SAFETY DATA SHEET

Classified as hazardous according to criteria of EPA New Zealand

Section 1 - Identification

Product Name **Buffer Solution pH 10.00**

Product Code	**ACR25860, ACR38389, AJA2564, BDH32040, BSPA99, FSBJ/2880, FSBJ/2885C, FSBSB115, HANHI7010L, HAC22836, FSH11404579, ALF038710, ALF038709, FSBJ/2885, EUT01X038203W, EUT01X223103W**
Address	Thermo Fisher Scientific New Zealand Ltd 244 Bush Road, Albany, Auckland, New Zealand
Emergency Tel.	**CHEMTREC®** **09 980 6780 or +64 9 980 6780**
Telephone / Fax Numbers	Tel: 09 980 6700 Fax: 09 980 6788
E-mail address	NZinfo@thermofisher.com

Recommended Use Laboratory chemicals.

Section 2 - Hazard(s) Identification

Classification under Work Safe New Zealand

6.3A - Substances that are irritating to the skin
6.4A - Substances that are irritating to the eye
6.8A - Substances that are known or presumed human reproductive or developmental toxicants

Classified as hazardous according to criteria of EPA New Zealand

HSNO Approval Number **HSR002596**

GHS Classification

Physical hazards
Based on available data, the classification criteria are not met

Health hazards

Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Reproductive Toxicity	Category 1B

Environmental hazards
Based on available data, the classification criteria are not met

Label Elements

Signal Word **Danger**

Hazard Statements
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H360 - May damage fertility or the unborn child

Precautionary Statements
P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P264 - Wash face, hands and any exposed skin thoroughly after handling
P280 - Wear eye protection/ face protection
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P308 + P313 - IF exposed or concerned: Get medical advice/attention
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P403 - Store in a well-ventilated place
P501 - Dispose of contents/ container to an approved waste disposal plant

Other information
No information available

Section 3 - Composition and Information on Ingredients

Component	CAS-No	Weight %
Water	7732-18-5	>60
Borates, tetra, sodium salts, decahydrate	1303-96-4	<10
Sodium hydroxide	1310-73-2	<1
C.I. Acid blue 9, disodium salt	3844-45-9	<0.0005

Section 4 - First Aid Measures

Inhalation Remove to fresh air. Get medical attention immediately if symptoms occur.

Ingestion Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Self-Protection of the First Aider No special precautions required.

First Aid Facilities Eyewash, safety shower and washroom.

Most important symptoms and effects None reasonably foreseeable.

Notes to Physician Treat symptomatically.

Section 5 - Fire Fighting Measures

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

Extinguishing media which must not be used for safety reasons
No information available.

Hazardous Combustion Products
Specific Hazards Arising from the Chemical
Thermal decomposition can lead to release of irritating gases and vapors.
Special protective equipment and precautions for fire fighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6 - Accidental Release Measures

Emergency procedures
Ensure adequate ventilation. Use personal protective equipment as required.
Environmental Precautions
Should not be released into the environment. See Section 12 for additional Ecological Information.

Methods for Containment and Clean Up
Sweep up and shovel into suitable containers for disposal.
Reference to Other Sections
Refer to protective measures listed in Sections 8 and 13.

Section 7 - Handling and Storage

Precautions for Safe Handling
Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation.

Conditions for Safe Storage, Including any Incompatibilities
Keep containers tightly closed in a dry, cool and well-ventilated place.

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

Section 8 - Exposure Controls and Personal Protection

Exposure limits
NZ - Workplace Exposure Standards and Biological Exposure Indices (6th edition). New Zealand Department of Labor

Component	New Zealand WEL
Borates, tetra, sodium salts, decahydrate	TWA: 5 mg/m³
Sodium hydroxide	Ceiling: 2 mg/m³

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

Engineering Measures
None under normal use conditions. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

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

Hand Protection Protective gloves

Glove material	Breakthrough time	Glove thickness	AUS/NZ Standard	Glove comments
Natural rubber, Nitrile rubber, Neoprene, PVC.	See manufacturers recommendations	-	AS/NZS 2161.1	(minimum requirement)

Inspect gloves before use.
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)
Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.
Remove gloves with care avoiding skin contamination.

Skin and body protection Long sleeved clothing

Repiratory Protection Use an AS/NZS 1716 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained in line with AS/NZS 1715 on the use and maintenance of repiratory protective devices

Recommended Filter type: Particle filter (or AUS/NZ equivalent)

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

Environmental exposure controls No information available.

Section 9 - Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Blue	
Physical State	Liquid	
Odor	No information available	
Odor Threshold	No data available	
pH	10	
Melting Point/Range	No data available	
Softening Point	No data available	
Boiling Point/Range	100 °C / 212 °F	
Flash Point	Not applicable	**Method -** No information available
Evaporation Rate	No data available	
Flammability (solid,gas)	Not applicable	Liquid
Explosion Limits	No data available	
Vapor Pressure	No data available	
Vapor Density	No data available	0.73 (Air = 1.0)
Specific Gravity / Density	No data available	
Bulk Density	Not applicable	Liquid
Water Solubility	Soluble in water	
Solubility in other solvents	No information available	

Partition Coefficient (n-octanol/water)

Component	log Pow
Borates, tetra, sodium salts, decahydrate	- 0.757

Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive Properties	No information available
Oxidizing Properties	No information available

Other information

Section 10 - Stability and Reactivity

Reactivity None known, based on information available

Stability Stable under normal conditions.

Conditions to Avoid Incompatible products, Excess heat.

Hazardous Decomposition Products None under normal use conditions.

Hazardous Polymerization Hazardous polymerization does not occur.

