

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

Printing date 14.12.2022

Version number 3

Revision: 14.12.2022

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

- **1.1 Product identifier**
- **Trade name:** Acrylamide/Bis Solution, 19:1
- **Article number:** 10679
- **UFI:** DS00-R015-H008-SYKJ
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture:** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
SERVA Electrophoresis GmbH  
Carl-Benz-Str. 7  
D-69115 Heidelberg  
Tel.: +49 6221 13840-0  
FAX: +49 6221 13840-10  
msds.info@serva.de
- **Information department:** Product Safety department Tel.: +49 6221 13840-35
- **1.4 Emergency telephone number:**  
Medical Emergency Information in case of poisoning:  
Poison Information Center Mainz - Phone: +49 (0) 6131 19240  
(advisory service in German or English language)

**SERVA**  
■ serving scientists ■

**SECTION 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.
- 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.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008:**  
The product is classified and labelled according to the GB CLP regulation.
- **Hazard pictograms:** GHS07, GHS08
- **Signal word:** Danger
- **Hazard-determining components of labelling:**  
acrylamide  
N,N'-methylenediacrylamide
- **Hazard statements:**  
H302 Harmful if swallowed.

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- 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**

- P201 Obtain special instructions before use.  
P264 Wash thoroughly after handling.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.  
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
P302+P352 IF ON SKIN: Wash with plenty of 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.

**Labelling of packages where the contents do not exceed 125 ml**

- **Hazard pictograms** GHS07, GHS08
- **Signal word** Danger

**Hazard-determining components of labelling:**

acrylamide  
N,N'-methylenediacrylamide

**Hazard statements**

- 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/hearing protection.  
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
P302+P352 IF ON SKIN: Wash with plenty of 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.

**2.3 Other hazards****Results of PBT and vPvB assessment:**

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

**SECTION 3: Composition/information on ingredients****3.2 Mixtures**

· **Description:** aqueous solution

**Dangerous components:**

CAS: 79-06-1 EINECS: 201-173-7	acrylamide ☠ 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'-methylenediacrylamide ⚠ Acute Tox. 4, H302	2.5-7%

**SVHC**

79-06-1	acrylamide
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- **Additional information**  
the product contains no further substances which shall be indicated according to UK REACH-Regulation (Regulation (EC) No. 1907/2006).  
For the wording of the listed hazard phrases refer to section 16.

**SECTION 4: First aid measures**

- **4.1 Description of first aid measures**
- **General information:**  
Take affected persons out into the fresh air.  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.  
Remove contaminated clothing.
- **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.
- **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture:**  
In case of fire or if heated, pressure in the container increases and may burst.  
In case of fire, the following can be formed, but not limited to:  
Carbon monoxide and carbon dioxide  
Nitrogen oxides (NO<sub>x</sub>)  
Ammonia (NH<sub>3</sub>)
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**  
Collect contaminated fire fighting agent separately. It must not enter the sewage system.  
Dispose of fire debris and contaminated fire fighting media in accordance with official regulations.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing.  
Ensure adequate ventilation  
Avoid contact with the eyes and skin.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up**  
Dispose contaminated material as waste according to item 13.  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

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- **6.4 Reference to other sections**
- See Section 7 for information on safe handling
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling:**
- CAS 79-06-1 Acrylamide (20 - 40%), skin absorbable. Avoid contact with eyes and skin.
- 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.
- Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**
- Store only in unopened original receptacles.
- Store at +2 to +8 °C
- **Information about storage in one common storage facility:** Store away from oxidising 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.
- Protect from exposure to the light.
- **7.3 Specific end use(s):** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- DMELs
- DMEL (Acrylamide, CAS No. 79-06-1) systemic long-term effects by inhalation: 0,07 mg/m<sup>3</sup>
- 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:**
- no further relevant information available

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

WEL	Long-term value: 0.1 mg/m <sup>3</sup>
	Carc; Sk

- **PNECs**
- PNEC (Acrylamide, CAS No. 79-06-1) fresh water for permanent discharge: 0,03 mg/l
- PNEC (Acrylamide, CAS No. 79-06-1) fresh water for occasional discharge: 0,3 mg/l
- PNEC (Acrylamide, CAS No. 79-06-1) sewage treatment plant: 0,2 mg/l
- **Additional information:** The lists that were valid during the creation were used as basis.
- **8.2 Exposure controls**
- **Appropriate engineering controls:** No further data; see item 7.
- **Individual protection measures, such as personal protective equipment:**
- **General protective and hygienic measures:**
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Store protective clothing separately.
- Avoid contact with the eyes and skin.
- Wash hands before breaks and at the end of work.
- **Breathing equipment:**
- Short term filter device:
- Filter A/P3

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- **Hand protection:**

- PVC gloves

- Neoprene gloves

- The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.*

- Protective gloves.

- 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(0.5mm), Butyl(0.5mm)

- 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.*

- 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:**

- PVC gloves

- Neoprene gloves

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

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

**SECTION 9: Physical and chemical properties**

- **9.1 Information on basic physical and chemical properties**

- **General Information:**

- **Physical state:**

Fluid

- **Colour:**

Colourless

- **Odour:**

Characteristic

- **Odour threshold:**

Not determined.

