

07.08.2020

Kit components

Product code	Description
1632088 L004460	ReadyPrep™ Protein Extraction Kit (Membrane I)

Components:

10000048987	Membrane Protein Extraction Buffer 1 (M1)
10000048989	Membrane Protein Extraction Buffer 2 (M2)
10000048962	Protein Solubilization Buffer (PSB)
10000048963	PSB Diluent
10005505	Precipitation Agent 1
10005485	Precipitation Agent 2
4307587	Wash Reagent 1
10005487	Wash Reagent 2
10005488	Wash 2 Additive

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

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

- **1.1 Product identifier**
- **Trade name:** *Membrane Protein Extraction Buffer 1 (M1)*
- **Article number:** 10000048987
- **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:**
Bio-Rad Pacific Ltd.
Unit 1101 DCH Commercial Centre
25 Westlands Road
Quarry Bay
Hong Kong
- **Information department:** sales.hongkong@bio-rad.com
- **1.4 Emergency telephone number:** 852-2789-3300

phone: 852-2789-3300 fax: 852-2789-1290

SECTION 2: Hazards identification

- **Emergency overview:**
Colourless, Fluid, No Data Available
- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008** The product is not classified, according to the CLP regulation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Not Applicable
- **Hazard pictograms** Not Applicable
- **Signal word** Not Applicable
- **Hazard statements** Not Applicable
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.1 Chemical characterisation: Substances**
- **CAS No. Description:**
7732-18-5 water
- **Identification number(s):**
- **EC number:** 231-791-2
- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.
- **Dangerous components:** Not applicable.
- **Additional information** For the wording of the listed hazard phrases refer to section 16.

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

Trade name: Membrane Protein Extraction Buffer 1 (M1)

(Contd. of page 1)

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Generally the product does not irritate the skin.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Rinse mouth with water. Seek medical attention and appropriate follow-up.
- **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** Use fire fighting measures that suit the environment.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **6.2 Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **6.4 Reference to other sections**
No dangerous substances are released.
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** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **7.2 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:** None.

(Contd. on page 3)

HK

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

Trade name: Membrane Protein Extraction Buffer 1 (M1)

(Contd. of page 2)

· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.· **8.1 Control parameters**· **Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **Additional information:** The lists that were valid during the creation were used as basis.· **8.2 Exposure controls**· **Personal protective equipment**· **General protective and hygienic measures**

The usual precautionary measures should be adhered to when handling chemicals.

· **Breathing equipment:** Not required.· **Protection of hands:** 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

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**· **General Information**· **Appearance:**

Form: Fluid

Colour: Colourless

· **Odour:** Odourless· **Odour threshold:** Not determined.· **pH-value at 20 °C:** 6.5· **Change in condition**

Melting point/freezing point: 0 °C

Initial boiling point and boiling range: undetermined

· **Flash point:** Not applicable
Not determined.· **Flammability (solid, gaseous)** Not applicable.· **Decomposition temperature:** Not determined.· **Self igniting:** Product is not selfigniting.· **Explosive properties:** Not determined.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

Trade name: Membrane Protein Extraction Buffer 1 (M1)

(Contd. of page 3)

· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure at 20 °C:	23 hPa
· Density:	Not determined
· 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:	
Water:	98.0 %
Solids content:	1.5 %
· 9.2 Other information	No further relevant information available.

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** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

Trade name: Membrane Protein Extraction Buffer 1 (M1)

(Contd. of page 4)

- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Dispose of waste in accordance to applicable national, regional, or local regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

SECTION 14: Transport information

- | | |
|---|--|
| <ul style="list-style-type: none"> · 14.1 UN-Number · ADR, ADN, IMDG, IATA | Not Reguated |
| <ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR · ADN, IMDG, IATA | Not Reguated
Not Reguated
Not Reguated |
| <ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA · Class | Not Reguated |
| <ul style="list-style-type: none"> · 14.4 Packing group · ADR, IMDG, IATA | Not Reguated |

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

Trade name: Membrane Protein Extraction Buffer 1 (M1)

(Contd. of page 5)

· 14.5 Environmental hazards:	
· Marine pollutant:	No
· 14.6 Special precautions for user	Not applicable.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN "Model Regulation":	Not Reguated

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.
- **National regulations**
- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **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.

- **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

- **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

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)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

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

- **1.1 Product identifier**
- **Trade name:** *Membrane Protein Extraction Buffer 2 (M2)*
- **Article number:** 10000048989
- **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:**
Bio-Rad Pacific Ltd.
Unit 1101 DCH Commercial Centre
25 Westlands Road
Quarry Bay
Hong Kong
- **Information department:** sales.hongkong@bio-rad.com
- **1.4 Emergency telephone number:** 852-2789-3300

phone: 852-2789-3300 fax: 852-2789-1290

SECTION 2: Hazards identification

- **Emergency overview:**
Colourless, Fluid, Causes mild skin irritation.
- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Skin Corr. 3 H316 Causes mild skin irritation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms** Not Applicable
- **Signal word** Warning
- **Hazard statements**
H316 Causes mild skin irritation.
- **Precautionary statements**
P332+P313 If skin irritation occurs: Get medical advice/attention.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

Proprietary Reagent R

Eye Dam. 1, H318
Skin Irrit. 2, H315
Acute Tox. 5, H303

3-<5%

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

Trade name: Membrane Protein Extraction Buffer 2 (M2)

(Contd. of page 1)

· **Additional information** 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** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Generally the product does not irritate the skin.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Rinse mouth with water. Seek medical attention and appropriate follow-up.
- **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** Use fire fighting measures that suit the environment.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **6.2 Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **6.4 Reference to other sections**
No dangerous substances are released.
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** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **7.2 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:** None.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

Trade name: Membrane Protein Extraction Buffer 2 (M2)

(Contd. of page 2)

· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **8.1 Control parameters**

· **Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **Additional information:** The lists that were valid during the creation were used as basis.

· **8.2 Exposure controls**

· **Personal protective equipment**

· **General protective and hygienic measures** Wash hands before breaks and at the end of work.

· **Breathing equipment:** Not necessary if room is well-ventilated.

· **Protection of hands:** 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

SECTION 9: Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form: Fluid

Colour: Colourless

· **Odour:** Odourless

· **Odour threshold:** Not determined.

