



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
GB/T 16483-2008, GB/T 17519-2013

Product Name Acrylamide/Bis 29:1 Premixed Powder

Revision date 17-Aug-2022

Revision Number 1.1

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

Product identifier

Product Name Acrylamide/Bis 29:1 Premixed Powder

Catalogue Number(s) 1610121, 1610124, 1610121EDU

Other means of identification

UN/ID no UN2074

Pure substance/mixture Mixture

Details of the supplier of the safety data sheet

Corporate Headquarters

Bio-Rad Laboratories Inc.
1000 Alfred Nobel Drive
Hercules, CA 94547
USA

Manufacturer

Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive
Hercules, California 94547
USA

Legal Entity / Contact Address

Bio-Rad Laboratories Ltd.
1st and 2nd Floor, Lumpini 1 Building
239/2, Rajdamri Road, Lumpini,
Pathumwan, Bangkok 10330
Thailand

Technical Service +66 2 652 8313
ctsthailand@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Hong Kong: 800-968-793

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

SECTION 2: Hazards identification

Emergency Overview

Toxic if swallowed
Irritating to skin
Irritating to eyes
May cause allergic skin reaction
Contains a known or suspected carcinogen

Appearance solid

Physical state Solid

Odour Sulphurous

Classification of the substance or mixture

Acute toxicity - Oral	Category 3
Acute toxicity - Dermal	Category 4

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitisation	Category 1
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1B
Reproductive toxicity	Category 1B
Specific target organ toxicity - Single exposure	Category 1
Specific target organ toxicity - Repeated exposure	Category 1
Hazardous to the Aquatic Environment - Acute Hazard	Category 3
Hazardous to the Aquatic Environment - Chronic Hazard	Category 3

Label elements**Signal word**

Danger

Hazard statements

Toxic if swallowed
Harmful in contact with skin
Harmful if inhaled
Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction
May cause genetic defects
May cause cancer
May damage fertility or the unborn child
Causes damage to organs
Causes damage to organs through prolonged or repeated exposure
Harmful to aquatic life with long lasting effects

Precautionary statements**Prevention**

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Contaminated work clothing should not be allowed out of the workplace
Do not breathe dust/fume/gas/mist/vapours/spray
Avoid release to the environment
Wear protective gloves/protective clothing/eye protection/face protection

Response

IF exposed or concerned: Call a POISON CENTER or doctor
IF INHALED: Remove person to fresh air and keep comfortable for breathing
Call a POISON CENTRE or doctor if you feel unwell
IF ON SKIN: Wash with plenty of water and soap
Call a POISON CENTRE or doctor if you feel unwell
Take off all contaminated clothing and wash it before reuse
If skin irritation or rash occurs: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF SWALLOWED: Immediately call a POISON CENTER or doctor
Rinse mouth

Disposal

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Physical and chemical hazards

Not applicable.

Health hazards

Immediate Health Effects: Can cause poisoning if inhaled, swallowed or absorbed by the skin. Symptoms of poisoning may appear even after several hours. Medical examination necessary even merely on suspicion of intoxication. Harmful. Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed. Causes skin irritation (pain, redness and swelling). Causes severe irritation (tears, blurred vision and redness). Irritating, but will not permanently injure eye tissue. Allergic reactions (sensitiser). Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing.

Chronic effects: Contains a known or suspected mutagen. Contains a known or suspected carcinogen. Contains a known or suspected reproductive toxin. Target organ(s).

Environmental hazards

This material is a water pollutant. Keep out of drains, sewers, ditches and waterways. Minimise use of water to prevent environmental contamination

Other hazards which do not result in classification

Not applicable

SECTION 3: Composition/information on ingredients**Substance**

Not applicable.

Mixture

Chemical name	Weight-%	CAS No
Acrylamide	50 - 100	79-06-1
Methylene diacrylamide	2.5 - 5	110-26-9

SECTION 4: First aid measures**Description of necessary first aid measures**

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Inhalation	Remove to fresh air. IF exposed or concerned: Get medical advice/attention. Get medical attention immediately if symptoms occur. If breathing has stopped, give artificial respiration. Get medical attention immediately. If symptoms persist, call a doctor.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a doctor. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. Do not rub affected area.
Skin contact	May cause an allergic skin reaction. If symptoms persist, call a doctor. Wash off immediately with soap and plenty of water for at least 15 minutes.
Ingestion	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get medical attention.

