



# SAFETY DATA SHEET

Revision date 09-Apr-2024

Version 4

## Section 1: Identification

### Product identifier

**Product name** Monarch® Buffer BX

**Product No** T2041

### 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

**Illicit Drug Precursors/Reagents** This product contains one or more substance(s) on the Illicit Drug Precursors/Reagents list. Verify requirements related to using, handling, and storing these substances.

### 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)

**24 Hour Emergency Phone Number** Chemtrec +65 3163 8374  
**Australian Poisons Information:** 131 126

## Section 2: Hazard(s) identification

### GHS Classification

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A

### Label elements

Exclamation mark

Corrosion



### Signal word

WARNING

### Hazard statements

Harmful if swallowed

May be harmful in contact with skin

Causes serious eye damage

### Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Do not breathe dust/fume/gas/mist/vapors/spray

Wear protective gloves/clothing and eye/face protection

### Precautionary Statements - Response

Immediately call a POISON CENTER or doctor

Immediately call a POISON CENTER or doctor

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

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

Wash contaminated clothing before reuse

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

Immediately call a POISON CENTER or doctor

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

Rinse mouth

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

### Precautionary Statements - Storage

Store locked up

### Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

### Other hazards which do not result in classification

No information available.

## Section 3: Composition and information on ingredients

Chemical name	CAS No.	Weight-%
Guanidine Thiocyanate	593-84-0	60 - 70%
Ethylenediamine tetraacetic acid	60-00-4	0 - 10%
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

<b>General advice</b>	IF exposed or concerned: Get medical advice/attention. If symptoms persist, call a physician.
<b>Inhalation</b>	If symptoms persist, call a physician. Remove to fresh air.
<b>Eye contact</b>	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. If symptoms persist, call a physician.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
<b>Ingestion</b>	Do NOT induce vomiting. Clean mouth with water. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
<b>Self-protection of the first aider</b>	Remove all sources of ignition. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

### Most important symptoms and effects, both acute and delayed

<b>Symptoms</b>	Prolonged contact may cause redness and irritation. Vapors may cause drowsiness and dizziness.
-----------------	--

### Indication of any immediate medical attention and special treatment needed

<b>Note to physicians</b>	Treat symptomatically.
---------------------------	------------------------

## Section 5: Firefighting measures

### Suitable extinguishing media

<b>Suitable extinguishing media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
-------------------------------------	---

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

<b>Unsuitable extinguishing media</b>	Do not scatter spilled material with high pressure water streams.
---------------------------------------	---

### Special exposure hazards in a fire

<b>Specific hazards arising from the chemical</b>	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.
---	--

### Protective equipment and precautions for firefighters

<b>Special protective equipment and precautions for fire-fighters</b>	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** Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**For emergency responders** Use personal protection recommended in Section 8.

#### Environmental precautions

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

#### Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

#### 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** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

**General hygiene considerations** Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. 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.

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

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Protect from moisture. Store locked up. Store away from other materials.

**Incompatible materials** Acids. Bases. Oxidizing agent.

### **Section 8: Exposure controls and personal protection**

#### Control parameters

**Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

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

#### Appropriate engineering controls

**Engineering controls** Showers

Eyewash stations  
Ventilation systems.

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

<b>Eye/face protection</b>	Tight sealing safety goggles. Face protection shield.
<b>Skin and body protection</b>	Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.
<b>Hand protection</b>	Wear suitable gloves. Impervious gloves.
<b>Respiratory protection</b>	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
<b>Environmental exposure controls</b>	No information available.
<b>Thermal hazards</b>	No information available.