· **pH-value at 20 °C:** 6.5

· **Change in condition**

Melting point/freezing point: undetermined

Initial boiling point and boiling range: undetermined

· **Flash point:** Not applicable
Not determined.

· **Flammability (solid, gaseous)** Not applicable.

· **Decomposition temperature:** Not determined.

· **Self igniting:** Product is not selfigniting.

· **Explosive properties:** Not determined.

· **Explosion limits:**

Lower: Not determined.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

Trade name: Membrane Protein Extraction Buffer 2 (M2)

(Contd. of page 3)

Upper:	Not determined.
· Vapour pressure at 20 °C:	23 hPa
· Density:	Not determined
· 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:	
Water:	94.0 %
Solids content:	6.0 %
· 9.2 Other information	No further relevant information available.

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** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

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

Proprietary Reagent R

Oral	LD50	4,190 mg/kg (rat)
------	------	-------------------

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes mild skin irritation.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

Trade name: Membrane Protein Extraction Buffer 2 (M2)

(Contd. of page 4)

- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

Proprietary Reagent R

Oral	LC50	0.21 mg/l (Selenastrum green algae)
		7.2 mg/l (Danio rerio (zebra fish))

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Dispose of waste in accordance to applicable national, regional, or local regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

SECTION 14: Transport information

- | | |
|---------------------------------------|--------------|
| · 14.1 UN-Number | |
| · ADR, ADN, IMDG, IATA | Not Reguated |
| · 14.2 UN proper shipping name | |
| · ADR | Not Reguated |
| | Not Reguated |
| · ADN, IMDG, IATA | Not Reguated |

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

Trade name: Membrane Protein Extraction Buffer 2 (M2)

(Contd. of page 5)

· 14.3 Transport hazard class(es)	
· ADR, ADN, IMDG, IATA	
· Class	Not Reguated
· 14.4 Packing group	
· ADR, IMDG, IATA	Not Reguated
· 14.5 Environmental hazards:	
· Marine pollutant:	No
· 14.6 Special precautions for user	Not applicable.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	
	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN "Model Regulation":	Not Reguated

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.
- **National regulations**
- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **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.

- **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
- **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
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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

(Contd. on page 7)

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

Printing date 07.08.2020

Revision: 07.08.2020

Trade name: Membrane Protein Extraction Buffer 2 (M2)

(Contd. of page 6)

*PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Acute Tox. 5: Acute toxicity - oral – Category 5**Skin Irrit. 2: Skin corrosion/irritation – Category 2**Skin Corr. 3: Skin corrosion/irritation – Category 3**Eye Dam. 1: Serious eye damage/eye irritation – Category 1*** **Data compared to the previous version altered.***

HK

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

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

- **1.1 Product identifier**
- **Trade name:** Protein Solubilization Buffer (PSB)
- **Article number:** 10000048962
- **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:**
Bio-Rad Pacific Ltd.
Unit 1101 DCH Commercial Centre
25 Westlands Road
Quarry Bay
Hong Kong
- **Information department:** sales.hongkong@bio-rad.com
- **1.4 Emergency telephone number:** 852-2789-3300

phone: 852-2789-3300 fax: 852-2789-1290

SECTION 2: Hazards identification

- **Emergency overview:**
White, Solid. Causes mild skin irritation.
- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Skin Corr. 3 H316 Causes mild skin irritation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms** Not Applicable
- **Signal word** Warning
- **Hazard statements**
H316 Causes mild skin irritation.
- **Precautionary statements**
P332+P313 If skin irritation occurs: Get medical advice/attention.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

(Contd. on page 2)

HK

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

Trade name: Protein Solubilization Buffer (PSB)

(Contd. of page 1)

Dangerous components:

CAS: 57-13-6 EINECS: 200-315-5	urea substance with a Community workplace exposure limit	50-100%
CAS: 62-56-6 EINECS: 200-543-5	thiourea Carc. 2, H351; Repr. 2, H361 Aquatic Chronic 2, H411 Acute Tox. 4, H302 Acute Tox. 5, H313	25-35%
CAS: 15471-17-7	NDSB 201 (3-(1-pyridino)-1-propane sulfonate) Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	2.5-5%

Additional information 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 No special measures required.

After inhalation Supply fresh air; consult doctor in case of complaints.

After eye contact Rinse opened eye for several minutes under running water.

After swallowing Rinse mouth with water. Seek medical attention and appropriate follow-up.

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 Use fire fighting measures that suit the environment.

5.2 Special hazards arising from the substance or mixture No further relevant information available.

5.3 Advice for firefighters

Protective equipment: No special measures required.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures Wear protective clothing.

6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up: Pick up mechanically.

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 No special precautions are necessary if used correctly.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

Trade name: Protein Solubilization Buffer (PSB)

(Contd. of page 2)

- **Information about protection against explosions and fires:** No special measures required.
- **7.2 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:** None.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

8.1 Control parameters

- **Components with limit values that require monitoring at the workplace:**

57-13-6 urea

OEL (China (Chinese))	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³
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- **Additional information:** The lists that were valid during the creation were used as basis.

8.2 Exposure controls

- **Personal protective equipment**
- **General protective and hygienic measures** Wash hands before breaks and at the end of work.
- **Protection of hands:** 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

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form:	Solid.
Colour:	White
Odour:	Odourless
Odour threshold:	Not determined.

pH-value at 20 °C:	6.5
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Change in condition

Melting point/freezing point:	undetermined
Initial boiling point and boiling range:	undetermined

Flash point:	Not applicable Not determined.
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(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

Trade name: Protein Solubilization Buffer (PSB)

(Contd. of page 3)

· Flammability (solid, gaseous)	Not determined.
· Ignition temperature:	440 °C
· Decomposition temperature:	Not determined.
· Self igniting:	Product is not selfigniting.
· Explosive properties:	Not determined.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure:	Not applicable.
· Density:	Not determined
· Relative density	Not determined.
· Vapour density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with Water:	Soluble
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
dynamic:	Not applicable.
kinematic:	Not applicable.
· Solvent content:	
Solids content:	100.0 %
· 9.2 Other information	No further relevant information available.

