

### Classified as hazardous in accordance with the criteria of EPA New Zealand

### **Section 1 - Identification**

**Product Identifier** 

Product Name Acrylamide/Bis-Acrylamide Mixture (37.5:1)

Recommended Use Laboratory chemicals.
Uses advised against No Information available

Product Code BP1368-100

Address Thermo Fisher Scientific New Zealand Ltd

244 Bush Road, Albany, Auckland, New Zealand

Emergency Tel. CHEMTREC®

09 980 6780 or +64 9 980 6780

**Telephone / Fax Numbers** Tel: 09 980 6700

Fax: 09 980 6788

E-mail address ANZinfo@thermofisher.com

## **Section 2 - Hazard(s) Identification**

Classification under Work Safe New Zealand

Classified as hazardous in accordance with the criteria of EPA New Zealand

**GHS Classification** 

Physical hazards

Based on available data, the classification criteria are not met

### **Health hazards**

Category 3 **Acute Oral Toxicity** Category 4 **Acute Dermal Toxicity** Acute Inhalation Toxicity - Dusts and Mists Category 4 Skin Corrosion/Irritation Category 2 Category 2 Serious Eye Damage/Eye Irritation Skin Sensitization Category 1 Germ Cell Mutagenicity Category 1B Carcinogenicity Category 1B Reproductive Toxicity Category 2 Specific target organ toxicity - (repeated exposure) Category 1

**Environmental hazards** 

Based on available data, the classification criteria are not met

Label Elements

FSHBP1368 Version 2 10-Mar-2023 Page 1/11



Signal Word

Danger

#### **Hazard Statements**

H319 - Causes serious eye irritation

H301 - Toxic if swallowed

H315 - Causes skin 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

H312 + H332 - Harmful in contact with skin or if inhaled

### **Precautionary Statements**

#### Prevention

P201 - Obtain special instructions before use

P270 - Do not eat, drink or smoke when using this product

P271 - Use only outdoors or in a well-ventilated area

P202 - Do not handle until all safety precautions have been read and understood

P264 - Wash face, hands and any exposed skin thoroughly after handling

P272 - Contaminated work clothing should not be allowed out of the workplace

P280 - Wear protective gloves/protective clothing/eye protection/face protection

#### Response

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P302 + P352 - IF ON SKIN: Wash with plenty of soap and 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

P312 - Call a POISON CENTER or doctor if you feel unwell

P330 - Rinse mouth

P362 + P364 - Take off contaminated clothing and wash it before reuse

### Storage

P405 - Store locked up

#### **Disposal**

P501 - Dispose of contents/ container to an approved waste disposal plant

### Other hazards which do not result in classification

Toxic to terrestrial vertebrates

## **Section 3 - Composition and Information on Ingredients**

Component	CAS No	Weight %
Acrylamide	79-06-1	95-98
Methylene diacrylamide	110-26-9	2-5

### **Section 4 - First Aid Measures**

**Description of first aid measures** 

FSHBP1368 Version 2 10-Mar-2023 Page 2 / 11

General Advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is

required.

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**Inhalation** Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth

method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Immediate medical attention is required.

Eye Contact In the case of contact with eyes, rinse immediately with plenty of water and seek medical

advice.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Immediate medical

attention is required.

**Ingestion** Do NOT induce vomiting. Call a physician or poison control center immediately.

Self-Protection of the First Aider Ensure that medical personnel are aware of the material(s) involved, take precautions to

protect themselves and prevent spread of contamination.

First Aid Facilities Eyewash, safety shower and washroom.

Most important symptoms and

effects

May cause allergic skin reaction. 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

Notes to Physician Treat symptomatically.

# **Section 5 - Fire Fighting Measures**

### **Suitable Extinguishing Media**

Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

### Extinguishing media which must not be used for safety reasons

No information available.

### **Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating gases and vapors.

### **Hazardous Combustion Products**

Carbon monoxide (CO), Nitrogen oxides (NOx), Carbon dioxide (CO2), Ammonia, Hydrogen.

### Special protective equipment and precautions for fire fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

### **Section 6 - Accidental Release Measures**

### Personal Precautions, Protective Equipment and Emergency Procedures

### **Emergency procedures**

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

### **Environmental Precautions**

Should not be released into the environment. See Section 12 for additional Ecological Information. Do not flush into surface water or sanitary sewer system.

### Methods for Containment and Clean Up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

FSHBP1368 Version 2 10-Mar-2023 Page 3 / 11

### Precautions to prevent secondary hazards

Clean contaminated objects and areas thoroughly observing environmental regulations

### **Reference to Other Sections**

Refer to protective measures listed in Sections 8 and 13.

