SAFETY DATA SHEET

Section 1 - Identification

Product Name **Phosphate Balanced Salt (PBS) Solutions**

Product Code	**CH3A069, CH3A590, CH3A591, CH3A595, CH3A645, CH3A659, SH20013,SH30028, SH30256, SH30258, SH3A109, SH3A363, SH3A400, SH3A567, SH3A625, SH3A627, SH3A632, SH3A648, SH3A649, SH3A657, SH3A684,SH3A685, SH3A686, SH3A687, SH3A703, SH3A721, SH3A770, SH3A834, SH3**
Address	ThermoFisher Scientific Australia Pty Ltd 5 Caribbean Drive, Scoresby VICTORIA 3179, Australia
Emergency Tel.	**CHEMTREC®** **03 9757 4559 or +613 9757 4559**
Telephone / Fax Numbers	Tel: 1300 735 292 Fax: 1800 067 639
E-mail address	ANZinfo@thermofisher.com

Recommended Use In vitro methods.

Uses advised against This product does not contain any substance(s) on the Illicit Drug Precursors/Reagents list. This product does not contain any substance(s) subject to Prohibition, Authorization or Restriction. This product does not contain any substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern.

Section 2 - Hazard(s) Identification

Classification under Safe Work Australia

Classified as not hazardous according to criteria of Safe Work Australia.

Physical hazards
No hazards identified

Health hazards
No hazards identified

Environmental hazards
No hazards identified

Label Elements None required

Other information

Contains a known or suspected endocrine disruptor

Included in the list established in accordance with Article 59(1) for having endocrine disrupting properties

Section 3 - Composition and Information on Ingredients

Component	CAS No	Weight %
Process water	7732-18-5	> 40
Sucrose	57-50-1	0 - 60
Sodium sulfate, anhydrous	7757-82-6	0 - 35
Sodium citrate dihydrate	6132-04-3	0 - 40
Methyl-beta-cyclodextrin	128446-36-6	0 - 10
Sodium phosphate, dibasic heptahydrate	7782-85-6	0 - 10
Sodium chloride	7647-14-5	0 - 18
Sodium phosphate, monobasic anhydrous (USP Tested)	7558-80-7	0 - 10
Sodium phosphate monobasic dihydrate	13472-35-0	0 - 10
Sodium phosphate monobasic	10049-21-5	0 - 10
Sodium phosphate dibasic dihydrate	10028-24-7	0 - 10
Sodium phosphate dibasic	7558-79-4	0 - 10
Potassium phosphate monobasic	7778-77-0	0 - 10
Potassium phosphate dibasic, anhydrous	7758-11-4	0 - 10
Potassium phosphate dibasic trihydrate	16788-57-1	0 - 10
Potassium chloride	7447-40-7	0 - 10
Amino Acids	NA	0 - 3.5
Triton X-200	9010-41-7	0 - 1
Octyl Phenol Ethoxylate (Triton X-100)	9002-93-1	0 - 1
Gelatin Type B	9000-70-8	0 - 1
EDTA 2Na 2H20	6381-92-6	0 - 1
Sulfobetaine 16 (SB3-16)	2281-11-0	0 - 0.1
Pluronic F-68 prill surfactant	9003-11-6	0 - 0.1
Tween 80	9005-65-6	0 - 0.01
Tween 20	9005-64-5	0 - 0.01

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
Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

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

Hazardous Decomposition Products
Oxides of phosphorus, Sodium oxides.

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
Use personal protective equipment as required. Ensure adequate ventilation.

Environmental Precautions
Should not be released into the environment.

Methods for Containment and Clean Up

Clean-up methods - small spillage
Sweep up and shovel into suitable containers for disposal.

Clean-up methods - large spillage
Not applicable, packaged goods.

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. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation. Ensure adequate ventilation.

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

Component	Australia	New Zealand WEL	ACGIH TLV	The United Kingdom	Germany
Sucrose	TWA: 10 mg/m³	TWA: 10 mg/m³	TWA: 10 mg/m³	STEL: 20 mg/m³ 15 min TWA: 10 mg/m³ 8 hr	

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

Exposure Controls
Engineering Measures
None under normal use conditions.

Personal protective equipment

Eye Protection Wear safety glasses with side shields (or 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	(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 Local authorities should be advised if significant spillages cannot be contained.

Section 9 - Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Clear, Colorless	
Physical State	Liquid	
Odor	No information available	
Odor Threshold	No data available	
pH	4 - 10	
Melting Point/Range	No data available	
Softening Point	No data available	
Boiling Point/Range	200 °C / 392 °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	(Air = 1.0)
Specific Gravity / Density	No data available	
Bulk Density	Not applicable	Liquid
Water Solubility	No information available	
Solubility in other solvents	No information available	
Partition Coefficient (n-octanol/water)		
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.