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** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

Trade name: Protein Solubilization Buffer (PSB)

(Contd. of page 4)

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

57-13-6 urea

Oral	LD50	14,500 mg/kg (rat)
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62-56-6 thiourea

Oral	LD50	1,750 mg/kg (rat)
------	------	-------------------

Dermal	LD50	2,800 mg/kg (rbt)
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· **Primary irritant effect:**

· **Skin corrosion/irritation**

Causes mild skin irritation.

· **Serious eye damage/irritation** Based on available data, the classification criteria are not met.

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

· **Carcinogenicity** Based on available data, the classification criteria are not met.

· **Reproductive toxicity** Based on available data, the classification criteria are not met.

· **STOT-single exposure** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure** Based on available data, the classification criteria are not met.

· **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation** Dispose of waste in accordance to applicable national, regional, or local regulations.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

Trade name: Protein Solubilization Buffer (PSB)

(Contd. of page 5)

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG, IATA	UN3077
· 14.2 UN proper shipping name · ADR · IMDG, IATA	3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (thiourea) 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (thiourea) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (thiourea)
· 14.3 Transport hazard class(es) · ADR, IMDG, IATA · Class · Label	9 Miscellaneous dangerous substances and articles. 9
· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards: · Special marking (ADR): · Special marking (IATA):	Symbol (fish and tree) Symbol (fish and tree)
· 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category · Stowage Code	Warning: Miscellaneous dangerous substances and articles. 90 F-A,S-F A SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ) · Transport category · Tunnel restriction code	5 kg Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g 3 E
· IMDG · Limited quantities (LQ)	5 kg

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

Trade name: Protein Solubilization Buffer (PSB)

(Contd. of page 6)

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

· **UN "Model Regulation":**UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
SOLID, N.O.S. (THIOUREA), 9, 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.· **National regulations**· **Technical instructions (air):**

Class	Share in %
I	20-35

· **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.· **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.

· **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

· **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

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity - oral - Category 4

Acute Tox. 5: Acute toxicity - dermal - Category 5

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

Skin Corr. 3: Skin corrosion/irritation - Category 3

Eye Irrit. 2A: Serious eye damage/eye irritation - Category 2A

Carc. 2: Carcinogenicity - Category 2

(Contd. on page 8)

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

Printing date 07.08.2020

Revision: 07.08.2020

Trade name: Protein Solubilization Buffer (PSB)

(Contd. of page 7)

Repr. 2: Reproductive toxicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
* **Data compared to the previous version altered.**

HK

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

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

- **1.1 Product identifier**
- **Trade name:** **PSB Diluent**
- **Article number:** 10000048963
- **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:**
Bio-Rad Pacific Ltd.
Unit 1101 DCH Commercial Centre
25 Westlands Road
Quarry Bay
Hong Kong
- **Information department:** sales.hongkong@bio-rad.com
- **1.4 Emergency telephone number:** 852-2789-3300

phone: 852-2789-3300 fax: 852-2789-1290

SECTION 2: Hazards identification

- **Emergency overview:**
Colourless, Liquid, No Data Available
- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008** The product is not classified, according to the CLP regulation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Not Applicable
- **Hazard pictograms** Not Applicable
- **Signal word** Not Applicable
- **Hazard statements** Not Applicable
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.
- **Dangerous components:** Not applicable.
- **Additional information** 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** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

Trade name: PSB Diluent

(Contd. of page 1)

- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Rinse mouth with water. Seek medical attention and appropriate follow-up.
- **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** Use fire fighting measures that suit the environment.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **6.2 Environmental precautions:** Dilute with plenty of water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **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** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **7.2 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:** None.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

Trade name: PSB Diluent

(Contd. of page 2)

- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**
The usual precautionary measures should be adhered to when handling chemicals.
- **Breathing equipment:** Not required.
- **Protection of hands:** 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

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Liquid
Colour:	Colourless
Odour:	Odourless
Odour threshold:	Not determined.

· pH-value at 20 °C: 6.5

· Change in condition

Melting point/freezing point:	undetermined
Initial boiling point and boiling range:	undetermined

· Flash point: Not applicable
Not determined.

· Flammability (solid, gaseous) Not applicable.

· Decomposition temperature: Not determined.

· Self igniting: Product is not selfigniting.

· Explosive properties: Not determined.

· Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· Vapour pressure at 20 °C: 23 hPa

· Density: Not determined
 · Relative density: Not determined.
 · Vapour density: Not determined.
 · Evaporation rate: Not determined.

· Solubility in / Miscibility with Water: Fully miscible

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

Trade name: PSB Diluent

(Contd. of page 3)

- **Partition coefficient: n-octanol/water:** Not determined.
- **Viscosity:**
 - dynamic:** Not determined.
 - kinematic:** Not determined.
- **Solvent content:**
 - Water:** 95.0 %
- **9.2 Other information** No further relevant information available.

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** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

Trade name: PSB Diluent

(Contd. of page 4)

- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** Dispose of waste in accordance to applicable national, regional, or local regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

SECTION 14: Transport information

- | | |
|---|---|
| <ul style="list-style-type: none"> · 14.1 UN-Number · ADR, ADN, IMDG, IATA | <p>Not Reguated</p> |
| <ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR · ADN, IMDG, IATA | <p>Not Reguated</p> <p>Not Reguated</p> <p>Not Reguated</p> |
| <ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA · Class | <p>Not Reguated</p> |
| <ul style="list-style-type: none"> · 14.4 Packing group · ADR, IMDG, IATA | <p>Not Reguated</p> |
| <ul style="list-style-type: none"> · 14.5 Environmental hazards: | <p>Not applicable.</p> |
| <ul style="list-style-type: none"> · 14.6 Special precautions for user | <p>Not applicable.</p> |
| <ul style="list-style-type: none"> · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | <p>Not applicable.</p> |
| <ul style="list-style-type: none"> · UN "Model Regulation": | <p>Not Reguated</p> |

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.
- **National regulations**
- **Water hazard class:** Generally not hazardous for water.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 07.08.2020

Trade name: PSB Diluent

(Contd. of page 5)

- **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.

