

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

## **Section 1 - Identification**

Product Identifier

Product Name Tetra-n-Butyl Ammonium Hydroxide Solution (1M in Methanol)

Synonyms N,N,N-Tributyl-1-butanium hydroxide in met; Tetra-n-butylammonium hydroxide in Carbinol

Recommended Use Laboratory chemicals. Uses advised against No Information available

Product Code O4575-100; O4576-100; O4577-25

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# Section 2 - Hazard(s) Identification

Classification under Work Safe New Zealand

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

**GHS Classification** 

Physical hazards

Flammable liquids Category 2

**Health hazards** 

Acute Oral Toxicity

Acute Dermal Toxicity

Acute Inhalation Toxicity - Vapors

Skin Corrosion/Irritation

Serious Eye Damage/Eye Irritation

Category 1

Reproductive Toxicity

Specific target organ toxicity - (single exposure)

Category 1

Category 2

Category 1

**Environmental hazards** 

Based on available data, the classification criteria are not met

**Label Elements** 

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Signal Word

Danger

## **Hazard Statements**

H225 - Highly flammable liquid and vapor

H314 - Causes severe skin burns and eye damage

H370 - Causes damage to organs

H361 - Suspected of damaging fertility or the unborn child

H301 + H311 + H331 - Toxic if swallowed, in contact with skin or if inhaled

## **Precautionary Statements**

## Prevention

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

P233 - Keep container tightly closed

P240 - Ground and bond container and receiving equipment

P242 - Use non-sparking tools

P243 - Take action to prevent static discharges

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

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

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

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

#### Response

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

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

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 or doctor

P330 - Rinse mouth

P331 - Do NOT induce vomiting

P363 - Wash contaminated clothing before reuse

P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

#### Storage

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

P405 - Store locked up

## Disposal

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

## Other hazards which do not result in classification

Toxic to terrestrial vertebrates

# Section 3 - Composition and Information on Ingredients

Component	CAS No	Weight %
Methyl alcohol	67-56-1	74 - 75
1-Butanaminium, N,N,N-tributyl-, hydroxide	2052-49-5	25 - 26

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

## **Description of first aid measures**

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

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required.

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**Inhalation** If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim

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

air. Immediate medical attention is required.

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

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

advice.

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

attention is required.

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

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

protect themselves and prevent spread of contamination.

First Aid Facilities Eyewash, safety shower and washroom.

Most important symptoms and

effects

Causes burns by all exposure routes. Difficulty in breathing. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and

vomiting: Product is a corrosive material. Use of gastric lavage or emesis is

contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of

perforation

Notes to Physician Treat symptomatically.

# **Section 5 - Fire Fighting Measures**

## Suitable Extinguishing Media

Water spray, fog or alcohol-resistant foam. CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam. Water mist may be used to cool closed containers.

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

No information available.

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

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes. Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

## **Hazardous Combustion Products**

Formaldehyde.

## Special protective equipment and precautions for fire fighters

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

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

## Personal Precautions, Protective Equipment and Emergency Procedures

## **Emergency procedures**

Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Remove all sources of ignition. Take precautionary measures against static discharges.

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#### **Environmental Precautions**

Should not be released into the environment. See Section 12 for additional Ecological Information.

## Methods for Containment and Clean Up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

## Precautions to prevent secondary hazards

Clean contaminated objects and areas thoroughly observing environmental regulations

#### **Reference to Other Sections**

Refer to protective measures listed in Sections 8 and 13.

# **Section 7 - Handling and Storage**

## Precautions for Safe Handling

#### Advice on safe handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.

#### **Hygiene Measures**

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

## Conditions for Safe Storage, Including any Incompatibilities

#### **Storage Conditions**

Flammables area. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Corrosives area. Keep away from heat, sparks and flame.

## **Incompatible Materials**

Strong acids. Strong bases. Strong oxidizing agents. Acid anhydrides. Acid chlorides. Peroxides. Metals.