Most important symptoms and effects, both acute and delayed

Itching. Rashes. Hives. May cause redness and tearing of the eyes. Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.

For emergency responders

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid breathing dust/fume/gas/mist/vapours/spray. Use personal protective equipment as required. See section 8 for more information.

Note to doctors

May cause sensitisation in susceptible persons. Treat symptomatically.

SECTION 5: Firefighting measures**Extinguishing media****Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

No information available.

Specific hazards arising from the chemical

Product is or contains a sensitiser. May cause sensitisation by skin contact.

Special protective actions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures****Personal precautions**

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid generation of dust. Do not breathe dust.

Other information

Refer to protective measures listed in Sections 7 and 8.

For emergency responders

Use personal protection recommended in Section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up

Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers.

Precautions to prevent secondary hazards

Clean contaminated objects and areas thoroughly observing environmental regulations.

SECTION 7: Handling and storage**Precautions for safe handling**

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse. Remove contaminated clothing and shoes. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid generation of dust. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Avoid breathing dust/fume/gas/mist/vapours/spray. See Section 8 for information on appropriate personal protective equipment.

**Conditions for safe storage,
including any incompatibilities**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up. Store according to product and label instructions.

Incompatible materials

Strong acids. Strong bases. Strong oxidising agents.

SECTION 8: Exposure controls/personal protection**Occupational exposure limits**

Chemical name	China	ACGIH TLV
Acrylamide - 79-06-1	TWA: 0.3 mg/m ³ Skin* G2A(C**)	dermal sensitizer TWA: 0.03 mg/m ³ inhalable fraction and vapor S*

Note

See section 16 for terms and abbreviations

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Monitoring and observation processes

No applicable information was found.

Engineering controls

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Wear safety glasses with side shields (or goggles).

Skin and body protection

Wear suitable protective clothing. Long sleeved clothing.

Hand protection

Wear suitable gloves. Impervious gloves.

Respiratory protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations

Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Avoid breathing dust/fume/gas/mist/vapours/spray.

SECTION 9: Physical and chemical properties**Information on basic physical and chemical properties**

Appearance	solid
Colour	white
Physical state	Solid
Odour	Sulphurous
Odour threshold	No information available

Property**Values****Remarks • Method**

pH		None known
Melting point / freezing point	84 °C	
Boiling point / boiling range	125 °C	

Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapour pressure	No data available	None known
Vapour density	No data available	None known
Relative density	No data available	None known
Water solubility	Soluble in water	
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Additional information		
Explosive properties	Not applicable	
Oxidising properties	Not applicable	

SECTION 10: Stability and reactivity

Stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Conditions to avoid Excessive heat.

Incompatible materials Strong acids. Strong bases. Strong oxidising agents.

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	123.00 mg/kg
ATEmix (dermal)	1,101.30 mg/kg
ATEmix (inhalation-dust/mist)	1.55 mg/l

Unknown acute toxicity

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

3.33 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Acrylamide	= 124 mg/kg (Rat)	= 1148 mg/kg (Rabbit)	-

Methylene diacrylamide	= 390 mg/kg (Rat)	-	-
------------------------	---------------------	---	---

Skin corrosion/irritation	Classification based on data available for ingredients. Irritating to skin.
Serious eye damage/eye irritation	Classification based on data available for ingredients. Causes serious eye irritation.
Respiratory or skin sensitisation	May cause sensitisation by skin contact.
Germ cell mutagenicity	Contains a known or suspected mutagen. Classification based on data available for ingredients. May cause genetic defects.
Carcinogenicity	Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	China	IARC
Acrylamide	Probably carcinogenic to humans	Group 2A

Legend

IARC (International Agency for Research on Cancer)