- **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

- **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

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)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

- *** Data compared to the previous version altered.**

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 23.07.2020

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

- **1.1 Product identifier**
- **Trade name:** Precipitation Agent 1
- **Article number:** 10005505
- **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:**
Bio-Rad Pacific Ltd.
Unit 1101 DCH Commercial Centre
25 Westlands Road
Quarry Bay
Hong Kong
- **Information department:** sales.hongkong@bio-rad.com
- **1.4 Emergency telephone number:** 852-2789-3300

phone: 852-2789-3300 fax: 852-2789-1290

SECTION 2: Hazards identification

- **Emergency overview:**

White, Fluid, May be harmful if inhaled. Causes severe skin burns and eye damage. Suspected of causing cancer. Toxic to aquatic life with long lasting effects.

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**

Acute Tox. 5 H333 May be harmful if inhaled.
 Skin Corr. 1A H314 Causes severe skin burns and eye damage.
 Eye Dam. 1 H318 Causes serious eye damage.
 Carc. 2 H351 Suspected of causing cancer.
 Aquatic Acute 2 H401 Toxic to aquatic life.
 Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS05 GHS08 GHS09

- **Signal word** Danger
- **Hazard-determining components of labelling:**
trichloroacetic acid
- **Hazard statements**
H333 May be harmful if inhaled.
H314 Causes severe skin burns and eye damage.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 23.07.2020

Trade name: Precipitation Agent 1

(Contd. of page 1)

*H351 Suspected of causing cancer.**H411 Toxic to aquatic life with long lasting effects.***Precautionary statements***P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.**P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**P310 Immediately call a POISON CENTER/doctor.**P321 Specific treatment (see on this label).**P405 Store locked up.**P501 Dispose of contents/container in accordance with local/regional/national/international regulations.***2.3 Other hazards****Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures**Description:** Mixture of the substances listed below with nonhazardous additions.**Dangerous components:**

	Proprietary Reagent A	Acute Tox. 5, H333	20-35%
CAS: 76-03-9 EINECS: 200-927-2	trichloroacetic acid	Carc. 2, H351 Skin Corr. 1A, H314 Aquatic Acute 1, H400; Aquatic Chronic 1, H410	5-10%

Additional information 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** Immediately remove any clothing soiled by the product.**After inhalation** In case of unconsciousness place patient stably in side position for transportation.**After skin contact**

Immediately wash with water and soap and rinse thoroughly.

Immediately rinse with water.

After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor.**After swallowing**

Drink copious amounts of water and provide fresh air. Call for a doctor immediately.

Rinse mouth with water. Seek medical attention and appropriate follow-up.

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.

HK
(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 23.07.2020

Trade name: **Precipitation Agent 1**

(Contd. of page 2)

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
- **5.2 Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
- **5.3 Advice for firefighters**
- **Protective equipment:** Mount respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
Wear protective clothing.
- **6.2 Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **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**
No special measures required.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **7.2 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.
- **7.3 Specific end use(s)** No further relevant information available.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 23.07.2020

Trade name: **Precipitation Agent 1**

(Contd. of page 3)

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 Control parameters**
 - **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
 - **Additional information:** The lists that were valid during the creation were used as basis.
- **8.2 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.
Avoid contact with the eyes and skin.
 - **Breathing equipment:** Not necessary if room is well-ventilated.
 - **Protection of hands:** 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.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Fluid
Colour:	White
Odour:	Recognisable
Odour threshold:	Not determined.
- **pH-value at 20 °C:** 1
- **Change in condition**

Melting point/freezing point:	undetermined
Initial boiling point and boiling range:	undetermined
- **Flash point:**

Not applicable	
Not determined.	
- **Flammability (solid, gaseous)** Not applicable.
- **Decomposition temperature:** Not determined.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 23.07.2020

Trade name: **Precipitation Agent 1**

(Contd. of page 4)

· Self igniting:	Product is not selfigniting.
· Explosive properties:	Not determined.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure at 20 °C:	23 hPa
· Density at 20 °C:	1.35585 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:	
Water:	55.3 %
Solids content:	55.0 %
· 9.2 Other information	No further relevant information available.

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** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
May be harmful if inhaled.

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

Proprietary Reagent A

Dermal	LD50	>10,000 mg/kg (Rabbit)
Inhalative	LC50/4 h	>10.5 mg/l (rat)

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 23.07.2020

Trade name: **Precipitation Agent 1**

(Contd. of page 5)

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**
Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity**
Suspected of causing cancer.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.
Do not allow product to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Dispose of waste in accordance to applicable national, regional, or local regulations.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 23.07.2020

Trade name: Precipitation Agent 1

(Contd. of page 6)

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· 14.1 UN-Number	
· ADR, IMDG, IATA	UN2564
· 14.2 UN proper shipping name	
· ADR	2564 TRICHLOROACETIC ACID SOLUTION, ENVIRONMENTALLY HAZARDOUS 2564 TRICHLOROACETIC ACID SOLUTION TRICHLOROACETIC ACID SOLUTION
· IMDG, IATA	
· 14.3 Transport hazard class(es)	
· ADR, IMDG, IATA	
· Class	8 Corrosive substances.
· Label	8
· 14.4 Packing group	
· ADR, IMDG, IATA	III
· 14.5 Environmental hazards:	
· Marine pollutant:	No
· Special marking (ADR):	Symbol (fish and tree)
· 14.6 Special precautions for user	Warning: Corrosive substances.
· Hazard identification number (Kemler code):	80
· EMS Number:	F-A, S-B
· Segregation groups	Acids
· Stowage Category	B
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	5L

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 23.07.2020

Trade name: Precipitation Agent 1

(Contd. of page 7)

· Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· UN "Model Regulation":UN 2564 TRICHLOROACETIC ACID SOLUTION, 8, III,
ENVIRONMENTALLY HAZARDOUS

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.**· Seveso category E2** Hazardous to the Aquatic Environment**· Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t**· Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t**· National regulations****· Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.**· 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.

· 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

· 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

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 5: Acute toxicity - inhalation - Category 5

Skin Corr. 1A: Skin corrosion/irritation - Category 1A

Eye Dam. 1: Serious eye damage/eye irritation - Category 1

Carc. 2: Carcinogenicity - Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard - Category 1

Aquatic Acute 2: Hazardous to the aquatic environment - acute aquatic hazard - Category 2

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard - Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard - Category 2

· * Data compared to the previous version altered.