Incompatible Materials Strong acids, Strong bases.

Hazardous Decomposition Products Oxides of phosphorus. Sodium oxides.

Hazardous Polymerization Hazardous polymerization does not occur.

Section 11 - Toxicological Information

Information on Toxicological Effects

Product Information No acute toxicity information is available for this product

(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

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Process water	LD50 > 90 mL/kg (Rat)		
Sucrose	LD50 = 29700 mg/kg (Rat)		
Sodium sulfate, anhydrous	LD50 > 10000 mg/kg (Rat)		LC50 > 2.4 mg/L (Rat) 4 h
Sodium chloride	LD50 = 3 g/kg (Rat)	LD50 > 10000 mg/kg (Rabbit)	LC50 > 42 mg/L (Rat) 1 h
Sodium phosphate, monobasic anhydrous (USP Tested)	LD50 = 8290 mg/kg (Rat)	LD50 > 7940 mg/kg (Rabbit)	LC50 > 0.83 mg/L (Rat) 4 h
Sodium phosphate dibasic	LD50 = 17 g/kg (Rat)		
Potassium phosphate monobasic	LD50 = 3200 mg/kg (Rat)		LC50 > 0.83 mg/L (Rat) 4 h
Potassium phosphate dibasic, anhydrous		LD50 > 5000 mg/kg (Rabbit)	
Potassium chloride	LD50 = 2600 mg/kg (Rat)		

Octyl Phenol Ethoxylate (Triton X-100)	LD50 = 1800 mg/kg (Rat)		
Pluronic F-68 prill surfactant	LD50 = 16 g/kg (Rat) LD50 = 5700 mg/kg (Rat)		LC50 = 320 mg/m³ (Rat) 4 h
Tween 80	LD50 = 34500 µL/kg (Rat)		
Tween 20	LD50 = 37000 mg/kg (Rat)		LC50 > 5.1 mg/L (Rat) 4 h

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;
Respiratory No data available
Skin No data available

(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

(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

Other Adverse Effects The toxicological properties have not been fully investigated.

Symptoms / effects,both acute and delayed No information available

Section 12 - Ecological Information

Ecotoxicity effects Do not empty into drains. .

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Sodium sulfate, anhydrous	LC50: = 13500 mg/L, 96h (Lepomis macrochirus) LC50: 3040 - 4380 mg/L, 96h static (Lepomis macrochirus) LC50: > 6800 mg/L, 96h static (Pimephales promelas) LC50: 13500 - 14500 mg/L, 96h (Pimephales promelas)	EC50: = 2564 mg/L, 48h (Daphnia magna)		
Sodium chloride	LC50: 6420 - 6700 mg/L, 96h static (Pimephales promelas)	EC50: 340.7 - 469.2 mg/L, 48h Static (Daphnia magna)		

	LC50: 4747 - 7824 mg/L, 96h flow-through (Oncorhynchus mykiss) LC50: 6020 - 7070 mg/L, 96h static (Pimephales promelas) LC50: = 12946 mg/L, 96h static (Lepomis macrochirus) LC50: 5560 - 6080 mg/L, 96h flow-through (Lepomis macrochirus) LC50: = 7050 mg/L, 96h semi-static (Pimephales promelas)	EC50: = 1000 mg/L, 48h (Daphnia magna)		
Potassium chloride	LC50: = 1060 mg/L, 96h static (Lepomis macrochirus) LC50: 750 - 1020 mg/L, 96h static (Pimephales promelas)	EC50: = 83 mg/L, 48h Static (Daphnia magna) EC50: = 825 mg/L, 48h (Daphnia magna)	EC50: = 2500 mg/L, 72h (Desmodesmus subspicatus)	

Persistence and Degradability No information available
Bioaccumulative Potential No information available

Mobility .
Endocrine Disruptor Information

Component	EU - Endocrine Disrupters Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Octyl Phenol Ethoxylate (Triton X-100)	Group III Chemical		

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 Empty remaining contents. Dispose of in accordance with local regulations. Do not re-use empty containers.

Other Information Chemical wastes should be disposed through a licensed commercial waste collection service.

Section 14 - Transport Information

IMDG/IMO Not regulated

ADG Not regulated

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

National Regulations **Australia**

See section 8 for national exposure control parameters.

Standard for the Uniform Scheduling of Medicines and Poisons
Classified as a scheduled poison according to the Standard for Uniform Scheduling of Medicines and Poisons.

