. Control parameters

- **Components with limit values that require monitoring at the workplace:**

#### 67-56-1 methanol (80-100%)

WEL	Short-term value: 333 mg/m <sup>3</sup> , 250 ppm
	Long-term value: 266 mg/m <sup>3</sup> , 200 ppm
Sk	

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

### · 8.2. Exposure controls

#### · Personal protective equipment

#### · General protective and hygienic measures

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the eyes and skin.

#### · Breathing equipment:

- Short term filter device:
- Filter P3.

#### · Protection of hands:

- Protective gloves.
- The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ 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. 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:

- Nitrile rubber, NBR
- Chloroprene rubber, CR

#### · Eye protection: Tightly sealed goggles.

#### · Body protection: Protective work clothing.

GB

(Contd. on page 5)

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

Printing date 31.01.2012

Version number 1

Revision: 19.12.2011

Trade name: 10x Dye concentrate

(Contd. of page 4)

## 9 Physical and chemical properties

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

#### · General Information

#### · Appearance:

Form:	Solution
Colour:	Black
Odour:	Characteristic

#### · Change in condition

Melting point/Melting range: undetermined

Boiling point/Boiling range: undetermined

· Flash point: > 11°C

· Self igniting: Product is not selfigniting.

· Danger of explosion: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

#### · Explosion limits:

Lower: 4.0 Vol %

Upper: 44.0 Vol %

· Density: Not determined

#### · Solubility in / Miscibility with

Water: Fully miscible

#### · Solvent content:

Organic solvents: 99.0 %

· VOC %: 100.00 %

· VOC g/l: 1000.0 g/l

· Solids content: 1.0 %

· 9.2. Other information: There are no more data available.

## 10 Stability and reactivity

### · 10.1. Reactivity

### · 10.2. Chemical stability

· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

· 10.3. Possibility of hazardous reactions: No dangerous reactions known

· 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 dangerous decomposition products known

## 11 Toxicological information

### · 11.1. Information on toxicological effects

#### · Acute toxicity:

#### · LD/LC50 values that are relevant for classification:

Oral	LD50	4329 mg/kg (Maus)
------	------	-------------------

#### 67-56-1 methanol

Oral	LD50	5600 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)
	LC50/96h	10800 mg/l (Fish)

#### · Primary irritant effect:

· on the skin: Irritant to skin and mucous membranes.

(Contd. on page 6)

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

Printing date 31.01.2012

Version number 1

Revision: 19.12.2011

**Trade name: 10x Dye concentrate**

(Contd. of page 5)

- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Toxic  
Irritant


## 12 Ecological information

- **12.1. Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2. Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **12.3. Bioaccumulative potential** No further relevant information available.
- **12.4. Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5. Results of PBT and vPvB assessment**
- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.
- **12.6. Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **13.1. Waste treatment methods**
- **Recommendation**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- |   |                         |
|---|-------------------------|
| · <b>14.1. UN-Number</b>  |                         |
| · <b>ADR, IMDG, IATA</b>  | UN1230                  |
| · <b>14.2. UN proper shipping name</b>  |                         |
| · <b>ADR</b>  | 1230 METHANOL, solution |
| · <b>IMDG</b>   | METHANOL, solution      |
| · <b>IATA</b>   | Methanol, solution      |
| · <b>14.3. Transport hazard class(es)</b>   |                         |
| · <b>ADR</b>  |                         |
|  |                         |
| · <b>Class</b>  | 3 Flammable liquids.    |

(Contd. on page 7)

GB

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

Printing date 31.01.2012

Version number 1

Revision: 19.12.2011

**Trade name: 10x Dye concentrate**

(Contd. of page 6)

· **Label** 3+6.1· **IMDG, IATA**· **Class** 3 Flammable liquids.· **Label** 3+6.1· **14.4. Packing group**· **ADR, IMDG, IATA** II· **14.5. Environmental hazards:** Not applicable.· **Marine pollutant:** No· **14.6. Special precautions for user**

Warning: Flammable liquids.