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020


Revision: 24.07.2020

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

- **1.1 Product identifier**
- **Trade name:** Precipitation Agent 2
- **Article number:** 10005485
- **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:**
Bio-Rad Pacific Ltd.
Unit 1101 DCH Commercial Centre
25 Westlands Road
Quarry Bay
Hong Kong
- **Information department:** sales.hongkong@bio-rad.com
- **1.4 Emergency telephone number:** 852-2789-3300

phone: 852-2789-3300 fax: 852-2789-1290

SECTION 2: Hazards identification

- **Emergency overview:**
Colourless, Fluid, Harmful if swallowed. May be harmful if inhaled.
- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Acute Tox. 4 H302 Harmful if swallowed.
Acute Tox. 5 H333 May be harmful if inhaled.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**

GHS07
- **Signal word** Warning
- **Hazard-determining components of labelling:**
sodium 3-alpha,12-alpha-dihydroxy-5-beta-cholanic acid sodium salt
- **Hazard statements**
H302 Harmful if swallowed.
H333 May be harmful if inhaled.
- **Precautionary statements**
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330 Rinse mouth.
P304+P312 IF INHALED: Call a POISON CENTER/doctor if you feel unwell.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 24.07.2020

Trade name: **Precipitation Agent 2**

(Contd. of page 1)

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 302-95-4 EINECS: 206-132-7	sodium 3-alpha,12-alpha-dihydroxy-5-beta-cholanic acid sodium salt	Acute Tox. 3, H301	2.5-5%
CAS: 497-19-8 EINECS: 207-838-8	sodium carbonate	Eye Irrit. 2, H319 Acute Tox. 5, H303	2.5-5%
	Proprietary Reagent A	Acute Tox. 5, H333	2.5-5%

- **Additional information** 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**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Generally the product does not irritate the skin.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing**
Call for a doctor immediately.
Rinse mouth with water. Seek medical attention and appropriate follow-up.
- **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** Use fire fighting measures that suit the environment.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 24.07.2020

Trade name: **Precipitation Agent 2**

(Contd. of page 2)

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 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.
- **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** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **7.2 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:** None.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 Control parameters**

· **Components with limit values that require monitoring at the workplace:**

497-19-8 sodium carbonate

OEL (China (Chinese))	Short-term value: 6 mg/m ³ Long-term value: 3 mg/m ³
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- **Additional information:** The lists that were valid during the creation were used as basis.

8.2 Exposure controls

Personal protective equipment

General protective and hygienic measures

Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.

- **Breathing equipment:** Not necessary if room is well-ventilated.

- **Protection of hands:** 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.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 24.07.2020

Trade name: **Precipitation Agent 2**

(Contd. of page 3)

· **Eye protection:** Safety glasses

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Odourless
Odour threshold:	Not determined.

· pH-value:	Not determined.
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· Change in condition

Melting point/freezing point:	undetermined
Initial boiling point and boiling range:	100 °C

· Flash point:	Not applicable Not determined.
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· Flammability (solid, gaseous)	Not applicable.
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· Decomposition temperature:	Not determined.
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· Self igniting:	Product is not selfigniting.
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· Explosive properties:	Not determined.
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· Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· Vapour pressure at 20 °C:	23 hPa
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· Density:	Not determined
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· Relative density	Not determined.
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· Vapour density	Not determined.
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· Evaporation rate	Not determined.
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· Solubility in / Miscibility with

Water:	Fully miscible
--------	----------------

· Partition coefficient: n-octanol/water:	Not determined.
---	-----------------

· Viscosity:

dynamic:	Not determined.
kinematic:	Not determined.

· Solvent content:

Water:	75.0 %
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Solids content:	20.0 %
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(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 24.07.2020

Trade name: Precipitation Agent 2

(Contd. of page 4)

· **9.2 Other information** No further relevant information available.

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** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known

SECTION 11: Toxicological information

· 11.1 Information on toxicological effects

· Acute toxicity

Harmful if swallowed.

May be harmful if inhaled.

· LD/LC50 values that are relevant for classification:

497-19-8 sodium carbonate

Oral	LD50	4,000 mg/kg (rat)
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Proprietary Reagent A

Dermal	LD50	>10,000 mg/kg (Rabbit)
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Inhalative	LC50/4 h	>10.5 mg/l (rat)
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· Primary irritant effect:

- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 24.07.2020

Trade name: Precipitation Agent 2

(Contd. of page 5)

· **Additional ecological information:**

· **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Dispose of waste in accordance to applicable national, regional, or local regulations.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· **14.1 UN-Number**

· **ADR, ADN, IMDG, IATA**

Not Reguated

· **14.2 UN proper shipping name**

· **ADR**

Not Reguated

Not Reguated

· **ADN, IMDG, IATA**

Not Reguated

· **14.3 Transport hazard class(es)**

· **ADR, ADN, IMDG, IATA**

· **Class**

Not Reguated

· **14.4 Packing group**

· **ADR, IMDG, IATA**

Not Reguated

· **14.5 Environmental hazards:**

· **Marine pollutant:**

No

· **14.6 Special precautions for user**

Not applicable.

· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

· **Transport/Additional information:**

Not dangerous according to the above specifications.

· **UN "Model Regulation":**

Not Reguated

HK
(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 24.07.2020

Trade name: **Precipitation Agent 2**

(Contd. of page 6)

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.
- **National regulations**
- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **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.

- **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
- **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
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)
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 - oral – Category 3
Acute Tox. 4: Acute toxicity - oral – Category 4
Acute Tox. 5: Acute toxicity - oral – Category 5
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- *** Data compared to the previous version altered.**

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020


Revision: 31.07.2020

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

- **1.1 Product identifier**
- **Trade name:** Wash Reagent 1
- **Article number:** 4307587, L004490
- **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:**
Bio-Rad Pacific Ltd.
Unit 1101 DCH Commercial Centre
25 Westlands Road
Quarry Bay
Hong Kong
- **Information department:** sales.hongkong@bio-rad.com
- **1.4 Emergency telephone number:** 852-2789-3300

phone: 852-2789-3300 fax: 852-2789-1290

SECTION 2: Hazards identification

- **Emergency overview:**
Colourless, Liquid, Harmful if swallowed. May be harmful if inhaled.
- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Acute Tox. 4 H302 Harmful if swallowed.
Acute Tox. 5 H333 May be harmful if inhaled.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**