Component	Standard for the Uniform Scheduling of Medicines and Poisons
Sodium citrate dihydrate - 6132-04-3	Schedule 5 listed - being the Carbonate, Silicate or Phosphate salts of Sodium or Potassium alone or in any combination: in solid orthodontic device cleaning preparations as an in-use aqueous solution;in solid automatic dishwashing preparations in a 500 g/L aqueous solution or mixture but with pH <=12.5;in other solid preparations in a 10 g/L aqueous solution, or in liquid or semi-solid preparations, unless in food additive preparations for domestic use, or in automatic dish washing preparations for domestic use with a pH >12.5;except when separately specified in these Schedules
Sodium phosphate, dibasic heptahydrate - 7782-85-6	Schedule 5 listed - being the Carbonate, Silicate or Phosphate salts of Sodium or Potassium alone or in any combination: in solid orthodontic device cleaning preparations as an in-use aqueous solution;in solid automatic dishwashing preparations in a 500 g/L aqueous solution or mixture but with pH <=12.5;in other solid preparations in a 10 g/L aqueous solution, or in liquid or semi-solid preparations, unless in food additive preparations for domestic use, or in automatic dish washing preparations for domestic use with a pH >12.5;except when separately specified in these Schedules
Sodium phosphate dibasic dihydrate - 10028-24-7	Schedule 5 listed - being the Carbonate, Silicate or Phosphate salts of Sodium or Potassium alone or in any combination: in solid orthodontic device cleaning preparations as an in-use aqueous solution;in solid automatic dishwashing preparations in a 500 g/L aqueous solution or mixture but with pH <=12.5;in other solid preparations in a 10 g/L aqueous solution, or in liquid or semi-solid preparations, unless in food additive preparations for domestic use, or in automatic dish washing preparations for domestic use with a pH >12.5;except when separately specified in these Schedules
Sodium phosphate dibasic - 7558-79-4	Schedule 5 listed - being the carbonate, silicate or phosphate salts of sodium or potassium alone or in any combination: in solid orthodontic device cleaning preparations, the pH of which as an in-use aqueous solution is >11.5, in solid automatic dishwashing preparations, the pH of which in a 500 g/L aqueous solution or mixture is >11.5 but <=12.5;in other solid preparations, the pH of which in a 10 g/L aqueous solution is >11.5, or in liquid or semi-solid preparations, the pH of which is >11.5, unless: in food additive preparations for domestic use, or in automatic dish washing preparations for domestic use with a pH >12.5;except when separately specified in these Schedules Schedule 5 listed - being the Carbonate, Silicate or Phosphate salts of Sodium or Potassium alone or in any combination: in solid orthodontic device cleaning preparations as an in-use aqueous solution;in solid automatic dishwashing preparations in a 500 g/L aqueous solution or mixture but with pH <=12.5;in other solid preparations in a 10 g/L aqueous solution, or in liquid or semi-solid preparations, unless in food additive preparations for domestic use, or in automatic dish washing preparations for domestic use with a pH >12.5;except when separately specified in these Schedules Schedule 6 listed - being the carbonate, silicate or phosphate salts of sodium or potassium alone or in any combination for non-domestic use: in solid automatic dishwashing preparations, the pH of which in a 500 g/L aqueous solution or mixture is >12.5, or in liquid or semi-solid automatic dishwashing preparations, the pH of which is >12.5 Schedule 10 listed
Potassium phosphate monobasic - 7778-77-0	Schedule 10 listed
Potassium phosphate dibasic, anhydrous - 7758-11-4	Schedule 5 listed - being the carbonate, silicate or phosphate salts of sodium or potassium alone or in any combination: in solid orthodontic device cleaning preparations, the pH of which as an in-use aqueous solution is >11.5, in solid automatic dishwashing preparations, the pH of which in a 500 g/L aqueous solution or mixture is >11.5 but <=12.5;in other solid preparations, the pH of which in a 10 g/L aqueous solution is >11.5, or in liquid or semi-solid preparations, the pH of which is >11.5, unless: in food additive preparations for domestic use, or in automatic dish washing preparations for domestic use with a pH >12.5;except when separately specified in these Schedules Schedule 5 listed - being the Carbonate, Silicate or Phosphate salts of Sodium or Potassium alone or in any combination: in solid orthodontic device cleaning preparations as an in-use aqueous solution;in solid automatic dishwashing preparations in a 500 g/L aqueous solution or mixture but with pH <=12.5;in other solid preparations in a 10 g/L aqueous solution, or in liquid or semi-solid preparations, unless in food additive preparations for domestic use, or in automatic dish washing preparations for domestic use with a pH >12.5;except when separately specified in these Schedules