· **Danger code (Kemler):** 336· **EMS Number:** F-E,S-D· **14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**· **ADR**· **Tunnel restriction code** D/E· **UN "Model Regulation":** UN1230, METHANOL, solution, 3 (6.1), II

## 15 Regulatory information

· **15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**· **National regulations**· **Technical instructions (air):**

Class	Share in %
I	80-100
II	5-15

· **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.

## 16 Other information

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

· **Relevant phrases**

H225 Highly flammable liquid and vapour.

H226 Flammable liquid and vapour.

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H314 Causes severe skin burns and eye damage.

H331 Toxic if inhaled.

H370 Causes damage to organs.

R10 Flammable.

R11 Highly flammable.

R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

(Contd. on page 8)

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

Printing date 31.01.2012

Version number 1

Revision: 19.12.2011

**Trade name: 10x Dye concentrate**

(Contd. of page 7)

R35 Causes severe burns.

R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

· **Department issuing MSDS:** Product safety department

· **Contact:** +49 6221 13840-35

· **Abbreviations and acronyms:**

PBT: persistent, bioaccumulative, toxic substance (REACH)

vPvB: very persistent, very bioaccumulative substance (REACH)

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

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

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

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

· **\* Data compared to the previous version altered.**

GB

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.01.2012

Version number 1

Revision: 15.03.2011

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

- **1.1. Product identifier**
- **Trade name:** 0,1 M NaOH Solution
- **Article number:** 400131
- **1.2. Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation** 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:** +49 6131 19240 (university hospital Mainz)

**SERVA**  
Electrophoresis

## 2 Hazards identification

- **2.1. Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS05

*Skin Corr. 1C H314 Causes severe skin burns and eye damage.*

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC not applicable**
- **Information concerning particular hazards for human and environment:**  
*The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.*
- **Classification system:**  
*The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.*

- **2.2. Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**  
*The product is classified and labelled according to the CLP regulation.*
- **Hazard pictograms** GHS05
- **Signal word** Danger
- **Hazard statements**  
*H314 Causes severe skin burns and eye damage.*
- **Precautionary statements**
  - P280 *Wear protective gloves/protective clothing/eye protection/face protection.*
  - P303+P361+P353 *IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.*
  - P304+P340 *IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.*
  - P305+P351+P338 *IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
  - P301+P330+P331 *IF SWALLOWED: rinse mouth. Do NOT induce vomiting.*
  - P405 *Store locked up.*
- **2.3. Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

(Contd. on page 2)

GB

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

Printing date 31.01.2012

Version number 1

Revision: 15.03.2011

Trade name: 0,1 M NaOH Solution

(Contd. of page 1)

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **3.2. Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with harmless additions.
- **Dangerous components:** Void
- **Additional information** For the wording of the listed risk phrases refer to section 16.

### 4 First aid measures

- **4.1. Description of first aid measures**
- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Immediately rinse with water.
- **After eye contact**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.
- **After swallowing**  
Rinse out mouth and then drink plenty of water.  
If symptoms persist consult doctor.
- **Information for 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.

### 5 Firefighting measures

- **5.1. Extinguishing media**
- **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
- **5.2. Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3. Advice for firefighters**
- **Protective equipment:** Mount respiratory protective device.

### 6 Accidental release measures

- **6.1. Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **6.2. Environmental precautions:** Dilute with plenty of water.
- **6.3. Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **6.4. Reference to other sections** No dangerous substances are released.

### 7 Handling and storage

- **Handling**
- **7.1. Precautions for safe handling** Open and handle receptacle with care.
- **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:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.

(Contd. on page 3)

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

Printing date 31.01.2012

Version number 1

Revision: 15.03.2011

Trade name: 0,1 M NaOH Solution

(Contd. of page 2)

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

## 8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.· **8.1. Control parameters**· **Components with limit values that require monitoring at the workplace:**

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

· **Additional information:** The lists that were valid during the creation were used as basis.· **8.2. Exposure controls**· **Personal protective equipment**· **General protective and hygienic measures**

The usual precautionary measures should be adhered to when handling chemicals.

· **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. 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 protection:** Tightly sealed goggles.· **Body protection:** Protective work clothing.