GHS07
- **Signal word** Warning
- **Hazard-determining components of labelling:**
sodium 3-alpha,12-alpha-dihydroxy-5-beta-cholanic acid sodium salt
- **Hazard statements**
H302 Harmful if swallowed.
H333 May be harmful if inhaled.
- **Precautionary statements**
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330 Rinse mouth.
P304+P312 IF INHALED: Call a POISON CENTER/doctor if you feel unwell.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 31.07.2020

Trade name: Wash Reagent 1

(Contd. of page 1)

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 302-95-4 EINECS: 206-132-7	sodium 3-alpha,12-alpha-dihydroxy-5-beta-cholanic acid sodium salt	Acute Tox. 3, H301	2.5-5%
CAS: 497-19-8 EINECS: 207-838-8	sodium carbonate	Eye Irrit. 2, H319 Acute Tox. 5, H303	2.5-5%
	Proprietary Reagent A	Acute Tox. 5, H333	2.5-5%

- **Additional information** 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**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Generally the product does not irritate the skin.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing**
Call for a doctor immediately.
Rinse mouth with water. Seek medical attention and appropriate follow-up.
- **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** Use fire fighting measures that suit the environment.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 31.07.2020

Trade name: Wash Reagent 1

(Contd. of page 2)

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 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.
- **6.4 Reference to other sections**
No dangerous substances are released.
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** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **7.2 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:** None.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 Control parameters**

- **Components with limit values that require monitoring at the workplace:**

497-19-8 sodium carbonate

OEL (China (Chinese))	Short-term value: 6 mg/m ³ Long-term value: 3 mg/m ³
-----------------------	---

- **Additional information:** The lists that were valid during the creation were used as basis.

- **8.2 Exposure controls**

- **Personal protective equipment**

- **General protective and hygienic measures**

Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.

- **Breathing equipment:** Not necessary if room is well-ventilated.

- **Protection of hands:** 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.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 31.07.2020

Trade name: Wash Reagent 1

(Contd. of page 3)

· **Eye protection:** Safety glasses

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Liquid
Colour:	Colourless
Odour:	Odourless
Odour threshold:	Not determined.

· pH-value at 20 °C:	6.5
----------------------	-----

· Change in condition

Melting point/freezing point:	undetermined
Initial boiling point and boiling range:	undetermined

· Flash point:	Not applicable Not determined.
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· Flammability (solid, gaseous)	Not applicable.
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· Decomposition temperature:	Not determined.
------------------------------	-----------------

· Self igniting:	Product is not selfigniting.
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· Explosive properties:	Not determined.
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· Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· Vapour pressure at 20 °C:	23 hPa
-----------------------------	--------

· Density:	Not determined
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· 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:

Water:	75.0 %
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Solids content:	25.0 %
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(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 31.07.2020

Trade name: Wash Reagent 1

(Contd. of page 4)

· **9.2 Other information** No further relevant information available.

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** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**

- **Acute toxicity**

Harmful if swallowed.

May be harmful if inhaled.

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

497-19-8 sodium carbonate

Oral	LD50	4,000 mg/kg (rat)
------	------	-------------------

Proprietary Reagent A

Dermal	LD50	>10,000 mg/kg (Rabbit)
--------	------	------------------------

Inhalative	LC50/4 h	>10.5 mg/l (rat)
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- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 31.07.2020

Trade name: Wash Reagent 1

(Contd. of page 5)

Additional ecological information:**General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects No further relevant information available.**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Dispose of waste in accordance to applicable national, regional, or local regulations.

Uncleaned packagings:**Recommendation:** Disposal must be made according to official regulations.**SECTION 14: Transport information****14.1 UN-Number**

ADR, ADN, IMDG, IATA

Not Reguated

14.2 UN proper shipping name

ADR

Not Reguated

Not Reguated

ADN, IMDG, IATA

Not Reguated

14.3 Transport hazard class(es)

ADR, ADN, IMDG, IATA

Class

Not Reguated

14.4 Packing group

ADR, IMDG, IATA

Not Reguated

14.5 Environmental hazards:

Marine pollutant:

No

14.6 Special precautions for user

Not applicable.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

Transport/Additional information:

Not dangerous according to the above specifications.

UN "Model Regulation":

Not Reguated

HK
(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 31.07.2020

Trade name: Wash Reagent 1

(Contd. of page 6)

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.
- **National regulations**
- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **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.

- **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
- **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
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)
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 - oral – Category 3
Acute Tox. 4: Acute toxicity - oral – Category 4
Acute Tox. 5: Acute toxicity - oral – Category 5
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- *** Data compared to the previous version altered.**

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 31.07.2020

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

- **1.1 Product identifier**
- **Trade name:** Wash Reagent 2
- **Article number:** 10005487, 4307591
- **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:**
Bio-Rad Pacific Ltd.
Unit 1101 DCH Commercial Centre
25 Westlands Road
Quarry Bay
Hong Kong
- phone: 852-2789-3300 fax: 852-2789-1290
- **Information department:** sales.hongkong@bio-rad.com
- **1.4 Emergency telephone number:** 852-2789-3300

SECTION 2: Hazards identification

- **Emergency overview:**

Colourless, Liquid, Highly flammable liquid and vapour. Harmful in contact with skin. May be harmful if inhaled. Causes skin irritation. Causes serious eye damage. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure.

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
 Flam. Liq. 2 H225 Highly flammable liquid and vapour.
 Acute Tox. 4 H312 Harmful in contact with skin.
 Acute Tox. 5 H333 May be harmful if inhaled.
 Skin Irrit. 2 H315 Causes skin irritation.
 Eye Dam. 1 H318 Causes serious eye damage.
 Carc. 2 H351 Suspected of causing cancer.
 Repr. 2 H361 Suspected of damaging fertility or the unborn child.
 STOT SE 3 H336 May cause drowsiness or dizziness.
 STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

- **2.2 Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02 GHS05 GHS07 GHS08

- **Signal word** *Danger*

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 31.07.2020

Trade name: Wash Reagent 2

(Contd. of page 1)

· Hazard-determining components of labelling:

trichloromethane

hydrochloric acid

· Hazard statements

H225 Highly flammable liquid and vapour.

H312 Harmful in contact with skin.

