

Revision date 07-Dec-2022

Version 1

Section 1: Identification

Product identifier

Product name Monarch Plasmid Wash Buffer 1

Product No T1014

Other means of identification

Synonyms None

Pure substance/mixture Mixture

Recommended use of the chemical and restrictions on use

Recommended use This product is for research and development only.

Uses advised against No information available.

Details of manufacturer or importer

Supplier

New England BioLabs (Australia) Pty Ltd
22/270 Ferntree Gully Road
Notting Hill, VIC 3168

For further information, please contact

Contact Point Product Safety Department

E-mail address info.au@neb.com

Emergency telephone number

Company Phone Number 978-927-5054, 800-632-5227 (toll free)

Australian Poisons Information: 131 126

Section 2: Hazard(s) identification

GHS Classification

Flammable liquids	Category 3
Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Carcinogenicity	Category 1A
Specific target organ toxicity (single exposure)	Category 3

Label elements

Flame

Exclamation mark

Health hazard



Signal word

DANGER

Hazard statements

Flammable liquid and vapor

Harmful if swallowed

Causes skin irritation

Causes serious eye irritation

May cause cancer

May cause drowsiness or dizziness

Precautionary Statements - Prevention

Obtain special instructions before use

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

Wear protective gloves/clothing and eye/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Avoid breathing dust/fume/gas/mist/vapors/spray

Use only outdoors or in a well-ventilated area

Ground and bond container and receiving equipment

Use non-sparking tools

Take action to prevent static discharges

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Keep container tightly closed

Keep cool

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

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

If eye irritation persists: Get medical advice/attention

IF ON SKIN: Wash with plenty of water and soap

If skin irritation occurs: Get medical advice/attention

Take off contaminated clothing and wash it before reuse

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]

IF INHALED: Remove person to fresh air and keep comfortable for breathing

Call a doctor if you feel unwell

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

Precautionary Statements - Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other hazards which do not result in classification

May be harmful in contact with skin.

May be harmful if inhaled.

Section 3: Composition and information on ingredients

Chemical name	CAS No	Weight-%
Trade Secret	-	30 - 40%
Trade Secret	-	30 - 40%
Non-hazardous ingredients	Proprietary	Balance

* The exact percentage (concentration) of composition has been withheld as a trade secret.

Section 4: First aid measures**Description of first aid measures****General advice**

Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.

Inhalation

Remove to fresh air. IF exposed or concerned: Get medical advice/attention. Get medical attention immediately if symptoms occur.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Skin contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation develops and persists.

Ingestion

Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.

Self-protection of the first aider

Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed**Symptoms**

May cause redness and tearing of the eyes. Burning sensation. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Indication of any immediate medical attention and special treatment needed**Note to physicians**

Treat symptomatically.

Section 5: Firefighting measures**Suitable extinguishing media****Suitable extinguishing media**

Dry chemical. Carbon dioxide (CO₂). Water spray. Alcohol resistant foam.

Large Fire

CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Special exposure hazards in a fire

Specific hazards arising from the chemical Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Protective equipment and precautions for firefighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.

Other information Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

Precautions to prevent secondary hazards

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

Section 7: Handling and storage

Precautions for safe handling

Advice on safe handling Use personal protection equipment. Avoid breathing vapors or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. In case of insufficient ventilation, wear suitable respiratory equipment.

General hygiene considerations Do not eat, drink or smoke when using this product. Contaminated work clothing should not

be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes or clothing.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Keep out of the reach of children.

Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents.

Section 8: Exposure controls and personal protection

Control parameters

Exposure Limits

Chemical name	Australia	New Zealand	ACGIH TLV
Trade Secret	TWA: 400 ppm TWA: 983 mg/m ³ STEL: 500 ppm STEL: 1230 mg/m ³	TWA: 400 ppm TWA: 983 mg/m ³ STEL: 500 ppm STEL: 1230 mg/m ³	STEL: 400 ppm TWA: 200 ppm

Chemical name	European Union	United Kingdom	Germany DFG
Trade Secret	-	TWA: 400 ppm TWA: 999 mg/m ³ STEL: 500 ppm STEL: 1250 mg/m ³	TWA: 200 ppm TWA: 500 mg/m ³ Peak: 400 ppm Peak: 1000 mg/m ³

Biological occupational exposure limits

Chemical name	Australia	ACGIH	European Union
Trade Secret	-	40 mg/L - urine (Acetone) - end of shift at end of workweek	-

Appropriate engineering controls

Engineering controls

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection

Tight sealing safety goggles.

Skin and body protection

Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.

Hand protection

Wear suitable gloves. Impervious gloves.

Respiratory protection

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

Environmental exposure controls

No information available.

Thermal hazards

No information available.

Section 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Colorless
Color	No information available
Odor	Alcohol.
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	4.80-5.00	
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	87 °C	None known
Flash point	26 °C	ASTM D-93
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	399 °C	
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

VOC content	No information available
Particle characteristics	No information available

Section 10: Stability and reactivity**Reactivity**

Reactivity	No information available.
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Chemical stability

Stability	Stable under normal conditions.
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Explosion data

Sensitivity to mechanical impact	None.
Sensitivity to static discharge	Yes.