	Schedule 6 listed - being the carbonate, silicate or phosphate salts of sodium or potassium alone or in any combination for non-domestic use: in solid automatic dishwashing preparations, the pH of which in a 500 g/L aqueous solution or mixture is >12.5, or in liquid or semi-solid automatic dishwashing preparations, the pH of which is >12.5 Schedule 10 listed
Potassium chloride - 7447-40-7	Schedule 4 listed - in oral preparations for human therapeutic use except: a) when containing <=550 mg of Potassium chloride per dosage unit, b) in preparations for oral rehydration therapy, c) in preparations for oral use for bowel cleansing prior to diagnostic medical and surgical procedures, or d) in preparations for enteral feeding

Australian Industrial Chemicals Introduction Scheme (AICIS)

Component	Australian Industrial Chemicals Introduction Scheme (AICIS)	Additional information
Process water - 7732-18-5	Present	-
Sucrose - 57-50-1	Present	-
Sodium sulfate, anhydrous - 7757-82-6	Present	-
Sodium citrate dihydrate - 6132-04-3	Present	-
Methyl-beta-cyclodextrin - 128446-36-6	Present	-
Sodium phosphate, dibasic heptahydrate - 7782-85-6	Present	-
Sodium chloride - 7647-14-5	Present	-
Sodium phosphate, monobasic anhydrous (USP Tested) - 7558-80-7	Present	-
Sodium phosphate monobasic dihydrate - 13472-35-0	Present	-
Sodium phosphate monobasic - 10049-21-5	Present	-
Sodium phosphate dibasic dihydrate - 10028-24-7	Present	-
Sodium phosphate dibasic - 7558-79-4	Present	-
Potassium phosphate monobasic - 7778-77-0	Present	-
Potassium phosphate dibasic, anhydrous - 7758-11-4	Present	-
Potassium phosphate dibasic trihydrate - 16788-57-1	Present	-
Potassium chloride - 7447-40-7	Present	-
Octyl Phenol Ethoxylate (Triton X-100) - 9002-93-1	Present	-
Gelatin Type B - 9000-70-8	Present	-
EDTA 2Na 2H20 - 6381-92-6	Present	-
Pluronic F-68 prill surfactant - 9003-11-6	Present	-
Tween 80 - 9005-65-6	Present	-
Tween 20 - 9005-64-5	Present	-

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

Chemicals of Security Concern
This product does not contain any substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern

National pollutant inventory Not applicable

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

This product does not contain any substance(s) subject to Prohibition, Authorization or Restriction.

International Inventories

Component	AICS	NZIoC	EINECS	ELINCS	TSCA	DSL	NDSL	PICCS	ENCS	ISHL	IECSC	KECL
Process water	X	X	231-791-2	-	X	X	-	X	X		X	KE-35400
Sucrose	X	X	200-334-9	-	X	X	-	X	-	X	X	KE-17258
Sodium sulfate, anhydrous	X	X	231-820-9	-	X	X	-	X	X	X	X	KE-31609
Sodium citrate dihydrate	X	X	-	-	-	-	-	X	X		X	-
Methyl-beta-cyclodextrin	X	X	-	411-120-1	X	X	-	X	X		X	99-3-1190
Sodium phosphate, dibasic heptahydrate	X	X	-	-	-	-	-	X	X		X	-
Sodium chloride	X	X	231-598-3	-	X	X	-	X	X	X	X	KE-31387
Sodium phosphate, monobasic anhydrous (USP Tested)	X	X	231-449-2	-	X	X	-	X	X	X	X	KE-31577
Sodium phosphate monobasic dihydrate	X	X	-	-	-	-	-	X	X		X	-
Sodium phosphate monobasic	X	X	-	-	-	-	-	X	X		X	-
Sodium phosphate dibasic dihydrate	X	X	-	-	-	-	-	X	X		X	-
Sodium phosphate dibasic	X	X	231-448-7	-	X	X	-	X	X	X	X	KE-12344
Potassium phosphate monobasic	X	X	231-913-4	-	X	X	-	X	X	X	X	KE-28622
Potassium phosphate dibasic, anhydrous	X	X	231-834-5	-	X	X	-	X	X	X	X	KE-12167
Potassium phosphate dibasic trihydrate	X	X	-	-	-	-	-	X	-		X	-
Potassium chloride	X	X	231-211-8	-	X	X	-	X	X	X	X	KE-29086
Octyl Phenol Ethoxylate (Triton X-100)	X	X	-	-	X	X	-	X	X	X	X	KE-33568
Gelatin Type B	X	X	232-554-6	-	X	X	-	X	X	X	X	KE-17574
EDTA 2Na 2H20	X	X	-	-	-	X	-	X	-		X	-
Sulfobetaine 16 (SB3-16)	-	-	218-918-7	-	-	-	-	-	X	X	X	-
Pluronic F-68 prill surfactant	X	X	-	-	X	X	-	X	X	X	X	KE-24574
Tween 80	X	X	-	-	X	X	-	X	X	X	X	KE-25511
Tween 20	X	X	-	-	X	X	-	X	X	X	X	KE-31681