H333 May be harmful if inhaled.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H351 Suspected of causing cancer.

H361 Suspected of damaging fertility or the unborn child.

H336 May cause drowsiness or dizziness.

H373 May cause damage to organs through prolonged or repeated exposure.

· Precautionary statements

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P321 Specific treatment (see on this label).

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

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· 2.3 Other hazards**· Results of PBT and vPvB assessment****· PBT:** Not applicable.**· vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures**· Description:** Mixture of the substances listed below with nonhazardous additions.**· Dangerous components:**

CAS: 67-64-1 EINECS: 200-662-2	acetone	Flam. Liq. 2, H225 Eye Irrit. 2, H319; STOT SE 3, H336	50-100%
CAS: 67-63-0 EINECS: 200-661-7	propan-2-ol	Flam. Liq. 2, H225 Eye Irrit. 2, H319; STOT SE 3, H336 Acute Tox. 5, H303; Acute Tox. 5, H333	2.5-5%
CAS: 67-66-3 EINECS: 200-663-8	trichloromethane	Flam. Liq. 2, H225 Acute Tox. 2, H310; Acute Tox. 3, H331 Carc. 2, H351; Repr. 2, H361; STOT RE 1, H372 Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319	3-<5%
CAS: 7647-01-0 EINECS: 231-595-7	hydrochloric acid	Skin Corr. 1B, H314; Eye Dam. 1, H318 STOT SE 3, H335	3-<5%
	Component 7	Flam. Liq. 3, H226 Acute Tox. 4, H302	2.5-5%

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 31.07.2020

Trade name: Wash Reagent 2

(Contd. of page 2)

· **Additional information** 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

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.

· **After inhalation** Supply fresh air; consult doctor in case of complaints.

· After skin contact

Generally the product does not irritate the skin.

Immediately wash with water and soap and rinse thoroughly.

Immediately rinse with water.

· **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing** Rinse mouth with water. Seek medical attention and appropriate follow-up.

· **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

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **For safety reasons unsuitable extinguishing agents** Water with full jet.

· 5.2 Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

· 5.3 Advice for firefighters

· Protective equipment:

Mount respiratory protective device.

Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

Wear protective clothing.

· 6.2 Environmental precautions:

Prevent seepage into sewage system, workpits and cellars.

Do not allow to enter sewers/ surface or ground water.

· 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralising agent.

Dispose contaminated material as waste according to item 13.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 31.07.2020

Trade name: Wash Reagent 2

(Contd. of page 3)

Ensure adequate ventilation.

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

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

7.2 Conditions for safe storage, including any incompatibilities**Storage****Requirements to be met by storerooms and receptacles:** Store in a cool location.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:**

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical systems: No further data; see item 7.**8.1 Control parameters****Components with limit values that require monitoring at the workplace:****67-64-1 acetone**

OEL (China (Chinese))	Short-term value: 450 mg/m ³ Long-term value: 300 mg/m ³
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67-63-0 propan-2-ol

OEL (China (Chinese))	Short-term value: 700 mg/m ³ Long-term value: 350 mg/m ³
-----------------------	---

67-66-3 trichloromethane

OEL (China (Chinese))	Long-term value: 20 mg/m ³ G2B
-----------------------	--

7647-01-0 hydrochloric acid

OEL (China (Chinese))	Ceiling limit: 7.5 mg/m ³
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(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 31.07.2020

Trade name: Wash Reagent 2

(Contd. of page 4)

Ingredients with biological limit values:**67-64-1 acetone**

BEI (China (Chinese))	50 mg/L 测试材料: 尿 采样时间: 工作班末 生物监测指标: 丙酮
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• **Additional information:** The lists that were valid during the creation were used as basis.

• **8.2 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 skin.

Avoid contact with the eyes.

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.

Not necessary if room is well-ventilated.

• **Protection of hands:** 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.

SECTION 9: Physical and chemical properties

• **9.1 Information on basic physical and chemical properties**• **General Information**• **Appearance:**

Form: Liquid

Colour: Colourless

• **Odour:** Recognisable• **Odour threshold:** Not determined.• **pH-value at 20 °C:** 5.5• **Change in condition**

Melting point/freezing point: undetermined

Initial boiling point and boiling range: 55 °C

• **Flash point:** < 0 °C

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 31.07.2020

Trade name: Wash Reagent 2

(Contd. of page 5)

· Flammability (solid, gaseous)	Not applicable.
· Ignition temperature:	340 °C
· Decomposition temperature:	Not determined.
· Self igniting:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	2.6 Vol %
Upper:	13 Vol %
· Vapour pressure at 20 °C:	233 hPa
· Density at 20 °C:	0.82281 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:	90.0 %
· 9.2 Other information	No further relevant information available.

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** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
- Harmful in contact with skin.
- May be harmful if inhaled.

(Contd. on page 7)

HK

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 31.07.2020

Trade name: Wash Reagent 2

(Contd. of page 6)

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

67-64-1 acetone

Oral	LD50	5,800 mg/kg (rat)
Dermal	LD50	20,000 mg/kg (rbt)

67-63-0 propan-2-ol

Oral	LD50	4,570 mg/kg (rat)
Dermal	LD50	13,400 mg/kg (Rabbit)
Inhalative	LC50/4 h	30 mg/l (rat)

67-66-3 trichloromethane

Oral	LD50	908 mg/kg (rat)
Dermal	LD50	75 mg/kg (rat)

Component 7

Oral	LD50	1,300 mg/kg (rat)
------	------	-------------------

· **Primary irritant effect:**

· **Skin corrosion/irritation**

Causes skin irritation.

· **Serious eye damage/irritation**

Causes serious eye damage.

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

· **Carcinogenicity**

Suspected of causing cancer.

· **Reproductive toxicity**

Suspected of damaging fertility or the unborn child.

· **STOT-single exposure**

May cause drowsiness or dizziness.

· **STOT-repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

· **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water danger class 3 (German Regulation) (Self-assessment): extremely hazardous for water.

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

Danger to drinking water if even extremely small quantities leak into the ground.

