

1 Identification

- **Product identifier**
- **Trade name:** 40% Acrylamide Solution
- **Catalog or product number:** 1610140, 1610141
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive
Hercules, California 94547 (510)741-1000
- **Information department:**
Technical services, customer support
lsg_techserv_us@bio-rad.com
- **Emergency telephone number:**
1(800)424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT.
510-741-1000

2 Hazard(s) identification

- **Classification of the substance or mixture**
- 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.
- 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.

- **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
- **Hazard statements**
H302+H312 Harmful if swallowed or in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.

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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.
- **Precautionary statements**
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P321 Specific treatment (see on this label).
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Emergency overview:**
- **Routes of exposure:**
Ingestion
Inhalation
Skin
- **Classification system**
- **Special Hazards**
Reproductive toxin.
Carcinogen.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with non-hazardous additions.

• **Listing of dangerous and non-hazardous components:**

79-06-1	acrylamide	35-50%
7732-18-5	water	50-100%

• **SVHC**
79-06-1 acrylamide

• **Additional information** For the wording of the listed risk phrases refer to section 15.

4 First-aid measures

- **Description of first aid measures**
- **General information**
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.
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.

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- (Contd. of page 2)
- After eye contact Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
 - After swallowing Do not induce vomiting; immediately call for medical help.
 - Information for doctor
 - Most important symptoms and effects, both acute and delayed Breathing difficulty
 - Indication of any immediate medical attention and special treatment needed No further relevant information available.

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:
Mount respiratory protective device.
Wear self-contained 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.
- 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.
- Information about protection against explosions and fires: Keep respiratory protective device available.
- Conditions for safe storage, including any incompatibilities
- Storage
- Requirements to be met by storerooms and receptacles: According to product specification
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep receptacle tightly sealed.
- Specific end use(s) No further relevant information available.

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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

PEL ()	0.3 mg/m ³ Skin
REL ()	0.03 mg/m ³ Skin; See Pocket Guide App. A
TLV ()	0.03* mg/m ³ Skin; *inhalable fraction and vapor

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:
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:
Only use chemical-protective gloves with CE-labeling of category III.
Protective gloves.
- Material of gloves Synthetic gloves
- 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:
Safety glasses
Tightly sealed goggles.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form:	Liquid
Color:	Colorless
Odor:	Odorless
Odour threshold:	Not determined.

pH-value: Not determined.

Change in condition

Melting point/Melting range: undetermined

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Boiling point/Boiling range:	undetermined
Flash point:	Not applicable
Flammability (solid, gaseous)	Not applicable.
Ignition temperature:	
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure at 20 °C:	23 hPa
Density at 20 °C:	1.012 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with Water:	Fully miscible
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
dynamic:	Not determined.
kinematic:	Not determined.
Solvent content:	
Organic solvents:	0.0 %
Water:	60.0 %
Solids content:	40.0 %
Other information	No further relevant information available.

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
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** Carbon monoxide

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11 Toxicological information

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

• **LD/LC50 values for hazardous components per OSHA criteria:**

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:** Irritant 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.

• **Carcinogenic categories**

• **IARC (International Agency for Research on Cancer)**

79-06-1 acrylamide	2A
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• **NTP (National Toxicology Program)**

79-06-1 acrylamide	R
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• **Target organs:**

- Skin.
- Eye.
- Respiratory tract.

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 danger class 3 (Internal calculation) (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.

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Other adverse effects No further relevant information available.

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13 Disposal considerations

- Waste treatment methods
- Recommendation
Hand over to hazardous waste disposers.
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

UN-Number	UN3426
DOT, ADR, IMDG, IATA	
UN proper shipping name	ACRYLAMIDE SOLUTION
DOT, IMDG, IATA	3426 ACRYLAMIDE SOLUTION
ADR	
Transport hazard class(es)	
DOT, 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
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	UN3426, ACRYLAMIDE SOLUTION, 6.1, III

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)

Section 302/304 (40CFR355.30 / 40CFR355.40):	79-06-1 acrylamide
Section 313 (40CFR372.65):	79-06-1 acrylamide

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TSCA (Toxic Substances Control Act):

All ingredients are listed.

California Proposition 65:

Chemicals known to cause cancer:

79-06-1 acrylamide

Developmental Toxicity

79-06-1 acrylamide

Carcinogenic categories

EPA (Environmental Protection Agency)

79-06-1 acrylamide

B2

TLV (Threshold Limit Value established by ACGIH)

79-06-1 acrylamide

A3

MAK (German Maximum Workplace Concentration)

79-06-1 acrylamide

2

NIOSH-Ca (National Institute for Occupational Safety and Health)

79-06-1 acrylamide

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

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 %
II	35-50

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.

Department issuing MSDS: Environmental Health and Safety.

Contact:

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

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)
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- ACGIH: American Conference of Governmental Industrial Hygienists

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LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

* Data compared to the previous version altered.

USA