Section 11 - Toxicological Information

Information on Toxicological Effects

Product Information
(a) acute toxicity;
Oral Based on available data, the classification criteria are not met
Dermal Based on available data, the classification criteria are not met
Inhalation Based on available data, the classification criteria are not met

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	LD50 > 90 mL/kg (Rat)		
Borates, tetra, sodium salts, decahydrate	5660 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	2.03 mg/l (Rat)
Sodium hydroxide	LD50 = 325 mg/kg (Rat)	LD50 = 1350 mg/kg (Rabbit)	
C.I. Acid blue 9, disodium salt	LD50 > 2 g/kg (Rat)		

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; Category 2
(d) respiratory or skin sensitization;
Respiratory No data available
Skin No data available

Component	Test method	Test species	Study result
Borates, tetra, sodium salts, decahydrate 1303-96-4 (<10)	OECD Test Guideline 406	guinea pig	- - non-sensitising
C.I. Acid blue 9, disodium salt 3844-45-9 (<0.0005)	OECD Test Guideline 429 Local Lymph Node Assay	mouse	non-sensitising

(e) germ cell mutagenicity; No data available

Component	Test method	Test species	Study result
C.I. Acid blue 9, disodium salt 3844-45-9 (<0.0005)	in vivo	mouse	negative

(f) carcinogenicity; No data available

Component	Test method	Test species / Duration	Study result
C.I. Acid blue 9, disodium salt 3844-45-9 (<0.0005)	OECD Test Guideline 453	mouse	NOAEL = > 7000 mg/kg

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; Category 1B

Component	Test method	Test species / Duration	Study result
Borates, tetra, sodium salts, decahydrate 1303-96-4 (<10)	OECD Test Guideline 416 ----------	Rat	NOAEL = 9.6 mg/kg ----------

	OECD Test Guideline 414		NOAEL = 17.5 mg/kg

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

Target Organs No information available.

(j) aspiration hazard; No data available

Symptoms / effects,both acute and delayed No information available

Section 12 - Ecological Information

Ecotoxicity effects .

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Borates, tetra, sodium salts, decahydrate	340 mg/L LC50 96 h 708 mg/l LC50 96 h (Pimephales promelas)	1085 - 1402 mg/L LC50 48 h	2.6-21.8 mg/L EC50 96h 158 mg/L EC50 = 96h	-
Sodium hydroxide	LC50: = 45.4 mg/L, 96h static (Oncorhynchus mykiss)	-	-	-
C.I. Acid blue 9, disodium salt	LC50 > 100 mg/L, 96h Golden orfe	EC50 > 1000 mg/L, 48h Daphnia magna	EC50 > 200 mg/L	EC50 > 10,000 mg/L

Persistence and Degradability

Persistence Soluble in water, Persistence is unlikely, based on information available.

Bioaccumulative Potential Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Borates, tetra, sodium salts, decahydrate	- 0.757	No data available

Mobility The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility. Highly mobile in soils

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors

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

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

Section 13 - Disposal Considerations

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

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

Other Information Disposal agencies or waste contractors must comply with the New Zealand Hazardous Substances (Disposal) Regulations . Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

Section 14 - Transport Information

IMDG/IMO Not regulated

NZS 5433:2012 Not regulated

Component	Hazchem Code
Sodium hydroxide 1310-73-2 (<1)	2W 2R

IATA Not regulated

Environmental hazards No hazards identified

Special Precautions No special precautions required

Additional information None known

Section 15 - Regulatory Information

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

Component	HSNO Approval Number
Borates, tetra, sodium salts, decahydrate	HSR002914
Sodium hydroxide	HSR001547
C.I. Acid blue 9, disodium salt	HSR002781

International Inventories X = listed

Component	NZIoC	AICS	EINECS	ELINCS	TSCA	DSL	NDSL	PICCS	ENCS	IECSC	KECL
Water	X	X	231-791-2	-	X	X	-	X	X	X	KE-35400
Borates, tetra, sodium salts, decahydrate	X	X	215-540-4	-	X	X	-	X	X	X	KE-03483
Sodium hydroxide	X	X	215-185-5	-	X	X	-	X	X	X	KE-31487
C.I. Acid blue 9, disodium salt	X	X	223-339-8	-	X	X	-	X	X	X	KE-13703

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

Section 16 - Other Information

This safety data sheet complies with the requirements of WorkSafe New Zealand Regulations

Legend

AICS - Australian Inventory of Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
IECSC - Chinese Inventory of Existing Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
TWA - Time Weighted Average
IARC - International Agency for Research on Cancer
ICAO/IATA - International Civil Aviation Organization/International Air Transport Association
MARPOL - International Convention for the Prevention of Pollution from Ships
NZS 5433:2012 - Transport of Dangerous Goods on Land
LD50 - Lethal Dose 50%
EC50 - Effective Concentration 50%
WEL - Workplace Exposure Limit
DNEL - Derived No Effect Level
POW - Partition coefficient Octanol:Water
vPvB - very Persistent, very Bioaccumulative
VOC (volatile organic compound)

NZIoC - New Zealand Inventory of Chemicals
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japanese Existing and New Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
CAS - Chemical Abstracts Service
ACGIH - American Conference of Governmental Industrial Hygienists Predicted No Effect Concentration (PNEC)
IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code
ADG Australian Code for the Transport of Dangerous Goods by Road and Rail
OECD - Organisation for Economic Co-operation and Development
LC50 - Lethal Concentration 50%
ATE - Acute Toxicity Estimate
RPE - Respiratory Protective Equipment
NOEC - No Observed Effect Concentration
BCF - Bioconcentration factor
PBT - Persistent, Bioaccumulative, Toxic

Key literature references and sources for data
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

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

Revision Date	24-Jun-2020
Revision Summary	Not applicable.

Disclaimer

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End of Safety Data Sheet