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 31.07.2020

Trade name: Wash Reagent 2

(Contd. of page 7)

- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Dispose of waste in accordance to applicable national, regional, or local regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- | | |
|--|---|
| <ul style="list-style-type: none"> · 14.1 UN-Number · ADR, IMDG, IATA | UN1993 |
| <ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR · IMDG, IATA | 1993 FLAMMABLE LIQUID, N.O.S. (vapour pressure at 50°C not more than 110 kPa) (ACETONE, CHLOROFORM)
1993 FLAMMABLE LIQUID, N.O.S. (vapor pressure at 50°C at most 110 kPa) (ACETONE, CHLOROFORM)
FLAMMABLE LIQUID, N.O.S. (ACETONE, CHLOROFORM) |
| <ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR, IMDG, IATA · Class · Label | 3 Flammable liquids.
3 |
| <ul style="list-style-type: none"> · 14.4 Packing group · ADR, IMDG, IATA | II |
| <ul style="list-style-type: none"> · 14.5 Environmental hazards: · Marine pollutant: | No |
| <ul style="list-style-type: none"> · 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Segregation groups · Stowage Category | Warning: Flammable liquids.
33
F-E, S-E
Liquid halogenated hydrocarbons
B |
| <ul style="list-style-type: none"> · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 31.07.2020

Trade name: Wash Reagent 2

(Contd. of page 8)

· Transport/Additional information:**· ADR****· Limited quantities (LQ)**

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· Transport category

2

· Tunnel restriction code

D/E

· IMDG**· Limited quantities (LQ)**

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation":

UN 1993 FLAMMABLE LIQUID, N.O.S. (VAPOUR PRESSURE AT 50°C NOT MORE THAN 110 KPA) (ACETONE, CHLOROFORM), 3, II

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.**· Seveso category P5c** FLAMMABLE LIQUIDS**· Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t**· Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t**· National regulations****· Technical instructions (air):**

Class	Share in %
I	2.5-5
III	2.5-5
NK	50-100

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

· 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

(Contd. on page 10)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 31.07.2020

Trade name: Wash Reagent 2

(Contd. of page 9)

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

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Flam. Liq. 3: Flammable liquids – Category 3

Acute Tox. 4: Acute toxicity - oral – Category 4

Acute Tox. 5: Acute toxicity - oral – Category 5

Acute Tox. 2: Acute toxicity - dermal – Category 2

Acute Tox. 3: Acute toxicity - inhalation – Category 3

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

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

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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

Carc. 2: Carcinogenicity – Category 2

Repr. 2: Reproductive toxicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

* **Data compared to the previous version altered.**

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 31.07.2020

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

- **1.1 Product identifier**
- **Trade name:** Wash 2 Additive
- **Article number:** 10005488
- **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:**
Bio-Rad Pacific Ltd.
Unit 1101 DCH Commercial Centre
25 Westlands Road
Quarry Bay
Hong Kong
- **Information department:** sales.hongkong@bio-rad.com
- **1.4 Emergency telephone number:** 852-2789-3300

phone: 852-2789-3300 fax: 852-2789-1290

SECTION 2: Hazards identification

- **Emergency overview:**
Colourless, Fluid, No Data Available
- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008** The product is not classified, according to the CLP regulation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Not Applicable
- **Hazard pictograms** Not Applicable
- **Signal word** Not Applicable
- **Hazard statements** Not Applicable
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.1 Chemical characterisation: Substances**
- **CAS No. Description:**
7732-18-5 water
- **Identification number(s):**
- **EC number:** 231-791-2
- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.
- **Dangerous components:** Not applicable.
- **Additional information** For the wording of the listed hazard phrases refer to section 16.

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 31.07.2020

Trade name: Wash 2 Additive

(Contd. of page 1)

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Generally the product does not irritate the skin.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Rinse mouth with water. Seek medical attention and appropriate follow-up.
- **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** Use fire fighting measures that suit the environment.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **6.2 Environmental precautions:** No special measures required.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **6.4 Reference to other sections**
No dangerous substances are released.
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** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **7.2 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:** None.
- **7.3 Specific end use(s)** No further relevant information available.

HK
(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 31.07.2020

Trade name: Wash 2 Additive

(Contd. of page 2)

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 Control parameters**
 - **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
 - **Additional information:** The lists that were valid during the creation were used as basis.
- **8.2 Exposure controls**
 - **Personal protective equipment**
 - **General protective and hygienic measures**
The usual precautionary measures should be adhered to when handling chemicals.
 - **Breathing equipment:** Not required.
 - **Protection of hands:** 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

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Odourless
Odour threshold:	Not determined.

· pH-value at 20 °C: 5.5

· Change in condition

Melting point/freezing point:	0 °C
Initial boiling point and boiling range:	undetermined

· Flash point: Not applicable
Not determined.

· Flammability (solid, gaseous) Not applicable.

· Decomposition temperature: Not determined.

· Self igniting: Product is not selfigniting.

· Explosive properties: Not determined.

· Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

(Contd. on page 4)

HK

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 31.07.2020

Trade name: Wash 2 Additive

(Contd. of page 3)

· Vapour pressure at 20 °C:	23 hPa
· Density:	Not determined
· 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:	
Water:	95.0 %
Solids content:	5.0 %
· 9.2 Other information	No further relevant information available.

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** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 31.07.2020

Trade name: Wash 2 Additive

(Contd. of page 4)

· **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Dispose of waste in accordance to applicable national, regional, or local regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- | | |
|---|--|
| <ul style="list-style-type: none"> · 14.1 UN-Number · ADR, ADN, IMDG, IATA | Not Reguated |
| <ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR · ADN, IMDG, IATA | Not Reguated
Not Reguated
Not Reguated |
| <ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA · Class | Not Reguated |
| <ul style="list-style-type: none"> · 14.4 Packing group · ADR, IMDG, IATA | Not Reguated |
| <ul style="list-style-type: none"> · 14.5 Environmental hazards: · Marine pollutant: | No |

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.08.2020

Revision: 31.07.2020

Trade name: Wash 2 Additive

(Contd. of page 5)

- | | |
|--|--|
| · 14.6 Special precautions for user | Not applicable. |
| · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| · Transport/Additional information: | Not dangerous according to the above specifications. |
| · UN "Model Regulation": | Not Reguated |

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.
- **National regulations**
- **Water hazard class:** Generally not hazardous for water.
- **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.

- **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
- **Abbreviations and acronyms:**
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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)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
- *** Data compared to the previous version altered.**