1 Identification

- Product identifier
  - Trade name: Acrylamide/Bis Solution, 29:1
  - Article number: 10687
  - Application of the substance / the mixture Laboratory chemicals

- Details of the supplier of the safety data sheet
  - Manufacturer/Supplier: SERVA Electrophoresis GmbH
    Carl-Benz-Str. 7
    D-69115 Heidelberg
    Tel.: +49 6221 13840-0
    FAX: +49 6221 13840-10
    msds.info@serva.de

  - Information department: Product Safety department
    Tel.: +49 6221 13840-35

- Emergency telephone number:
  Medical Emergency Information in case of poisoning:
  Poison Information Center Mainz - Phone: +49 (0) 6131 19240
  (advisory service in German or English language)

2 Hazard(s) identification

- Classification of the substance or mixture
  GHS08
  Mut. 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.
  Skin Irrit. 2 H315 Causes skin irritation.
  Eye Irrit. 2A H319 Causes serious eye irritation.
  Skin Sens. 1 H317 May cause an allergic skin reaction.

- Label elements
  - GHS label elements
    The product is classified and labeled according to the Globally Harmonized System (GHS).
  - Hazard pictograms GHS07, GHS08
  - Signal word Danger

- Hazard-determining components of labeling:
  acrylamide
  N,N’-methyleneacrylamide

- Hazard statements
  Harmful if swallowed.
  Causes skin irritation.
  Causes serious eye irritation.
  May cause an allergic skin reaction.
  May cause genetic defects.
May cause cancer.
Suspected of damaging fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure.

**Precautionary statements**
Obtain special instructions before use.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
If on skin: Wash with plenty of soap and water.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

**Classification system:**

**NFPA ratings (scale 0 - 4)**
- Health = 2
- Fire = 0
- Reactivity = 0

**HMIS-ratings (scale 0 - 4)**
- HEALTH
  - Health = *2
- FIRE
  - Fire = 0
- REACTIVITY
  - Reactivity = 0

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

### 3 Composition/information on ingredients

**Chemical characterization:** Mixtures
**Description:** Mixture of the substances listed below with nonhazardous additions.

**Dangerous components:**
- 79-06-1 acrylamide 20-40%

**Additional information:** For the wording of the listed hazard phrases refer to section 16.

### 4 First-aid measures

**Description of first aid measures**
**General information:**
Take affected persons out into the fresh air.
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

**After inhalation:** Supply fresh air and to be sure call for a doctor.

**After skin contact:**
Immediate wash with copious amounts of water and soap; rinse thoroughly; seek medical advice.

**After eye contact:**
Rinse opened eye for several minutes under running water. Remove present contact lenses, if easy to do, and continue rinsing. Consult ophthalmologist immediately.

**After swallowing:**
Wash out mouth instantly. Drink copious amounts of water and provide fresh air. Call for doctor immediately.

(Contd. on page 3)
Trade name: Acrylamide/Bis Solution, 29:1

5 Fire-fighting measures

- Extinguishing media
  - Suitable extinguishing agents: CO₂ extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Special hazards arising from the substance or mixture: No further relevant information available.
- Advice for firefighters
  - Protective equipment: Wear self-contained respiratory protective device.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  - Wear protective clothing.
  - Ensure adequate ventilation
- Environmental precautions: 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.
- Reference to other sections
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.

7 Handling and storage

- 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 at +2 to +8 °C
    - Store only in unopened original receptacles.
  - Information about storage in one common storage facility: Store away from oxidizing agents.
  - 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 and store in dry conditions.
  - 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.
Trade name: Acrylamide/Bis Solution, 29:1

- **Control parameters**
  - DMELs
    - DMEL (Acrylamide, CAS No. 79-06-1) systemic long-term effects by inhalation: 0.07 mg/m³
    - DMEL (Acrylamide, CAS No. 79-06-1) systemic long-term effects, dermal: 0.1 mg/kg/day

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

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Component</th>
<th>PEL</th>
<th>REL</th>
<th>TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>79-06-1</td>
<td>acrylamide (20-40%)</td>
<td>0.3 mg/m³</td>
<td>0.03 mg/m³</td>
<td>0.03* mg/m³</td>
</tr>
<tr>
<td>Skin</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **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 A/P3
  - **Protection of hands:**
    - PVC gloves
    - Neoprene 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
      - PVC (0.5 mm) Butyl (0.5 mm)
      - max. 8 h
  - **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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
  - **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
    - PVC gloves
    - 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: Solution
Trade name: Acrylamide/Bis Solution, 29:1

Color: Colorless
Odor: Characteristic
pH-value at 20 °C (68 °F): 6.0 - 8.0
Change in condition
Melting point/Melting range: Undetermined.
Boiling point/Boiling range: Undetermined.
Flash point: Not applicable.
Auto igniting: Product is not selfigniting.
Danger of explosion: Product does not present an explosion hazard.
Density at 20 °C (68 °F): 1.04 g/cm³ (8.6788 lbs/gal)
Solubility in / Miscibility with Water: Fully miscible.
Solvent content: Organic solvents: 0.0 %
Solids content: 30.0 %
Other information: No further relevant information available.

10 Stability and reactivity
Reactivity: No further relevant information available.
Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Possibility of hazardous reactions: No further relevant informations available.
Conditions to avoid: No further relevant information available.
Incompatible materials: No further relevant information available.
Hazardous decomposition products: No further relevant informations available.