### **Section 7 - Handling and Storage**

### **Precautions for Safe Handling**

#### Advice on safe handling

Do not get in eyes, on skin, or on clothing. Avoid dust formation. Wear personal protective equipment/face protection. Use only under a chemical fume hood. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance.

### **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

#### Conditions for Safe Storage, Including any Incompatibilities

#### **Storage Conditions**

Keep container tightly closed in a dry and well-ventilated place. Keep at temperature not exceeding 50°C. Keep away from acids.

### **Incompatible Materials**

Metals. Reducing Agent. Acids. Bases. Peroxides. Oxidizing agent.

AS/NZS 2243.10:2004, Safety in laboratories - Storage of chemicals

## **Section 8 - Exposure Controls and Personal Protection**

### **Control parameters**

### **Exposure limits**

**NZ** - Workplace Exposure Standards and Biological Exposure Indices (6th edition). New Zealand Department of Labor **UK** - EH40/2005 Work Exposure Limits. Fourth edition. Published 2020.

**ACGIH** - Threshold Limit Values - Ceiling (TLV-C) guidelines by the American Conference of Governmental Industrial Hygienists (ACGIH) for controlling worker exposure to airborne chemical concentrations in the workplace.

**AUS** - Exposure Standards for Atmospheric Contaminants in the Occupational Environment - Guidance Note on the Interpretation of Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:3008(1995)] Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)]

updated in August, 2005. Safe Work Australia

Comp	onent	New Zealand WEL	Australia	ACGIH TLV	The United Kingdom
Acryla	amide	TWA: 0.0015 mg/m <sup>3</sup>	TWA: 0.03 mg/m <sup>3</sup>	TWA: 0.03 mg/m <sup>3</sup>	STEL: 0.3 mg/m <sup>3</sup> 15 min
		Skin		Skin	TWA: 0.1 mg/m <sup>3</sup> 8 hr
					Carc.
					Skin

### **Biological limit values**

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

### **Appropriate engineering controls**

### **Engineering Measures**

Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

FSHBP1368 Version 2 10-Mar-2023 Page 4/11

### Individual protection measures, such as personal protective equipment

**Eye Protection** Goggles (Australian/New Zealand Standard AS/NZS 1337 - Eye protectors for Industrial

applications)

Hand Protection Protective gloves

Glove material	Breakthrough time	Glove thickness	AUS/NZ Standard	Glove comments
Natural rubber, Nitrile	See manufacturers	-	AS/NZS 2161	(minimum requirement)
rubber, Neoprene, PVC.	recommendations			

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Skin and body protection Long sleeved clothing

Repiratory Protection Use an AS/NZS 1716 approved respirator if exposure limits are exceeded or if irritation or

other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained in line with AS/NZS 1715 on the use

and maintenance of repiratory protective devices

**Recommended Filter type:** Particulates filter conforming to EN 143 (or AUS/NZ equivalent)

Recommended half mask:- Valve filtering: EN405 or Half mask: EN140 plus filter, EN 141 (or AUS/NZ equivalent)

When RPE is used a face piece Fit Test should be conducted

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls** Prevent product from entering drains.

### **Section 9 - Physical and Chemical Properties**

### Information on basic physical and chemical properties

Physical State Solid

AppearanceWhiteOdorOdorless

Odor Threshold No data available

**pH** 6.3 (1%)

Melting Point/RangeNo data availableSoftening PointNo data available

Boiling Point/Range No information available

Flammability (liquid) Not applicable Solid

Flammability (solid,gas) No information available

**Explosion Limits** No data available

Flash Point No information available Method - No information available

Autoignition Temperature No data available Decomposition Temperature No data available

Viscosity Not applicable Solid

Water Solubility Soluble

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

Componentlog PowAcrylamide-1.24Methylene diacrylamide-1.52

Vapor PressureNo information availableDensity / Specific GravityNo data available

FSHBP1368 Version 2 10-Mar-2023 Page 5 / 11

# Acrylamide/Bis-Acrylamide Mixture (37.5:1)

### SAFETY DATA SHEET

Bulk Density

No data available

Vapor DensityNot applicableSolidParticle characteristicsNo data available

Other information

Evaporation Rate Not applicable - Solid

# **Section 10 - Stability and Reactivity**

Reactivity None known, based on information available

**Stability** Light sensitive. Air sensitive.

Sensitivity to Mechanical Impact No information available

Sensitivity to Static Discharge No information available

Hazardous Polymerization Polymerization can occur. Do not expose to temperatures exceeding 84 °C/ 183 °F.

**Hazardous Reactions** None under normal processing.

Conditions to Avoid Extremes of temperature and direct sunlight, Temperatures above 50°C, Exposure to light.

Incompatible Materials Metals, Reducing Agent, Acids, Bases, Peroxides, Oxidizing agent.