- **Melting point/freezing point:**

no information available

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

no information available

- **Flammability:**

no information available

- **Lower and upper explosion limit:**

no information available

- **Lower:**

no information available

- **Upper:**

no information available

- **Flash point:**

no information available

- **Ignition temperature:**

no information available

- **Decomposition temperature:**

no information available

- **pH at 20 °C:**

6-8

- **Viscosity:**

- **Kinematic viscosity:**

no information available

- **Dynamic viscosity:**

no information available

- **Solubility:**

- **Water:**

Fully miscible

- **Partition coefficient n-octanol/water (log value):**

no information available

- **Vapour pressure:**

no information available

- **Density and/or relative density:**

- **Density:**

no information available

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- |  |   |
|--|---|
| · <b>Relative density:</b>   | no information available                      |
| · <b>9.2 Other information</b>   |   |
| · <b>Appearance:</b>   |   |
| · <b>Form:</b>   | Solution                                      |
| · <b>Important information on protection of health and environment, and on safety:</b> |   |
| · <b>Explosive properties:</b>   | Product does not present an explosion hazard. |

**SECTION 10: Stability and reactivity**

- **10.1 Reactivity:** No further relevant information available.
- **10.2 Chemical stability:**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions:**  
Polymerizes at elevated temperatures and upon contact with polymerization initiators (e.g. UV light, oxidizing agents, acids, alkalis)
- **10.4 Conditions to avoid:**  
high temperatures  
exposure to the light
- **10.5 Incompatible materials:**  
Avoid contact with:  
Oxidizers, acids, bases
- **10.6 Hazardous decomposition products:** In case of fire: See Section 5

**SECTION 11: Toxicological information**

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:**
- **Acute toxicity:** Harmful if swallowed.

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

**79-06-1 acrylamide**

Oral	LD50	177 mg/kg (rat)
Dermal	LD50	1,141 mg/kg (rat)

- **Skin corrosion/irritation:** Causes skin irritation.
- **Serious eye damage/irritation:** Causes serious eye irritation.
- **Respiratory or skin sensitisation:** May cause an allergic skin reaction.
- **Germ cell mutagenicity:** May cause genetic defects.
- **Carcinogenicity:** May cause cancer.
- **Reproductive toxicity:** Suspected of damaging fertility.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:** Causes damage to organs through prolonged or repeated exposure.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.
- **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 (UK 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)
- **11.2 Information on other hazards:**

- **Endocrine disrupting properties:**

None of the ingredients is listed.

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### SECTION 12: Ecological information

- **12.1 Toxicity:**
- **Aquatic toxicity:**  
CAS 79-06-1 Acrylamide (20-40%), long-term toxicity to fish: NOEC (28 days) > 5 mg/l  
CAS 79-06-1 Acrylamide (20 - 40%), toxicity to aquatic microorganisms: NOEC: 2 mg/l
- **12.2 Persistence and degradability:**  
CAS 79-06-1 Acrylamide (20 - 40%), screening test (closed bottle test): approximate 100% biodegradable after 28 days.  
CAS 79-06-1 Acrylamid (20 - 40%), easily biodegradable  
CAS 110-26-9 N,N'-methylenebisacrylamide (2,5 - 7%); not readily biodegradable
- **12.3 Bioaccumulative potential:** No further relevant information available.
- **12.4 Mobility in soil:** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment:**
- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.
- **12.6 Endocrine disrupting properties:** For information on endocrine disrupting properties see section 11.
- **12.7 Other adverse effects:**
- **Additional ecological information:**
- **General notes:**  
Do not allow product to reach ground water, water course or sewage system.  
Water danger class 3 (German Regulation) (Self-assessment): extremely hazardous for water.

### SECTION 13: Disposal considerations

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

### SECTION 14: Transport information

- |   |                          |
|---|--------------------------|
| · <b>14.1 UN number or ID number</b>  |                          |
| · <b>ADR, IMDG, IATA</b>  | UN3426                   |
| · <b>14.2 UN proper shipping name</b>   |                          |
| · <b>ADR</b>  | 3426 ACRYLAMIDE SOLUTION |
| · <b>IMDG, IATA</b>   | ACRYLAMIDE SOLUTION      |
| · <b>14.3 Transport hazard class(es)</b>  |                          |
| · <b>ADR, IMDG, IATA</b>  |                          |
|  |                          |
| · <b>Class:</b>   | 6.1 Toxic substances.    |
| · <b>Label:</b>   | 6.1                      |

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· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards · Marine pollutant:	No
· 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category · Stowage Code · Handling Code	Warning: Toxic substances. 60 F-A,S-A A SW1 Protected from sources of heat. H2 Keep as cool as reasonably practicable
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category · Tunnel restriction code	2 E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 3426 ACRYLAMIDE SOLUTION, 6.1, III

### SECTION 15: Regulatory information

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

· Directive 2012/18/EU

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

· REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 28, 29, 60

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

None of the ingredients is listed.

· REGULATION (EU) 2019/1148

· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

· Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

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

None of the ingredients is listed.

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· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

· **Technical instructions (air):**

Class	Share in %
Wasser	40-70
II	20-40

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

· **Substances of very high concern (SVHC) according to UK REACH**

79-06-1	acrylamide
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· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

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

· **Relevant phrases**

- 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.

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

· **Contact:** +49 6221 13840-35

· **Date of previous version:** 17.11.2022

· **Abbreviations and acronyms:**

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

ICAO: International Civil Aviation Organisation

PBT: persistent, bioaccumulative, toxic substance (UK REACH)

vPvB: very persistent, very bioaccumulative substance (UK REACH)

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

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

bw: body weight

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PNEC: Predicted No-Effect Concentration (UK REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

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

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*Skin Sens. 1: Skin sensitisation – Category 1**Muta. 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*

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