

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

## **Section 1 - Identification**

**Product Identifier** 

Product Name Phenol, Ready-to-Use, buffer saturated solution pH 4.5

Recommended Use Laboratory chemicals.
Uses advised against No Information available

Product Code J67158

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 ANZinfo@thermofisher.com

## **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 4

**Health hazards** 

**Acute Oral Toxicity** Category 3 Category 3 **Acute Dermal Toxicity** Acute Inhalation Toxicity - Vapors Category 2 Skin Corrosion/Irritation Category 1 B Category 1 Serious Eye Damage/Eye Irritation Germ Cell Mutagenicity Category 2 Reproductive Toxicity Category 2 Specific target organ toxicity - (repeated exposure) Category 2

**Environmental hazards** 

Chronic aquatic toxicity Category 4

**Label Elements** 

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Signal Word

Danger

## **Hazard Statements**

H227 - Combustible liquid

H314 - Causes severe skin burns and eye damage

H341 - Suspected of causing genetic defects if inhaled

H330 - Fatal if inhaled

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

H361 - Suspected of damaging fertility or the unborn child

H413 - May cause long lasting harmful effects to aquatic life

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

## **Precautionary Statements**

#### Prevention

P201 - Obtain special instructions before use

P202 - Do not handle until all safety precautions have been read and understood

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

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

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

P363 - Wash contaminated clothing before reuse

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

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

## 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

Toxicity to Soil Dwelling Organisms

Toxic to terrestrial vertebrates

## **Section 3 - Composition and Information on Ingredients**

Component	CAS No	Weight %
Phenol	108-95-2	70
Water	7732-18-5	27
Citrate, sodium, dihydrate	6132-04-3	2
Citric acid	77-92-9	1

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## **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

required.

New Zealand Emergency Tel. CHEMTREC®

09 980 6780 or +64 9 980 6780

**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. Symptoms of overexposure may be 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

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Notes to Physician Treat symptomatically.

## **Section 5 - Fire Fighting Measures**

#### **Suitable Extinguishing Media**

Carbon dioxide (CO<sub>2</sub>). Powder. Water spray. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. 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. Combustible material. Containers may explode when heated.

## **Hazardous Combustion Products**

Carbon monoxide (CO), Carbon dioxide (CO2), Sodium oxides.

## 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

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### **Emergency procedures**

Ensure adequate ventilation. Use personal protective equipment as required. 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.

#### **Environmental Precautions**

Do not flush into surface water or sanitary sewer system.

#### Methods for Containment and Clean Up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal, Remove all sources of ignition.

### 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.

### **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**

Corrosives area. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame.

## **Incompatible Materials**

Oxidizing agent.

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

**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 **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.

Component	New Zealand WEL	Australia	ACGIH TLV	The United Kingdom
Phenol	Phenol TWA: 1 ppm		TWA: 5 ppm	STEL: 4 ppm 15 min
	TWA: 3.8 mg/m <sup>3</sup>	TWA: 4 mg/m <sup>3</sup>	Skin	STEL: 16 mg/m <sup>3</sup> 15 min
	STEL: 2 ppm	_		TWA: 2 ppm 8 hr
	STEL: 7.7 mg/m <sup>3</sup>			TWA: 7.8 mg/m <sup>3</sup> 8 hr
	Skin			Skin

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**Biological limit values** 

**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	United Kingdom
			Exposure Indices	
Phenol	100 mg/L (urine) end of shift		250 mg/g creatinine	
	(Phenol)		Medium: urine	
			Time: end of shift	
			Determinant: Phenol with	
			hydrolysis	

## Appropriate engineering controls

## **Engineering Measures**

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
Butyl rubber.	See manufacturers	-	AS/NZS 2161	(minimum requirement)
	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: Organic gases and vapours filter (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 Prevent product from entering drains. Do not allow material to contaminate ground water

system. Local authorities should be advised if significant spillages cannot be contained.

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

## Information on basic physical and chemical properties

Physical State Liquid

Appearance Clear

Odor No information available
Odor Threshold No data available

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No information available рH

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

Flammability (liquid) Combustible liquid On basis of test data

Flammability (solid,gas) Not applicable Liquid

**Explosion Limits** No data available

79 °C / 174.2 °F Method - No information available Flash Point

No data available **Autoignition Temperature** No data available **Decomposition Temperature** No data available **Viscosity** 

**Water Solubility** Miscible

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

Component log Pow Phenol 1.5 -1.72 Citric acid

23 hPa @ 20 °C **Vapor Pressure** 

**Density / Specific Gravity** 1.06 g/cm3 @ 20 °C **Bulk Density** Not applicable Liquid **Vapor Density** No data available (Air = 1.0)Particle characteristics Not applicable (liquid)

Other information

**Explosive Properties** explosive air/vapour mixtures possible

## **Section 10 - Stability and Reactivity**

Reactivity None known, based on information available

Stability Light sensitive.

**Sensitivity to Mechanical Impact** No information available

Sensitivity to Static Discharge No information available

No information available. **Hazardous Polymerization** 

**Hazardous Reactions** None under normal processing.

**Conditions to Avoid** Keep away from open flames, hot surfaces and sources of ignition.

**Incompatible Materials** Oxidizing agent.

Hazardous Decomposition Products Carbon monoxide (CO). Carbon dioxide (CO2). Sodium oxides.

## **Section 11 - Toxicological Information**

## **Acute Effects**

## Information on likely routes of exposure

### **Product Information**

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

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

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

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skin.