Hazardous Decomposition Products Carbon monoxide (CO). Nitrogen oxides (NOx). Carbon dioxide (CO2). Ammonia.

Hydrogen.

# Section 11 - Toxicological Information

#### **Acute Effects**

### Information on likely routes of exposure

### **Product Information**

**Inhalation** Not an expected route of exposure.

**Eyes** Avoid contact with eyes. Corrosive to the eyes and may cause severe damage including

blindness. May cause irritation.

Skin Avoid contact with skin. Skin Corrosion/Irritation. May cause irritation. Harmful in contact

with skin.

**Ingestion** May be harmful if swallowed.

#### Numerical measures of toxicity

(a) acute toxicity;

OralCategory 3DermalCategory 4InhalationCategory 4

### Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Acrylamide	124 mg/kg ( Rat )	1141 mg/kg (Rabbit)	
Methylene diacrylamide	50-300 mg/kg ( Rat )	1141 mg/kg (Rabbit)	

(b) skin corrosion/irritation; Category 2

FSHBP1368 Version 2 10-Mar-2023 Page 6/11

(c) serious eye damage/irritation; Category 2

(d) respiratory or skin sensitization;

**Respiratory Skin**No data available
Category 1

Sensitization No information available

(e) germ cell mutagenicity; Category 1B

May cause heritable genetic damage

(f) carcinogenicity; Category 1B

Possible cancer hazard. May cause cancer based on animal data The table below indicates

whether each agency has listed any ingredient as a carcinogen

Component	New Zealand	Australia	New South Wales	Western Australia	IARC	EU	UK	Germany
Acrylamide	Confirmed				Group 2A	Carc Cat. 1B		Cat. 2
	carcinogen							

(g) reproductive toxicity; Category 2

**Reproductive Effects**Category 2: Substances which should be regarded as if they impair fertility in humans

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; Category 1

Target Organs Peripheral Nervous System (PNS).

(j) aspiration hazard; Not applicable

Solid

### Symptoms / effects,both acute and delayed

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.

### **Section 12 - Ecological Information**

### **Ecotoxicity**

Aquatic ecotoxicity Contains a substance which is:. Harmful to aquatic organisms. The product contains

following substances which are hazardous for the environment.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Acrylamide	124 mg/L LC50 96 h	EC50: = 98 mg/L, 48h		
	74-150 mg/L LC50 96 h	Flow through (Daphnia		
	81-150 mg/L LC50 96 h	magna)		
	103-115 mg/L LC50 96	EC50: = 98 mg/L, 48h		
	ĥ	(Daphnia magna)		
	137-191 mg/L LC50 96			
	ĥ			

Terrestrial ecotoxicity There is no data for this product

Persistence and Degradability

FSHBP1368 Version 2 10-Mar-2023 Page 7 / 11

Persistence Persistence is unlikely.

Degradation in sewage treatment

plant

Contains substances known to be hazardous to the environment or not degradable in waste

water treatment plants.

Bioaccumulative Potential Bioaccumulation is unlikely

Component log Pow		Bioconcentration factor (BCF)
Acrylamide	-1.24	No data available
Methylene diacrylamide	-1.52	No data available

Mobility The product is water soluble, and may spread in water systems. Will likely be mobile in the

environment due to its water solubility. Highly mobile in soils

Other adverse effects

Endocrine Disruptor Information Persistent Organic Pollutant Ozone Depletion Potential This product does not contain any known or suspected endocrine disruptors

This product does not contain any known or suspected substance This product does not contain any known or suspected substance

### **Section 13 - Disposal Considerations**

### Waste treatment methods

Waste from Residues/Unused

**Products** 

Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with all federal, E.P.A., state and local regulations. Assure

conformity with all applicable regulations.

**Contaminated Packaging** Dispose of this container to hazardous or special waste collection point.

Other Information Disposal agencies or waste contractors must comply with the New Zealand Hazardous

Substances (Disposal) Regulations. Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not

empty into drains.

# **Section 14 - Transport Information**

Component	Hazchem Code
Acrylamide	2X
79-06-1 ( 95-98 )	

#### NZS 5433:2020

UN-No UN2074

Proper Shipping Name ACRYLAMIDE, SOLID, MIXTURE

Hazard Class 6.1 Packing Group III

<u>IATA</u>

UN-No UN2074

Proper Shipping Name ACRYLAMIDE, SOLID, MIXTURE

Hazard Class 6.1 Packing Group III

FSHBP1368 Version 2 10-Mar-2023 Page 8 / 11

IMDG/IMO

UN-No UN2074

Proper Shipping Name ACRYLAMIDE, SOLID, MIXTURE

Hazard Class 6.1 Packing Group III

Environmental hazards No hazards identified

Transport in bulk according to Annex II of MARPOL 73/78 and the

Not applicable, packaged goods

IBC Code

Special Precautions No special precautions required. Please refer to the applicable dangerous goods

regulations for additional information.