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

AS 1940-2004 - The storage and handling of flammable and combustible liquids

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

### **Control parameters**

## **Exposure limits**

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

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

AUS - Exposure Standards for Atmospheric Contaminants in the Occupational Environment - Guidance Note on the Interpretation of Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:3008(1995)] Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)] updated in August, 2005. Safe Work Australia

	Component	New Zealand WEL	Australia	ACGIH TLV	The United Kingdom
Г	Methyl alcohol	TWA: 200 ppm	STEL: 250 ppm	TWA: 200 ppm	WEL - TWA: 200 ppm TWA;
	·	TWA: 262 mg/m <sup>3</sup>	STEL: 328 mg/m <sup>3</sup>	STEL: 250 ppm	266 mg/m³ TWA
		STEL: 250 ppm	TWA: 200 ppm	Skin	WEL - STEL: 250 ppm
		STEL: 328 mg/m <sup>3</sup>	TWA: 262 mg/m <sup>3</sup>		STEL; 333 mg/m <sup>3</sup> STEL
-		Ckin	_		•

## **Biological limit values**

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**NZ** - Substances assigned Biological Exposure Indices in the New Zealand Workplace Exposure Standards and Biological Exposure Indices (6th edition). New Zealand Department of Labor

**ACGIH** - American Conference of Governmental Industrial Hygienists (ACGIH) TLVs® and BEIs®- Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices. 2022 Edition

Component	New Zealand	Australia	ACGIH - Biological Exposure Indices	United Kingdom
Methyl alcohol	15 mg/L (urine) end of shift		15 mg/L	
	(Methyl alcohol)		Medium: urine	
	, , ,		Time: end of shift	
			Determinant: Methanol	

## Appropriate engineering controls

### **Engineering Measures**

Use only under a chemical fume hood. Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

## Individual protection measures, such as personal protective equipment

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

applications)

Hand Protection Protective gloves

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

Inspect gloves before use.

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

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

Remove gloves with care avoiding skin contamination.

Skin and body protection Long sleeved clothing

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

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

and maintenance of repiratory protective devices

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

Recommended half mask:- Particle filtering: EN149:2001 (or AUS/NZ equivalent)

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

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

**Environmental exposure controls** No information available.

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

## Information on basic physical and chemical properties

Physical State Liquid

Appearance Clear Odorless

Odor Threshold No data available

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# Tetra-n-Butyl Ammonium Hydroxide Solution (1M in Methanol)

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pH 12.0 Alkaline

Melting Point/Range
Softening Point
No data available
No data available
No information available

Boiling Point/Range No information available

Flammability (liquid) Highly flammable On basis of test data

Flammability (solid,gas) Not applicable Liquid Explosion Limits No data available

EL. I. B. 1.4

Flash Point 11.1 °C / 52 °F Method - No information available

Autoignition TemperatureNo data availableDecomposition TemperatureNo data availableViscosityNo data availableWater SolubilityNo information available

Solubility in other solvents

No information available

Partition Coefficient (n-octanol/water)

Componentlog PowMethyl alcohol-0.741-Butanaminium, N,N,N-tributyl-,1.518

hydroxide

Vapor Pressure No information available

**Density / Specific Gravity** 0.83

Bulk DensityNot applicableLiquidVapor Density> 1.0(Air = 1.0)

Particle characteristics Not applicable (liquid)

Other information

**Explosive Properties** Vapors may form explosive mixtures with air

**Evaporation Rate** No information available

# **Section 10 - Stability and Reactivity**

Reactivity None known, based on information available

**Stability** Stable under normal conditions.

Sensitivity to Mechanical Impact No information available

Sensitivity to Static Discharge No information available

Hazardous Polymerization Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

Conditions to Avoid Incompatible products, Heat, flames and sparks, Keep away from open flames, hot

surfaces and sources of ignition.

