Safety Data Sheet
acc. to OSHA HCS

Printing date 01/05/2015 Reviewed on 12/16/2014

*
1 Identification

· **Product identifier**

· **Trade name: Acrylamide**

· **Catalog or product number:**
1610100, 1610107, 1610103, 1610101, 1610108, 1610107EDU, 9700099, 1610101EDU, 1610113
· **CAS Number:**
79-06-1
· **EC number:**
201-173-7
· **Index number:**
616-003-00-0
· **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

· **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

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2 Hazard(s) identification

· **Classification of the substance or mixture**

Acute Tox. 3	H301	Toxic if swallowed.
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.
Acute Tox. 4	H312	Harmful in contact with skin.
Acute Tox. 4	H332	Harmful if inhaled.
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.

· **Label elements**
· **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/05/2015 Reviewed on 12/16/2014

Trade name: Acrylamide

(Contd. of page 1)

· **Hazard pictograms**

GHS06 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
acrylamide
· **Hazard statements**

H301	Toxic if swallowed.
H312+H332	Harmful in contact with skin or if inhaled.
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**

P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P280	Wear protective gloves.
P301+P310	If swallowed: Immediately call a poison center/doctor.
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.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:** Contact with acids may cause release of toxic gases
· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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3 Composition/information on ingredients

· **Chemical characterization: Substances**
· **CAS No. Description:**
79-06-1 acrylamide
· **Identification number(s):**
· **EC number:** 201-173-7
· **Index number:** 616-003-00-0
· **Additional information:** For the wording of the listed risk phrases refer to section 15.

· **SVHC**	
79-06-1	acrylamide

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/05/2015 Reviewed on 12/16/2014

Trade name: Acrylamide

(Contd. of page 2)

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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.
· **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.
· **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.

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5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents**
CO_2, 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.

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6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
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.

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7 Handling and storage

· **Precautions for safe handling**
Thorough dedusting.
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.

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/05/2015 Reviewed on 12/16/2014

Trade name: Acrylamide

(Contd. of page 3)

· **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/m³ Skin
REL ()	0.03 mg/m³ Skin; See Pocket Guide App. A
TLV ()	0.03* mg/m³ 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.

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/05/2015 Reviewed on 12/16/2014

Trade name: Acrylamide

(Contd. of page 4)

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Crystalline
Color:	Whitish
· **Odor:**	sulphurous
· **Odour threshold:**	Not determined.
· **pH-value:**	Not applicable.
· **Change in condition**	
Melting point/Melting range:	84-85 °C
Boiling point/Boiling range:	125 °C
· **Flash point:**	Not applicable
· **Flammability (solid, gaseous)**	Product is not flammable.
· **Ignition temperature:**	
Decomposition temperature:	Not determined.
· **Auto igniting:**	Not determined.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapor pressure at 20 °C:**	0.009 hPa
· **Density at 20 °C:**	1.03 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not applicable.
· **Evaporation rate**	Not applicable.
· **Solubility in / Miscibility with**	
Water at 20 °C:	400 g/l Fully miscible
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
dynamic:	Not applicable.
kinematic:	Not applicable.
Organic solvents:	0.0 %
Solids content:	100.0 %
· **Other information**	No further relevant information available.

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/05/2015 Reviewed on 12/16/2014

Trade name: Acrylamide

(Contd. of page 5)

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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:**

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
79-06-1	acrylamide	2A

· **NTP (National Toxicology Program)**		
79-06-1	acrylamide	R

· **OSHA-Ca (Occupational Safety & Health Administration)**
Substance is not listed.

· **Target organs:**
Skin.
Eye.
Respiratory tract.

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12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **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) (Assessment by list): extremely hazardous for water.

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/05/2015 Reviewed on 12/16/2014

Trade name: Acrylamide

(Contd. of page 6)

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.
· **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.

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14 Transport information

· **UN-Number**	
· **DOT, ADR, IMDG, IATA**	UN2074
· **UN proper shipping name**	
· **DOT, IMDG, IATA**	ACRYLAMIDE, SOLID
· **ADR**	2074 ACRYLAMIDE SOLID
· **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.
· **Transport/Additional information:**	
· **DOT**	
· **Remarks:**	ERG 153P Lösung: EmS 6.1-02

(Contd. on page 8)

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/05/2015 Reviewed on 12/16/2014

Trade name: Acrylamide

(Contd. of page 7)

· **UN "Model Regulation":** UN2074; ACRYLAMIDE, SOLID; 6.1; III

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15 Regulatory information

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

· **Section 302/304 (40CFR355.30 / 40CFR355.40):**
Substance is listed.

· **Section 313 (40CFR372.65):**
Substance is listed.

· **TSCA (Toxic Substances Control Act):**
Substance is 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)**
Substance is listed.

· **National regulations**

· **Information about limitation of use:**
Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

· **Technical instructions (air):**

Class	Share in %
II	50-100

· **Water hazard class:** Water danger class 3 (Assessment by list): extremely hazardous for water.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/05/2015 Reviewed on 12/16/2014

Trade name: Acrylamide

(Contd. of page 8)

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 SDS:** 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
· **Date of preparation / last revision** 01/05/2015 / -
· **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
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
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Acute Tox. 3: Acute toxicity, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Muta. 1B: Germ cell mutagenicity, Hazard Category 1B
Carc. 1B: Carcinogenicity, Hazard Category 1B
Repr. 2: Reproductive toxicity, Hazard Category 2
STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1
· *** Data compared to the previous version altered.**