

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

Printing date 26.11.2010

Version number 1

Revision: 26.11.2010

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

- **Product identifier**
- **Trade name:** Acrylamide/Bis Solution 37,5:1
- **Article number:** 10688
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
SERVA Electrophoresis GmbH  
Carl-Benz-Str. 7  
D-69115 Heidelberg  
Tel.: +49 6221 13840-0  
FAX: +49 6221 13840-10  
msds.info@serva.de
- **Information department:** Product Safety department Tel.: +49 6221 13840-35
- **Emergency telephone number:** +49 6131 19240 (university hospital Mainz)

**SERVA**  
Electrophoresis

## 2 Hazards identification

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



GHS08 health hazard

- Muta. 1B H340 May cause genetic defects.  
 Carc. 1B H350 May cause cancer.  
 Repr. 2 H361 Suspected of damaging fertility or the unborn child.  
 STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.



GHS07

- Acute Tox. 4 H302 Harmful if swallowed.  
 Acute Tox. 4 H312 Harmful in contact with skin.  
 Skin Irrit. 2 H315 Causes skin irritation.  
 Eye Irrit. 2 H319 Causes serious eye irritation.  
 Skin Sens. 1 H317 May cause an allergic skin reaction.

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



T; Toxic

- R45-46-25-48/23/24/25: May cause cancer. May cause heritable genetic damage. Toxic if swallowed.  
 Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.



Xn; Harmful

- R20/21-62: Harmful by inhalation and in contact with skin. Possible risk of impaired fertility.



Xi; Irritant

- R36/38: Irritating to eyes and skin.



Xi; Sensitising

- R43: May cause sensitisation by skin contact.

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· **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.

· **Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms** GHS07, GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**

acrylamide

· **Hazard statements**

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H340 May cause genetic defects.

H350 May cause cancer.

H361 Suspected of damaging fertility or the unborn child.

H372 Causes damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P362 Take off contaminated clothing and wash before reuse.

P321 Specific treatment (see on this label).

· **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

· **Code letter and hazard designation of product:**

T Toxic

· **Hazard-determining components of labelling:**

acrylamide

· **Risk phrases:**

45 May cause cancer.

46 May cause heritable genetic damage.

20/21 Also harmful by inhalation and in contact with skin.

25 Also toxic if swallowed.

36/38 Irritating to eyes and skin.

43 May cause sensitisation by skin contact.

48/23/24/25 Also toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.

62 Possible risk of impaired fertility.

· **Safety phrases:**

53 Avoid exposure - obtain special instructions before use.

9 Keep container in a well-ventilated place.

20 When using do not eat or drink.

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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60 This material and its container must be disposed of as hazardous waste.

- **Special labelling of certain preparations:**  
Only for trade users / technical specialists
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

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

- **Dangerous components:**

|                   |  |        |
|-------------------|--|--------|
| CAS: 79-06-1      | acrylamide   | 20-40% |
| EINECS: 201-173-7 |  T R45-46-25-48/23/24/25;  Xn R20/21-62;  Xi R36/38;  Xi R43<br> Acute Tox. 3, H301; Acute Tox. 3, H311;  Muta. 1B, H340; Carc. 1B, H350;            Repr. 2, H361; STOT RE 1, H372; Acute Tox. 4, H332; Skin Irrit. 2, H315;            Eye Irrit. 2, H319; Skin Sens. 1, H317 |        |

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

### 4 First aid measures

- **Description of first aid measures**
- **General information**  
Take affected persons out into the fresh air.  
Remove contaminated clothing.  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.  
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation**  
Supply fresh air and to be sure call for a doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.
- **After swallowing** Drink copious amounts of water and provide fresh air. Call for doctor immediately.

### 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Advice for firefighters**
- **Protective equipment:** Mount respiratory protective device.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **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.

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- **Reference to other sections**  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

**7 Handling and storage**

- **Handling**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**  
The product is not flammable  
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store only in unopened original receptacles.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Store under lock and key and with access restricted to technical experts or their assistants only.  
Keep receptacle tightly sealed.

