

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.11.2011

Version number 1

Revision: 04.10.2011

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

### 1.1. Product identifier

· Trade name: Acrylamide/bis Solution 19:1

· Article number: 10686

· 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



GHS08

Muta. 1B H340 May cause genetic defects.

Carc. 1B H350 May cause cancer.

Repr. 2 H361f Suspected of damaging fertility.

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

R20/21-40-62: Harmful by inhalation and in contact with skin. Limited evidence of a carcinogenic effect. 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.
- 
- **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** GHS07, GHS08
  - **Signal word** Danger
  - **Hazard-determining components of labelling:**  
acrylamide  
N,N'-methylene diacrylamide
  - **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.  
H361f Suspected of damaging fertility.  
H372 Causes damage to organs through prolonged or repeated exposure.
  - **Precautionary statements**  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P201 Obtain special instructions before use.  
P264 Wash thoroughly after handling.  
P281 Use personal protective equipment as required.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P405 Store locked up.
  - **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: 79-06-1 EINECS: 201-173-7	acrylamide ☠ T Carc. Cat. 2, Muta. Cat. 2 R45-46-25-48/23/24/25; ☠ Xn R20/21-62; ☠ Xi R36/38; ☠ Xi R43 Repr. Cat. 3 ----- ☠ Acute Tox. 3, H301; ☠ Muta. 1B, H340; Carc. 1B, H350; Repr. 2, H361f; STOT RE 1, H372; ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	20-40%
CAS: 110-26-9 EINECS: 203-750-9	N,N'-methylene diacrylamide ☠ Xn R22 ⚠ Acute Tox. 4, H302	1-3%

- **SVHC**

79-06-1	acrylamide
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· **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**  
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** Do not induce vomiting; call for medical help 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:** 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.  
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.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.

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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 unopened original receptacles.
- **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:**

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

WEL ()	Long-term value: 0.3 mg/m <sup>3</sup> Carc; Sk
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- **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.

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

#### Protection of hands:

Rubber gloves

Neoprene gloves

Internal tests have shown that some rubber gloves may be subject to permeability to Acrylamide solution.

We suggest using neoprene gloves.

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.

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.

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

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## 9 Physical and chemical properties

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

#### · General Information

#### · Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Odourless

#### · Change in condition

Melting point/Melting range: undetermined

Boiling point/Boiling range: undetermined

· Flash point: Not applicable

· Ignition temperature: 424°C

· Self igniting: Product is not selfigniting.

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

· Vapour pressure at 20°C: 0 hPa

· Density: Not determined

#### · Solubility in / Miscibility with

Water: Fully miscible

#### · Solvent content:

Organic solvents: 0.0 %

· VOC %: 0.00 %

· 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

## 11 Toxicological information

### · 11.1. 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)

##### 110-26-9 N,N'-methylenediacrylamide

Oral	LD50	390 mg/kg (rat)
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#### · Primary irritant effect:

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

· on the eye: Irritating effect.

· Sensitization: Sensitization possible through skin contact.

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**· 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.

**12 Ecological information****· 12.1. Toxicity**

· **Acquatic 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 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.

**· 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.

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

**14 Transport information****· 14.1. UN-Number**

· **ADR, IMDG, IATA**

2810

**· 14.2. UN proper shipping name**

· **ADR**

Toxic liquid, organic, n.o.s., acrylamide

· **IMDG, IATA**

TOXIC LIQUID, ORGANIC, N.O.S. (ACRYLAMIDE)

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

· **ADR**



· **Class**

6.1 Toxic substances.

· **Label**

6.1

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· **IMDG**· **Class**

6.1 Toxic substances.

· **IATA**· **Class**

6.1 Toxic substances.

· **Label**

6.1

· **14.4. Packing group**· **ADR, IATA**

III

· **14.5. Environmental hazards:**· **Marine pollutant:**

No

· **14.6. Special precautions for user**· **Danger code (Kemler):**

Warning: Toxic substances.

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· **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**

E

· **UN "Model Regulation":**

UN2810, TOXIC LIQUID, ORGANIC, N.O.S., 6.1, III

\* **15 Regulatory information**· **15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**· **National regulations**· **Water hazard class:** Water danger class 3 (Self-assessment): extremely hazardous for water.· **15.2. Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**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.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H340 May cause genetic defects.

H350 May cause cancer.

H361f Suspected of damaging fertility.

H372 Causes damage to organs through prolonged or repeated exposure.

R20/21 Harmful by inhalation and in contact with skin.

R22 Harmful if swallowed.

R25 Toxic if swallowed.

R36/38 Irritating to eyes and skin.

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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:**

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.**

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