## 9 Physical and chemical properties

· **9.1. Information on basic physical and chemical properties**· **General Information**· **Appearance:**

Form: Solution

Colour: Colourless

· **Odour:** Odourless· **pH-value at 20°C:** > 12· **Change in condition**

Melting point/Melting range: undetermined

Boiling point/Boiling range: ca. 100°C

· **Flash point:** Not applicable· **Self igniting:** Product is not selfigniting.· **Danger of explosion:** Product does not present an explosion hazard.

(Contd. on page 4)

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

Printing date 31.01.2012

Version number 1

Revision: 15.03.2011

Trade name: 0,1 M NaOH Solution

(Contd. of page 3)

- |  |                                   |
|--|-----------------------------------|
| · <b>Density:</b>                                | Not determined                    |
| · <b>Solubility in / Miscibility with Water:</b> | Fully miscible                    |
| · <b>Solvent content:</b>                        |                                   |
| <b>Organic solvents:</b>                         | 0.0 %                             |
| · <b>9.2. Other information</b>                  | There are no more data available. |

### 10 Stability and reactivity

- **10.1. Reactivity**
- **10.2. Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3. Possibility of hazardous reactions** No dangerous reactions known
- **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 dangerous decomposition products known

### 11 Toxicological information

- **11.1. Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

Oral	LD50	1080 mg/kg (rat)
------	------	------------------

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

### 12 Ecological information

- **12.1. Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2. Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **12.3. Bioaccumulative potential** No further relevant information available.
- **12.4. Mobility in soil** No further relevant information available.
- **Additional ecological information:**

- **General notes:**

Generally not hazardous for water.

Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

- **12.5. Results of PBT and vPvB assessment**
- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.

(Contd. on page 5)

GB

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

Printing date 31.01.2012

Version number 1

Revision: 15.03.2011

Trade name: 0,1 M NaOH Solution

(Contd. of page 4)

- **12.6. Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **13.1. Waste treatment methods**
- **Recommendation**  
Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

· <b>14.1. UN-Number</b> · <b>ADR, ADN, IMDG, IATA</b>	Void
· <b>14.2. UN proper shipping name</b> · <b>ADR, ADN, IMDG, IATA</b>	Void
· <b>14.3. Transport hazard class(es)</b> · <b>ADR, ADN, IMDG, IATA</b> · <b>Class</b>	Void
· <b>14.4. Packing group</b> · <b>ADR, IMDG, IATA</b>	Void
· <b>14.5. Environmental hazards:</b> · <b>Marine pollutant:</b>	Not applicable. No
· <b>14.6. Special precautions for user</b>	Not applicable.
· <b>14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	Not dangerous according to the above specifications.
· <b>UN "Model Regulation":</b>	-

### 15 Regulatory information

- **15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Water hazard class:** Generally not hazardous for water.
- **15.2. 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 MSDS:** Product safety department
- **Contact:** +49 6221 13840-35
- **Abbreviations and acronyms:**  
PBT: persistent, bioaccumulative, toxic substance (REACH)  
vPvB: very persistent, very bioaccumulative substance (REACH)  
REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

(Contd. on page 6)

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

Printing date 31.01.2012

Version number 1

Revision: 15.03.2011

**Trade name: 0,1 M NaOH Solution**

(Contd. of page 5)

*CLP: Regulation on classification, labelling and packaging of substances and mixtures**ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)**RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)**IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**ICAO: International Civil Aviation Organization**GHS: Globally Harmonized System of Classification and Labelling of Chemicals**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent***· \* Data compared to the previous version altered.**

GB

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

Printing date 31.01.2012

Version number 1

Revision: 02.03.2010

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

- **1.1. Product identifier**
- **Trade name:** Albumin bovine Fraction V, Protease-free
- **Article number:** 39225-1
- **CAS Number:**  
9048-46-8
- **EC number:**  
232-936-2
- **1.2. Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation** 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:** +49 6131 19240 (university hospital Mainz)

**SERVA**  
Electrophoresis

## 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 CLP regulation.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC not applicable**
- **Classification system:**  
The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.
- **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:** Not applicable.
- **vPvB:** Not applicable.