## **Section 9: Physical and chemical properties**

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid
<b>Appearance</b>	Clear
<b>Color</b>	No information available
<b>Odor</b>	None.
<b>Odor threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	5.2	
<b>Melting point / freezing point</b>	No data available	None known
<b>Initial boiling point and boiling range</b>	No data available	None known
<b>Flash point</b>	No data available	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapor pressure</b>	No data available	None known
<b>Vapor density</b>	No data available	None known
<b>Relative density</b>	No data available	None known
<b>Water solubility</b>	No data available	None known
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	200 °C	
<b>Decomposition temperature</b>	No data available	None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known

### Other information

<b>VOC content</b>	No information available
<b>Particle characteristics</b>	No information available

## **Section 10: Stability and reactivity**

### Reactivity

<b>Reactivity</b>	No information available.
-------------------	---------------------------

**Chemical stability**

**Stability** Stable under normal conditions.

**Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

**Possibility of hazardous reactions**

**Possibility of hazardous reactions** None under normal processing.

**Conditions to avoid**

**Conditions to avoid** Exposure to air or moisture over prolonged periods.

**Incompatible materials**

**Incompatible materials** Acids. Bases. Oxidizing agent.

**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. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing.

**Eye contact** Specific test data for the substance or mixture is not available. Causes serious eye irritation.

**Skin contact** Specific test data for the substance or mixture is not available. May cause irritation.

**Ingestion** Specific test data for the substance or mixture is not available. May cause drowsiness or dizziness.

**Symptoms** Redness. Coughing and/ or wheezing. Prolonged contact may cause redness and irritation.

**Numerical measures of toxicity - Product Information**

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

**ATEmix (oral)** 820.70 mg/kg  
**ATEmix (dermal)** 97,817.30 mg/kg  
**ATEmix (inhalation-gas)** 99,999.00 ppm  
**ATEmix (inhalation-vapor)** 99,999.00 mg/l  
**ATEmix (inhalation-dust/mist)** 73.40 mg/l

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ethylenediamine tetraacetic acid	> 2000 mg/kg ( Rat )	-	-

See section 16 for terms and abbreviations

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

<b>Skin corrosion/irritation</b>	May cause skin irritation.
<b>Serious eye damage/eye irritation</b>	Causes serious eye damage. Causes burns. Classification based on data available for ingredients.
<b>Respiratory or skin sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	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
Ethylenediamine tetraacetic acid	EC50: =1.01mg/L (72h, <i>Desmodesmus subspicatus</i> )	LC50: 34 - 62mg/L (96h, <i>Lepomis macrochirus</i> ) LC50: 44.2 - 76.5mg/L (96h, <i>Pimephales promelas</i> )	-	EC50: =113mg/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** There is no data for this product.

### 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** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

See section 8 for more information

## Section 14: Transport information

**ADG** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

### **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
Guanidine Thiocyanate - 593-84-0	Present	-
Ethylenediamine tetraacetic acid - 60-00-4	Present	-



**Illicit Drug Precursors/Reagents**

This product contains one or more substance(s) on the Illicit Drug Precursors/Reagents list. Verify requirements related to using, handling, and storing these substances.

**International Inventories**

<b>AIIC</b>	Contact supplier for inventory compliance status.
<b>NZIoC</b>	Contact supplier for inventory compliance status.
<b>TSCA</b>	Contact supplier for inventory compliance status.
<b>DSL/NDSL</b>	Contact supplier for inventory compliance status.
<b>EINECS/ELINCS</b>	Contact supplier for inventory compliance status.
<b>ENCS</b>	Contact supplier for inventory compliance status.
<b>IECSC</b>	Contact supplier for inventory compliance status.
<b>KECI</b>	Contact supplier for inventory compliance status.
<b>PICCS</b>	Contact supplier for inventory compliance status.

**Legend:**

<b>AICS</b>	- Australian Inventory of Chemical Substances
<b>NZIoC</b>	- New Zealand Inventory of Chemicals
<b>TSCA</b>	- United States Toxic Substances Control Act Section 8(b) Inventory
<b>DSL/NDSL</b>	- Canadian Domestic Substances List/Non-Domestic Substances List
<b>EINECS/ELINCS</b>	- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
<b>ENCS</b>	- Japan Existing and New Chemical Substances
<b>IECSC</b>	- China Inventory of Existing Chemical Substances
<b>KECL</b>	- Korean Existing and Evaluated Chemical Substances
<b>PICCS</b>	- 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**

**Revision date** 09-Apr-2024

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

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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

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

Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 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)  
U.S. 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

**End of Safety Data Sheet**