**8 Exposure controls/personal protection**

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

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

**79-06-1 acrylamide (20-40%)**

|     |  |
|-----|--|
| WEL | Long-term value: 0.3 mg/m <sup>3</sup> |
|     | Carc; Sk                               |

- **Additional information:** The lists that were valid during the creation were used as basis.
- **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:**  
Neoprene gloves  
PVC gloves  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation  
PVC (0.5 mm) Butyl (0.5 mm)  
max. 8 h
- **Material of gloves**

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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:**

Neoprene gloves

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

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

## 9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form: Fluid

Colour: Colourless

· **Odour:** Characteristic

· **pH-value at 20°C:** 6.5

· **Change in condition**

Melting point/Melting range: undetermined

Boiling point/Boiling range: undetermined

· **Flash point:** Not applicable

· **Self igniting:** Product is not selfigniting.

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

· **Density at 20°C:** 1.04 g/cm<sup>3</sup>

· **Solubility in / Miscibility with**

Water: Fully miscible

· **Solvent content:**

Organic solvents: 0.0 %

· **VOC %:** 0.00 %

· **Solids content:** 30.0 %

## 10 Stability and reactivity

· **Reactivity**

· **Chemical stability**

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

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

· **Hazardous decomposition products:** No dangerous decomposition products known

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### 11 Toxicological information

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

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

#### 79-06-1 acrylamide

|        |      |                 |
|--------|------|-----------------|
| Oral   | LD50 | 124 mg/kg (rat) |
| Dermal | LD50 | 400 mg/kg (rat) |

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **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  
Harmful  
Irritant  
Carcinogenic  
The product can cause inheritable damage.
- **Sensitisation** May cause sensitisation by skin contact.

### 12 Ecological information

- **Toxicity**
- **Acquatic toxicity:** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water danger class 3 (German Regulation) (Self-assessment): extremely hazardous for water.  
Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
Danger to drinking water if even extremely small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 13 Disposal considerations

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

### 14 Transport information

- **Land transport ADR/RID (cross-border)**



- **ADR/RID class:** 6.1 Toxic substances.

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- **Danger code (Kemler):** 60
- **UN-Number:** 3426
- **Packaging group:** III
- **Label** 6.1
- **UN proper shipping name:** 3426 ACRYLAMIDE SOLUTION
- **Tunnel restriction code** E

· **Maritime transport IMDG:**



- **IMDG Class:** 6.1
- **UN Number:** 3426
- **Label** 6.1
- **Packaging group:** III
- **Marine pollutant:** No
- **Propper shipping name:** ACRYLAMIDE SOLUTION

· **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 6.1
- **UN/ID Number:** 3426
- **Label** 6.1
- **Packaging group:** III
- **Propper shipping name:** ACRYLAMIDE SOLUTION

- **UN "Model Regulation":** UN3426, ACRYLAMIDE SOLUTION, 6.1, III
- **Special precautions for user** Warning: Toxic substances.

**15 Regulatory information**

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

| Class | Share in % |
|-------|------------|
| II    | 20-40      |

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

- H301 Toxic if swallowed.
- H311 Toxic in contact with skin.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.

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|              |  |
|--------------|--|
| H340         | May cause genetic defects.   |
| H350         | May cause cancer.  |
| H361         | Suspected of damaging fertility or the unborn child.   |
| H372         | Causes damage to organs through prolonged or repeated exposure.  |
| R20/21       | Harmful by inhalation and in contact with skin.  |
| R25          | Toxic if swallowed.  |
| R36/38       | Irritating to eyes and skin.   |
| R43          | May cause sensitisation by skin contact.   |
| R45          | May cause cancer.  |
| R46          | May cause heritable genetic damage.  |
| R48/23/24/25 | Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. |
| R62          | Possible risk of impaired fertility.   |

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

· **Contact:** +49 6221 13840-35

· **Abbreviations and acronyms:**

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

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

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.**

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