## 3 Composition/information on ingredients

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

## 4 First aid measures

- **4.1. Description of first aid measures**
- **General information** No special measures required.

(Contd. on page 2)

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

Printing date 31.01.2012

Version number 1

Revision: 02.03.2010

**Trade name: Albumin bovine Fraction V, Protease-free**

(Contd. of page 1)

- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Immediately rinse with water.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Drink copious amounts of water and provide fresh air. Call for doctor immediately.
- **Information for 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.

## 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:** No special measures required.

## 6 Accidental release measures

- **6.1. Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **6.2. Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3. Methods and material for containment and cleaning up:** Pick up mechanically.
- **6.4. Reference to other sections** No dangerous substances are released.

## 7 Handling and storage

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

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1. Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **8.2. Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**  
The usual precautionary measures should be adhered to when handling chemicals.
- **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.

(Contd. on page 3)

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

Printing date 31.01.2012

Version number 1

Revision: 02.03.2010

**Trade name: Albumin bovine Fraction V, Protease-free**

(Contd. of page 2)

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 protection:** Safety glasses

· **Body protection:** Protective work clothing.

## 9 Physical and chemical properties

· **9.1. Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Powder

Colour: Whitish

· **Odour:** Characteristic

· **pH-value (70 g/l) at 20°C:** 7

· **Change in condition**

Melting point/Melting range: undetermined

Boiling point/Boiling range: undetermined

· **Flash point:** Not applicable

· **Flammability (solid, gaseous)** Product is not flammable.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Density at 20°C:** 1.01 g/cm<sup>3</sup>

· **Solubility in / Miscibility with**

Water at 20°C: 100 g/l

Organic solvents: 0.0 %

· **VOC %:** 0.00 %

· **Solids content:** 100.0 %

· **9.2. Other information** No further relevant information available.

## 10 Stability and reactivity

· **10.1. Reactivity**

· **10.2. Chemical stability**

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **10.3. Possibility of hazardous reactions** No dangerous reactions known

· **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 dangerous decomposition products known

GB

(Contd. on page 4)

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

Printing date 31.01.2012

Version number 1

Revision: 02.03.2010

Trade name: Albumin bovine Fraction V, Protease-free

(Contd. of page 3)

### 11 Toxicological information

· **11.1. Information on toxicological effects**

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

The substance is not subject to classification according to the latest version of the EU lists.

### 12 Ecological information

· **12.1. Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **12.2. Persistence and degradability** No further relevant information available.

· **Behaviour in environmental systems:**

· **12.3. Bioaccumulative potential** No further relevant information available.

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

· **Additional ecological information:**

· **General notes:**

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

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **12.5. Results of PBT and vPvB assessment**

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

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

· **12.6. Other adverse effects** No further relevant information available.

### 13 Disposal considerations

· **13.1. Waste treatment methods**

· **Recommendation** Must be specially treated adhering to official regulations.

· **Uncleaned packagings:**

· **Recommendation:**

Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

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

### 14 Transport information

· **14.1. UN-Number**

· **ADR, ADN, IMDG, IATA** Void

· **14.2. UN proper shipping name**

· **ADR, ADN, IMDG, IATA** Void

· **14.3. Transport hazard class(es)**

· **ADR, ADN, IMDG, IATA**

· **Class** Void

(Contd. on page 5)

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

Printing date 31.01.2012

Version number 1

Revision: 02.03.2010

Trade name: Albumin bovine Fraction V, Protease-free

(Contd. of page 4)

· <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>	Not applicable.
· <b>14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	Not dangerous according to the above specifications.
· <b>UN "Model Regulation":</b>	-

### 15 Regulatory information

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

### 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 MSDS:** Product safety department
- **Contact:** +49 6221 13840-35
- **Abbreviations and acronyms:**  
 PBT: persistent, bioaccumulative, toxic substance (REACH)  
 vPvB: very persistent, very bioaccumulative substance (REACH)  
 REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals  
 CLP: Regulation on classification, labelling and packaging of substances and mixtures  
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 ICAO: International Civil Aviation Organization  
 GHS: Globally Harmonized 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)
- **\* Data compared to the previous version altered.**

GB