Possibility of hazardous reactions

Possibility of hazardous reactions	None under normal processing.
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Conditions to avoid

Conditions to avoid	Heat, flames and sparks.
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Incompatible materials

Incompatible materials	Strong acids. Strong bases. Strong oxidizing agents.
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Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

Section 11: Toxicological information**Acute toxicity****Information on likely routes of exposure****Product Information**

Inhalation	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. May cause drowsiness or dizziness. May be harmful if inhaled.
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
Skin contact	Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed. (based on components).
Symptoms	Redness. May cause redness and tearing of the eyes. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Numerical measures of toxicity - Product Information

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

ATEmix (oral)	1,158.00 mg/kg
ATEmix (dermal)	4,150.90 mg/kg
ATEmix (inhalation-vapor)	66.8224 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Trade Secret	= 475 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	= 3.181 mg/L (Rat) 4 h = 7.655 mg/L (Rat) 4 h
Trade Secret	= 1870 mg/kg (Rat)	= 4059 mg/kg (Rabbit)	> 10000 ppm (Rat) 6 h

See section 16 for terms and abbreviations

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Classification based on data available for ingredients. Causes skin irritation.
Serious eye damage/eye irritation	Classification based on data available for ingredients. Causes serious eye irritation.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

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

Chemical name	Australia	European Union	IARC
Trade Secret -	-	-	Group 3

Legend

IARC (International Agency for Research on Cancer)

Group 3 - Not Classifiable as to Carcinogenicity in Humans

Reproductive toxicity No information available.

STOT - single exposure May cause drowsiness or dizziness. May cause respiratory irritation.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Section 12: Ecological information

Ecotoxicity

Aquatic ecotoxicity

Unknown aquatic toxicity 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Trade Secret	EC50: >1000mg/L (96h, <i>Desmodesmus subspicatus</i>) EC50: >1000mg/L (72h, <i>Desmodesmus subspicatus</i>)	LC50: =9640mg/L (96h, <i>Pimephales promelas</i>) LC50: =11130mg/L (96h, <i>Pimephales promelas</i>) LC50: >1400000µg/L (96h, <i>Lepomis macrochirus</i>)	-	EC50: =13299mg/L (48h, <i>Daphnia magna</i>)

Terrestrial ecotoxicity There is no data for this product.

Persistence and degradability

Persistence and degradability No information available.

Bioaccumulative potential

Bioaccumulation

Component Information

Chemical name	Partition coefficient
Trade Secret	-1.7
Trade Secret	0.05

Mobility

Mobility No information available.

Other adverse effects

Other adverse effects No information available.

Section 13: Disposal considerations**Waste treatment methods**

Waste from residues/unused products Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

See section 8 for more information

Section 14: Transport information

ADG Not regulated

IATA

UN number or ID number UN1993
Proper shipping name Flammable liquid, n.o.s.
Transport hazard class(es) 3
Packing group II

IMDG

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
 No information available

Section 15: Regulatory information**Regulatory information****National regulations****Australia**

See section 8 for national exposure control parameters

Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)
 No poisons schedule number allocated

Australian Industrial Chemicals Introduction Scheme (AICIS)

Chemical name	Australian Industrial Chemicals Introduction Scheme (AICIS)	Additional information
Trade Secret -	Present	-
Trade Secret -	Present	-

Illicit Drug Precursors/Reagents

This product does not contain any substance(s) on the Illicit Drug Precursors/Reagents list.

Major hazard (accident/incident planning) regulation

Verify that license requirements are met

Hazardous chemical

Liquids with flash points <61°C kept above their boiling points at ambient conditions

Threshold quantity (T)
200**National pollutant inventory**

Subject to reporting requirement

Chemical name	National pollutant inventory
Trade Secret -	20 MW Threshold category 2b total 60000 MWH Threshold category 2b total 1 tonne/h Threshold category 2a total 25 tonne/yr Threshold category 1a total 400 tonne/yr Threshold category 2a total 2000 tonne/yr Threshold category 2b total

International Inventories

AIIC

Contact supplier for inventory compliance status.

NZIoC

Contact supplier for inventory compliance status.

TSCA

Contact supplier for inventory compliance status.

DSL/NDSL

Contact supplier for inventory compliance status.

EINECS/ELINCS

Contact supplier for inventory compliance status.

ENCS

Contact supplier for inventory compliance status.

IECSC

Contact supplier for inventory compliance status.

KECL

Contact supplier for inventory compliance status.

PICCS

Contact supplier for inventory compliance status.

Legend:

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

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

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

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

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

Section 16: Other information

Prepared by

Environmental, Health and Safety
978-927-5054

Revision date

07-Dec-2022

Revision note

SDS is valid 3 years from revision date. Contact info@neb.com for latest revision

***Indicates updated data since last publication.

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA Ceiling C	TWA (time-weighted average) Maximum limit value Carcinogen	STEL *	STEL (Short Term Exposure Limit) Skin designation
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Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 Australian Industrial Chemicals Introduction Scheme (AICIS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge and belief at the date of publication. This information is intended only as a guide for safe handling, use, processing, storage, transportation, disposal and release and should not be taken as a warranty or quality specification. The information relates only to the specific material and may not be valid for such material used in combination with any other materials or in any process unless expressly specified in the text. New England Biolabs will not be liable for any damages resulting from handling or contact with the product.

End of Safety Data Sheet

Australia SDS version information - UGHS

UL release:

Q2 GHS Revision 7 2022

Australia

Partial process, including GHS Wizard, NO TW

Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)

Specific target organ toxicity (single exposure)	Category 3
Category 3 Target organ effects: Respiratory irritation.	

Full text of H-Statements referred to under section 3 H225 - Highly flammable liquid and vapor H302 - Harmful if swallowed H315 - Causes skin irritation H319 - Causes serious eye irritation

Composition

63.4