Legend: X - Listed. '-' - Not Listed. PMN - Indicates a commenced PMN substance. XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B). **KECL** - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

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

Basel convention on the control of transboundary movements of hazardous wastes and their dispoal
Not applicable.

Component	CAS No	OECD HPV	Restriction of Hazardous Substances (RoHS)	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
Process water	7732-18-5	Listed	Not applicable	Not applicable	Not applicable
Sucrose	57-50-1	Listed	Not applicable	Not applicable	Not applicable
Sodium sulfate, anhydrous	7757-82-6	Listed	Not applicable	Not applicable	Not applicable
Sodium citrate dihydrate	6132-04-3	Not applicable	Not applicable	Not applicable	Not applicable
Methyl-beta-cyclodextrin	128446-36-6	Not applicable	Not applicable	Not applicable	Not applicable
Sodium phosphate, dibasic heptahydrate	7782-85-6	Not applicable	Not applicable	Not applicable	Not applicable
Sodium chloride	7647-14-5	Listed	Not applicable	Not applicable	Not applicable
Sodium phosphate, monobasic anhydrous (USP Tested)	7558-80-7	Listed	Not applicable	Not applicable	Not applicable
Sodium phosphate monobasic dihydrate	13472-35-0	Listed	Not applicable	Not applicable	Not applicable
Sodium phosphate monobasic	10049-21-5	Not applicable	Not applicable	Not applicable	Not applicable
Sodium phosphate dibasic dihydrate	10028-24-7	Not applicable	Not applicable	Not applicable	Not applicable
Sodium phosphate dibasic	7558-79-4	Listed	Not applicable	Not applicable	Not applicable
Potassium phosphate monobasic	7778-77-0	Listed	Not applicable	Not applicable	Not applicable
Potassium phosphate dibasic, anhydrous	7758-11-4	Listed	Not applicable	Not applicable	Not applicable
Potassium phosphate dibasic trihydrate	16788-57-1	Not applicable	Not applicable	Not applicable	Not applicable
Potassium chloride	7447-40-7	Listed	Not applicable	Not applicable	Not applicable
Amino Acids	NA	Not applicable	Not applicable	Not applicable	Not applicable
Triton X-200	9010-41-7	Not applicable	Not applicable	Not applicable	Not applicable
Octyl Phenol Ethoxylate (Triton X-100)	9002-93-1	Not applicable	Not applicable	Not applicable	Not applicable
Gelatin Type B	9000-70-8	Listed	Not applicable	Not applicable	Not applicable
EDTA 2Na 2H20	6381-92-6	Not applicable	Not applicable	Not applicable	Not applicable
Sulfobetaine 16 (SB3-16)	2281-11-0	Not applicable	Not applicable	Not applicable	Not applicable
Pluronic F-68 prill surfactant	9003-11-6	Listed	Not applicable	Not applicable	Not applicable
Tween 80	9005-65-6	Not applicable	Not applicable	Not applicable	Not applicable
Tween 20	9005-64-5	Not applicable	Not applicable	Not applicable	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	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Octyl Phenol Ethoxylate (Triton X-100)	Endocrine disrupting properties (Article 57(f) - environment) Application date: July 4, 2019 Sunset date: January 4, 2021 Exemption - extended latest application and sunset date for the research,development and production of medicinal products or medical devices in view of their use for the diagnosis,treatment or prevention of the coronavirus disease (COVID-19)	-	SVHC Candidate list - 618-344-0 - Endocrine disrupting properties, Article 57f - environment

After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.

https://echa.europa.eu/authorisation-list
https://echa.europa.eu/candidate-list-table

Section 16 - Other Information

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 5433:2020 - 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
https://echa.europa.eu/information-on-chemicals
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

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.

Revision Date	14-Jul-2023
Revision Summary	Update to GHS format.

This Safety Data Sheet (SDS) is prepared in accordance to and complies with the requirements of Safe Work Australia - Work Health and Safety Regulations (WHS Regulations).

Disclaimer

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End of Safety Data Sheet