Incompatible Materials Strong acids, Strong bases, Strong oxidizing agents, Acid anhydrides, Acid chlorides,

Peroxides, Metals.

Hazardous Decomposition Products Formaldehyde.

# **Section 11 - Toxicological Information**

**Acute Effects** 

Information on likely routes of exposure

**Product Information** 

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# Tetra-n-Butyl Ammonium Hydroxide Solution (1M in Methanol)

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Inhalation Inhalation of vapors in high concentration may cause irritation of respiratory system.

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

blindness.

Skin Avoid contact with skin. Causes burns. Skin Corrosion/Irritation. Harmful in contact with

skin.

**Ingestion** May be harmful if swallowed.

## Numerical measures of toxicity

(a) acute toxicity;

**Eyes** 

Oral Category 3
Dermal Category 3
Inhalation Category 3

## Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Methyl alcohol	LD50 = 1187 – 2769 mg/kg (Rat)	LD50 = 17100 mg/kg ( Rabbit )	LC50 = 128.2 mg/L (Rat) 4 h
1-Butanaminium, N,N,N-tributyl-, hydroxide	500 mg/kg (Rat)		

(b) skin corrosion/irritation; Category 1 B

(c) serious eye damage/irritation; Category 1

(d) respiratory or skin sensitization;

Respiratory No data available Skin No data available

Component	Test method	Test species	Study result
Methyl alcohol	OECD Test Guideline 406	guinea pig	non-sensitising
67-56-1 ( 74 - 75 )	Guinea Pig Maximisation Test		
, , ,	(GPMT)		

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

Component	Test method	Test species / Duration	Study result
Methyl alcohol	OECD Test Guideline 416	Rat / Inhalation 2 Generation	NOAEC = 1.3 mg/l (air)
67-56-1 ( 74 - 75 )			

(h) STOT-single exposure; Category 1

Results / Target organs Optic nerve

Central nervous system (CNS)

(i) STOT-repeated exposure; No data available

Target Organs No information available.

(j) aspiration hazard; No data available

## Symptoms / effects, both acute and delayed

Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Product is

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a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

# **Section 12 - Ecological Information**

### **Ecotoxicity**

## **Aquatic ecotoxicity**

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Methyl alcohol	Pimephales promelas:	EC50 > 10000 mg/L 24h		EC50 = 39000 mg/L 25
	LC50 > 10000 mg/L 96h			min
				EC50 = 40000 mg/L 15
				min
				EC50 = 43000 mg/L 5
				min

## Terrestrial ecotoxicity

Component	Earthworm	Avian	Honeybees
Methyl alcohol	Acute toxicity: LC50 > 1 mg/cm2		
	(Eisenia foetida, 48 h, filter		
	paper)		ļ

## Persistence and Degradability

No information available

Component	Degradability
Methyl alcohol	DT50 ~ 17.2d
67-56-1 ( 74 - 75 )	>94% after 20d

## **Bioaccumulative Potential**

No information available

Component	log Pow	Bioconcentration factor (BCF)
Methyl alcohol	-0.74	<10 dimensionless
1-Butanaminium, N,N,N-tributyl-, hydroxide	1.518	No data available

Mobility

No information available.

## Other adverse effects

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

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

# **Section 13 - Disposal Considerations**

### Waste treatment methods

Waste from Residues/Unused Products

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

conformity with all applicable regulations.

**Contaminated Packaging** 

Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and

empty container away from heat and sources of ignition.

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

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on the application for which the product was used. Do not flush to sewer. Can be landfilled or incinerated, when in compliance with local regulations. Do not empty into drains. Large amounts will affect pH and harm aquatic organisms. Solutions with high pH-value must be neutralized before discharge.