Additional information None known

## **Section 15 - Regulatory Information**

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

### **National Regulations**

There are no applicable tolerable exposure limits or environmental exposure limits according to the EPA Controls for Hazardous Substances

### Certified handlers, tracking and controlled substance license requirements

Certified handlers are required for some substances. This includes substances requiring a controlled substance license, and most explosives, vertebrates toxic agents, and certain fumigants. Acutely toxic substances which are a Category 1 or 2, such as pesticides also require Certified handlers. Please check the Health and Safety at Work Act 2015 for further information. Tracking is required for some highly hazardous substances. These substances need to be under the control of an appropriately trained person or appropriately secured. Please check the Health and Safety at Work Act 2015 for further information.

### Prohibition or notification/licensing requirements

Shown below are details of specific prohibition/notifications or licencing requirements when they apply.

Component	New Zealand
Acrylamide	Confirmed carcinogen

### **International Regulations**

Ozone Depletion Potential This product does not contain any known or suspected substance

Persistent Organic Pollutant This product does not contain any known or suspected substance

Rotterdam Convention (PIC) Not applicable

# Authorisation/Restrictions according to EU REACH

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Acrylamide	-	Use restricted. See item 28.	SVHC Candidate list - 201-173-7 -
		(see link for restriction details)	Carcinogenic, Article
		Use restricted. See item 29.	57a;Mutagenic, Article 57b
		(see link for restriction details)	_
		Use restricted. See item 60.	
		(see link for restriction details)	

FSHBP1368 Version 2 10-Mar-2023 Page 9 / 11

Use restricted. See ite	m 75.
(see link for restriction of	details)

After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.

https://echa.europa.eu/authorisation-list

https://echa.europa.eu/substances-restricted-under-reach

https://echa.europa.eu/candidate-list-table

### **International Inventories**

New Zealand (NZIoC), Australia (AICS), Europe (EINECS/ELINCS/NLP), Korea (KECL), China (IECSC), Taiwan (TCSI), Japan (ISHL), Canada (DSL/NDSL), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	NZIoC	AICS	EINECS	ELINCS	NLP	KECL	IECSC	TCSI
Acrylamide	79-06-1	Х	Х	201-173-7	-	-	KE-29374	X	Х
Methylene diacrylamide	110-26-9	Х	Х	203-750-9	-	-	KE-23800	X	X

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	PICCS	ISHL	ENCS
Acrylamide	79-06-1	X	ACTIVE	X	ı	X	X	X
Methylene diacrylamide	110-26-9	Х	ACTIVE	X	-	X	Х	Х

Legend: X - Listed '-' - Not Listed

KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

# **Section 16 - Other Information**

# This safety data sheet complies with the requirements of the EPA Hazardous Substances (Hazard Classification) Notice 2020 and WorkSafe New Zealand Regulations

### Legend

NZIoC - New Zealand Inventory of Chemicals

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

IECSC - Chinese Inventory of Existing Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer NZS 5433:2020 - Transport of Dangerous Goods on Land

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Ships

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

WEL - Workplace Exposure Limit

**DNEL** - Derived No Effect Level

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

**VOC** - (Volatile Organic Compound)

AICS - Australian Inventory of Chemical Substances

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**ENCS** - Japanese Existing and New Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

CAS - Chemical Abstracts Service

**ACGIH** - American Conference of Governmental Industrial Hygienists

PNEC - Predicted No Effect Concentration

**OECD** - Organisation for Economic Co-operation and Development **IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**ADG** - Australian Code for the Transport of Dangerous Goods by Road and Rail

LC50 - Lethal Concentration 50%

ATE - Acute Toxicity Estimate

RPE - Respiratory Protective Equipment

NOEC - No Observed Effect Concentration

**BCF** - Bioconcentration factor

PBT - Persistent, Bioaccumulative, Toxic

#### Key literature references and sources for data

HSNO classifications provided in the New Zealand Chemical Classification Information Database (CCID).

https://echa.europa.eu/information-on-chemicals

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

EPA Guide to classifying hazardous substances in New Zealand

EPA - Assigning a product to an existing HSNO approval guide

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Physical hazards

On basis of test data

FSHBP1368 Version 2 10-Mar-2023 Page 10 / 11

Health Hazards Calculation method Environmental hazards Calculation method

#### **Training Advice**

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Revision Date 10-Mar-2023 Revision Summary Not applicable

#### **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**

FSHBP1368 Version 2 10-Mar-2023 Page 11/11