**Ingestion** May be harmful if swallowed.

Numerical measures of toxicity

(a) acute toxicity;

Oral Category 3
Dermal Category 3
Inhalation Category 3

## Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Phenol	LD50 = 340 mg/kg (Rat)	LD50 = 630 mg/kg ( Rabbit )	LC50 = 316 mg/m <sup>3</sup> ( Rat ) 4 h
Water	_	-	-
Citrate, sodium, dihydrate	LD50 = 5400 mg/kg (Mouse)	LD50 = > 2000 mg/kg (Rat)	
	(OECD 401)	(OECD 402)	
Citric acid	LD50 = 3 g/kg (Rat)	>2 g/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
Citrate, sodium, dihydrate	Guinea Pig Maximisation Test	guinea pig	non-sensitising
6132-04-3 ( 2 )	(GPMT)		_

(e) germ cell mutagenicity; Category 2

Component	Test method	Test species	Study result
Citrate, sodium, dihydrate OECD Test Guideline 47 Bacterial Reverse Mutation		in vitro Bacteria	negative
	Chromosomal aberration assay OECD Test Guideline 475	in vivo Rat	negative

(f) carcinogenicity; No data available

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

	Component	New Zealand	Australia	New South Wales	Western Australia	IARC	EU	UK	Germany
Ī	Phenol								Cat. 3B

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; Category 2

Target Organs Liver, Kidney, Skin, Central nervous system (CNS).

(j) aspiration hazard; No data available

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## Symptoms / effects,both acute and delayed

Symptoms of overexposure may be 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.

## **Section 12 - Ecological Information**

#### **Ecotoxicity**

## **Aquatic ecotoxicity**

Contains a substance which is:. The product contains following substances which are hazardous for the environment. Very toxic to aquatic organisms.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Phenol	4-7 mg/L LC50 96 h	EC50: 10.2 - 15.5 mg/L,	EC50: 187 - 279 mg/L,	EC50 21 - 36 mg/L 30
	32 mg/L LC50 96 h	48h (Daphnia magna)	72h static	min
		EC50: 4.24 - 10.7 mg/L,	(Desmodesmus	EC50 = 23.28 mg/L 5
		48h Static (Daphnia	subspicatus)	min
		magna)	EC50: 0.0188 - 0.1044	EC50 = 25.61 mg/L 15
			mg/L, 96h static	min
			(Pseudokirchneriella	EC50 = 28.8 mg/L 5 min
			subcapitata)	EC50 = 31.6 mg/L 15
			EC50: = $46.42 \text{ mg/L}$ ,	min
			96h	
			(Pseudokirchneriella	
			subcapitata)	
Citric acid	Leuciscus idus: LC50 =	EC50 = 120  mg/L/72h		Photobacterium
	440-760 mg/L/96h			phosphoreum: EC50 =
				14 mg/L/15 min

## Terrestrial ecotoxicity

Component	Earthworm	Avian	Honeybees
Phenol	Acute toxicity: LC100 = 6900		
	mg/kg (Eisenia foetida, 56 Days,		
	soil dry weight)		

## Persistence and Degradability

**Persistence** 

Miscible with water, Persistence is unlikely, based on information available.

Component	Degradability
Citrate, sodium, dihydrate	93 % (Exposure Time: 0.25 d)(OECD 303 A)
6132-04-3 ( 2 )	90 % (Exposure Time: 30 d)(Closed Bottle test)

Degradation in sewage treatment plant

Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

## Bioaccumulative Potential Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Phenol	1.5	17.5 dimensionless
		647 dimensionless
Citric acid	-1.72	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

## 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

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## **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.

Other Information

Disposal agencies or waste contractors must comply with the New Zealand Hazardous Substances (Disposal) Regulations . Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Large amounts will affect pH and harm aquatic organisms.

## **Section 14 - Transport Information**

Component	Hazchem Code			
Phenol	3X			
108-95-2 ( 70 )	2X			

#### NZS 5433:2020

UN2821 **UN-No** 

**Proper Shipping Name** PHENOL SOLUTION

**Hazard Class** 6 1 **Packing Group** Ш

IATA

**UN-No** UN2821

PHENOL SOLUTION **Proper Shipping Name** 

**Hazard Class** 6.1 **Packing Group** 

IMDG/IMO

**UN-No** UN2821

PHENOL SOLUTION **Proper Shipping Name** 

**Hazard Class** 6.1 **Packing Group** 

No hazards identified **Environmental hazards** 

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

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### **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.

## 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

## 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	· · · · · · · · · · · · · · · · · · ·
Phenol	-	Use restricted. See item 75.	-
		(see link for restriction details)	
Citric acid	-	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
Phenol	108-95-2	Х	Х	203-632-7	-	-	Х	X	X
Water	7732-18-5	Х	Χ	231-791-2	-	-	KE-35400	Х	X
Citrate, sodium, dihydrate	6132-04-3	Х	Х	-	-	-	-	Х	Х
Citric acid	77-92-9	Χ	Х	-	•	-	KE-20831	Χ	Х

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	PICCS	ISHL	ENCS
Phenol	108-95-2	X	ACTIVE	Х	-	X	Х	X
Water	7732-18-5	Х	ACTIVE	Х	-	Х	-	Х
Citrate, sodium, dihydrate	6132-04-3	-	-	-	-	Х	-	X
Citric acid	77-92-9	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**

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# 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 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)

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

**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

**ADG** - Australian Code for the Transport of Dangerous Goods by Road and Rail

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

Health Hazards

Environmental hazards

On basis of test data
Calculation method
Calculation method

### **Training Advice**

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

Revision Date 22-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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