# **Section 14 - Transport Information**

Component	Hazchem Code
Methyl alcohol	2WE
67-56-1 ( 74 - 75 )	

#### NZS 5433:2020

UN-No UN2924

**Proper Shipping Name** Flammable liquid, corrosive, n.o.s.

Hazard Class 3 Subsidiary Hazard Class 8 Packing Group II

<u>IATA</u>

**UN-No** UN2924

Proper Shipping Name Flammable liquid, corrosive, n.o.s.

Hazard Class 3 Subsidiary Hazard Class 8 Packing Group II

IMDG/IMO

UN-No UN2924

**Proper Shipping Name** Flammable liquid, corrosive, n.o.s.

Hazard Class 3 Subsidiary Hazard Class 8 Packing Group II

Environmental hazards No hazards identified

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

**IBC Code** 

Not applicable, packaged goods

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

regulations for additional information.

Additional information None known

# **Section 15 - Regulatory Information**

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

## **National Regulations**

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

## Certified handlers, tracking and controlled substance license requirements

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

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## Prohibition or notification/licensing requirements

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

## International Regulations

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

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

Rotterdam Convention (PIC) Not applicable

Component	Seveso III Directive (2012/18/EC) -	Seveso III Directive (2012/18/EC) -	IMDG Marine Pollutant
	Qualifying Quantities for Major	Qualifying Quantities for Safety	
	Accident Notification	Report Requirements	
Methyl alcohol	500 tonne	5000 tonne	

# Authorisation/Restrictions according to EU REACH

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	· · · · · · · · · · · · · · · · · · ·
Methyl alcohol	-	Use restricted. See item 69. (see link for restriction details) Use restricted. See item 75. (see link for restriction details)	-

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

## **International Inventories**

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

Component	CAS No	NZIoC	AICS	EINECS	ELINCS	NLP	KECL	IECSC	TCSI
Methyl alcohol	67-56-1	X	X	200-659-6	ı	-	KE-23193	X	Х
1-Butanaminium, N,N,N-tributyl-,	2052-49-5	Х	Х	218-147-6	-	-	KE-34029	Х	Х
hydroxide									

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	PICCS	ISHL	ENCS
Methyl alcohol	67-56-1	X	ACTIVE	X	-	Х	X	Х
1-Butanaminium, N,N,N-tributyl-, hvdroxide	2052-49-5	Х	ACTIVE	Х	-	Х	Х	Х

Legend: X - Listed '-' - Not Listed

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

## **Section 16 - Other Information**

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

#### Legend

NZIoC - New Zealand Inventory of Chemicals

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

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

**AICS** - Australian Inventory of Chemical Substances

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

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

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# Tetra-n-Butyl Ammonium Hydroxide Solution (1M in Methanol)

## SAFETY DATA SHEET

Substances List

IECSC - Chinese Inventory of Existing Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

TWA - Time Weighted Average

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

ICAO/IATA - International Civil Aviation Organization/International Air

**Transport Association** 

MARPOL - International Convention for the Prevention of Pollution from

Ships

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50% WEL - Workplace Exposure Limit DNEL - Derived No Effect Level

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

**VOC** - (Volatile Organic Compound)

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

**CAS** - Chemical Abstracts Service

ACGIH - American Conference of Governmental Industrial Hygienists

PNEC - Predicted No Effect Concentration

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

Dangerous Goods Code

LC50 - Lethal Concentration 50% ATE - Acute Toxicity Estimate

RPE - Respiratory Protective Equipment NOEC - No Observed Effect Concentration

**BCF** - Bioconcentration factor

PBT - Persistent, Bioaccumulative, Toxic

#### Key literature references and sources for data

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

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

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

EPA Guide to classifying hazardous substances in New Zealand

EPA - Assigning a product to an existing HSNO approval guide

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

Physical hazards On basis of test data
Health Hazards Calculation method
Environmental hazards Calculation method

## **Training Advice**

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

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

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

Revision Date 10-Mar-2023 Revision Summary Not applicable

## **Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

# **End of Safety Data Sheet**

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