11 Toxicological information
Information on toxicological effects
Acute toxicity:
LD/LC50 values that are relevant for classification:
79-06-1 acrylamide

<table>
<thead>
<tr>
<th>Route</th>
<th>LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>124 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal</td>
<td>1141 mg/kg (rat)</td>
</tr>
</tbody>
</table>

Primary irritant effect:
on the skin: Irritant to skin and mucous membranes.
on the eye: Irritating effect.
Sensitization: Sensitization possible through skin contact.
Other information (about experimental toxicology):
Acrylamide, EC Number: 201-173-7, CAS number: 79-06-1, is identified as a carcinogenic and mutagenic substance according to Article 57 (a) and (b) of Regulation (EC) No 1907/2006 (REACH).
This corresponds to a classification as carcinogen (1B) and mutagen (1B) in Annex VI, part 3, Table 3.1 of Regulation (EC) No 1272/2008 (list of harmonised classification and labelling of hazardous substances).
(ECHA SVHC Support Document - Acrylamide; Page 2)
Additional toxicological information:
The product shows the following dangers according to internally approved calculation methods for preparations:
Toxic
12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
- Behavior in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.
- Additional ecological information:
  - General notes:
    - Water hazard class 3 (Self-assessment): extremely hazardous for water
    - Do not allow product to reach ground water, water course or sewage system.
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
  - Other adverse effects: No further relevant information available.

13 Disposal considerations

- Waste treatment methods
- Recommendation:
  - Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
  - Disposal must be made according to official regulations.
- Uncleaned packagings:
- Recommendation:
  - Disposal of uncleaned packagings must be made according to official regulations in the same manner as the product.
- Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

- UN-Number
  - DOT, ADR, IMDG, IATA: UN3426
- UN proper shipping name
  - ADR: 3426 ACRYLAMIDE SOLUTION
  - IMDG: ACRYLAMIDE SOLUTION
  - IATA: Acrylamide solution
### Transport hazard class(es)

**DOT**

- **Class**: 6.1 Toxic substances
- **Label**: 6.1

### ADR, IMDG, IATA

- **Class**: 6.1 Toxic substances
- **Label**: 6.1

### Packing group

**DOT, ADR, IMDG, IATA**: III

### Environmental hazards:

- **Marine pollutant**: No

### Special precautions for user

- **Warning**: Toxic substances
- **Danger code (Kemler)**: 60
- **EMS Number**: F-A,S-A
- **Stowage Category**: A
- **Stowage Code**: SW1 Protected from sources of heat.
- **Handling Code**: H2 Keep as cool as reasonably practicable

### Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

- **Stowage Category**: A
- **Stowage Code**: SW1 Protected from sources of heat.
- **Handling Code**: H2 Keep as cool as reasonably practicable

### Transport/Additional information:

**ADR**

- **Excepted quantities (EQ)**
  - Code: E1
  - Maximum net quantity per inner packaging: 30 ml
  - Maximum net quantity per outer packaging: 1000 ml

**IMDG**

- **Limited quantities (LQ)**: 5L
- **Excepted quantities (EQ)**
  - Code: E1
  - Maximum net quantity per inner packaging: 30 ml
  - Maximum net quantity per outer packaging: 1000 ml

**UN "Model Regulation":** UN3426, ACRYLAMIDE SOLUTION, 6.1, III

### 15 Regulatory information

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

- **Section 355 (extremely hazardous substances):**
  - 79-06-1 acrylamide

- **Section 313 (Specific toxic chemical listings):**
  - 79-06-1 acrylamide
Trade name: Acrylamide/Bis Solution, 29:1

### TSCA (Toxic Substances Control Act):
All ingredients are listed.

### Proposition 65
None of the ingredients is listed.

### Chemicals known to cause cancer:
- 79-06-1 acrylamide

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

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

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

### Cancerogenity categories

<table>
<thead>
<tr>
<th>Agency</th>
<th>Acrylamide</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA</td>
<td>79-06-1</td>
</tr>
<tr>
<td>TLV</td>
<td>79-06-1</td>
</tr>
</tbody>
</table>

### GHS label elements
- The product is classified and labeled according to the Globally Harmonized System (GHS).
- Hazard pictograms: GHS07, GHS08
- Signal word: Danger

### Hazard-determining components of labeling:
- acrylamide
- N,N'-methyleneadiacrylamide

### Hazard statements
- Harmful if swallowed.
- Causes skin irritation.
- Causes serious eye irritation.
- May cause an allergic skin reaction.
- May cause genetic defects.
- May cause cancer.
- Suspected of damaging fertility or the unborn child.
- Causes damage to organs through prolonged or repeated exposure.

### Precautionary statements
- Obtain special instructions before use.
- Wash thoroughly after handling.
- Wear protective gloves/protective clothing/eye protection/face protection.
- If swallowed: Call a poison center/doctor if you feel unwell.
- If on skin: Wash with plenty of soap and water.
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Store locked up.
- Dispose of contents/container in accordance with local/regional/national/international regulations.

### Chemical safety assessment
A Chemical Safety Assessment has not been carried out.

### 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.
Abbreviations and acronyms:
- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- ICAO: International Civil Aviation Organisation
- PBT: persistent, bioaccumulative, toxic substance (REACH)
- vPvB: very persistent, very bioaccumulative substance (REACH)
- REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
- CLP: Regulation on classification, labelling and packaging of substances and mixtures
- bw: body weight
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- ACGIH: American Conference of Governmental Industrial Hygienists
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- NIOSH: National Institute for Occupational Safety
- OSHA: Occupational Safety & Health
- TLV: Threshold Limit Value
- PEL: Permissible Exposure Limit
- REL: Recommended Exposure Limit
- Acute Tox. 4: Acute toxicity – Category 4
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
- Skin Sens. 1: Skin sensitisation – Category 1
- Mut. 1B: Germ cell mutagenicity – Category 1B
- Carc. 1B: Carcinogenicity – Category 1B
- Repr. 2: Reproductive toxicity – Category 2
- STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
- * Data compared to the previous version altered.