Group 2A - Probably Carcinogenic to Humans

Reproductive toxicity	Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. May damage fertility or the unborn child.
Specific target organ toxicity — single exposure	Based on the classification criteria of the Globally Harmonized System as adopted in the country or region with which this safety data sheet complies, this product has been determined to cause systemic target organ toxicity from acute exposure. (STOT SE), Causes damage to organs if swallowed, Causes damage to organs in contact with skin.
Specific target organ toxicity — repeated exposure	Causes damage to organs through prolonged or repeated exposure.
Target organ effects	Eyes. Skin. Central nervous system. Peripheral Nervous System (PNS). Reproductive system. Thyroid. Lungs.
Aspiration hazard	Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

Ecotoxicity	Harmful to aquatic life with long lasting effects.
Unknown aquatic toxicity	0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical name	Algae/aquatic plants	Fish	Crustacea
Acrylamide	-	LC50: 103 - 115mg/L (96h, Pimephales promelas) LC50: 137 - 191mg/L (96h, Oncorhynchus mykiss) LC50: 74 - 150mg/L (96h, Oncorhynchus mykiss) LC50: 81 - 150mg/L (96h, Lepomis macrochirus) LC50: =124mg/L (96h, Pimephales promelas)	EC50: =98mg/L (48h, Daphnia magna)

Persistence and degradability No information available.

Bioaccumulative potential There is no data for this product.

Component Information

Chemical name	Partition coefficient
Acrylamide	-0.9
Methylene diacrylamide	-0.08

Mobility in soil No information available.

SECTION 13: Disposal considerations

Waste chemicals Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information**IMDG**

UN number or ID number UN2074
UN proper shipping name ACRYLAMIDE, SOLID
Description UN2074, ACRYLAMIDE, SOLID, 6.1, III
Transport hazard class(es) 6.1
Packing group III
Marine pollutant NP
EmS-No F-A, S-A
Transport in bulk according to Annex II of MARPOL and the IBC Code No information available

IATA

UN number or ID number UN2074
UN proper shipping name Acrylamide, solid
Description UN2074, Acrylamide, solid, 6.1, III
Transport hazard class(es) 6.1
Packing group III
ERG Code 6L

China

UN number or ID number UN2074
UN proper shipping name ACRYLAMIDE, SOLID
Transport hazard class(es) 6.1
Packing group III
Description UN2074, ACRYLAMIDE, SOLID, 6.1, III

Special precautions for user

Please refer to the applicable dangerous goods regulations for additional information

SECTION 15: Regulatory information

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

National regulations

Law of the People's Republic of China on Prevention and Control of Occupational Diseases

Catalogue of occupational hazard factors:

Listed. Chemical hazards.

Catalogue of occupational diseases:

Listed. Occupational poisoning.

Chemical name	Category
Acrylamide	Chemical hazards

Regulations on the Control over Safety of Hazardous ChemicalsInventory of hazardous chemicals

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed. Verify that licence requirements are met.

Weight-% 97

Chemical name	Inventory of hazardous chemicals
Acrylamide	Listed

GB 18218-2009 Identification of major hazard installations for dangerous chemicals

Not applicable

List of hazardous chemicals under priority management

Not applicable

Regulations on Labour Protection in Workplaces Where Toxic Substances Are UsedInventory of highly toxic goods

Chemical name	TWA (time-weighted average)	STEL (Short Term Exposure Limit)	Maximum limit value
Acrylamide	0.3 mg/m ³	0.9 mg/m ³	

Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

List of toxic chemicals severely restricted for import and export in China

Not applicable

Measures for the Environmental Management of New Chemical Substances**IECSC - China Inventory of Existing Chemical Substances**

Contact supplier for inventory compliance status.

International Regulations**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable**The Stockholm Convention on Persistent Organic Pollutants** Not applicable**The Rotterdam Convention** Not applicable**SECTION 16: Other information****Prepared By** Bio-Rad Laboratories, Environmental Health and Safety**Revision date** 17-Aug-2022**Revision Note** Reformatted and updated existing information.**Abbreviations and acronyms**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

EPA (Environmental Protection Agency)

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet