

Trade Name:

AlphaLISA SureFire® Ultra™ Detection Kit

# **Human and Mouse ARID1A Total Detection Kit**



#### **Article numbers:**

ALSU-TARID-A500 ALSU-TARID-A10K ALSU-TARID-A50K ALSU-TARID-A-HV ALSU-TARID-A-L

Components and Hazard Identification in ALSU assay kits.

Kit Components	Vol / 100 point	Vol / 500 point	Vol / 10,000 point	Vol / 50,000 point	Hazard Identification	
Activation Buffer	1 x 0.3 mL	1 x 0.8 mL	1 x 10 mL	1 x 50 mL	♦	GHS07; H319
Dilution Buffer	1 x 1.8 mL	1 x 3 mL	1 x 60 mL	1 x 300 mL	N/A;	N/A;
Lysis Buffer B (5X)	1 x 12 mL	1 x 12 mL	4 x 60 mL	3 x 400 mL	⟨₺⟩	GHS07; H319
Reaction Buffer 1 - Ultra	1 x 0.9 mL	1 x 1.5 mL	1 x 28 mL	1 x 140 mL	N/A;	N/A;
Reaction Buffer 2 - Ultra	1 x 0.9 mL	1 x 1.5 mL	1 x 28 mL	1 x 140 mL	N/A;	N/A;
AlphaLISA® Capt <i>Sure</i> ™ Acceptor Beads (2 mg/mL)	1 x 0.045mL	1 x 0.06 mL	1 x 1.1 mL	1 x 5.5 mL	N/A;	N/A;
Alpha Streptavidin Donor Beads (2 mg/mL)	1 x 0.045mL	1 x 0.06 mL	1 x 1.1 mL	1 x 5.5 mL	N/A;	N/A;
Positive Control Lysate (lyophilized)	1 x 250uL	1 x 250uL	1 x 250uL	1 x 250uL	N/A;	N/A;
Supplement B	1 x 1.5 mL	1 x 1.5 mL	1 x 30 mL	1 x 135 mL	<b>(1)</b>	GHS07; H319

#### Components and Hazard Identification for Individual Sale items

\*\*\* = assay target name

Composition		Hazards identification		
ALSU-AB-100ml ALSU-AB-10ml	Activation Buffer	<b>(</b> )	GHS07; H319	
ALSU-ABB-100ml ALSU-ABB-10ml	Activation Buffer B	N/A;	N/A	
ALSU-ABC-100ml ALSU-ABC-10ml	Activation Buffer C		GHS05; H318	
ALSU-DB-100ml ALSU-DB-10ml	Dilution Buffer	N/A;	N/A	
ALSU-LB-100mL ALSU-LB-10mL	Lysis Buffer (5x)	1	GHS07; H319	
ALSU-LBB-100mL ALSU-LBB-10mL	Lysis Buffer B (5x) plus Supplement B (pack)	♦ ♦	GHS07; H319 plus GHS07; H319	
ALSU-LBC-100mL ALSU-LBC-10mL	Lysis Buffer C (5x) plus Supplement C (Pack)	<u>(1)</u>	GHS07; H319 plus GHS05; H318	
ALSU-***-A-L	Positive Control Lysate	N/A;	N/A	
ALSU-ACAB-0.06mL ALSU-ACAB-1.2mL ALSU-ACAB-6mL	AlphaLISA® CaptSure ™ Acceptor Beads (2 mg/mL)	N/A;	N/A	
ALSU-ASDB-0.06mL ALSU-ASDB-1.2mL ALSU-ASDB-6mL	Alpha Streptavidin Donor Beads (2 mg/mL)	N/A;	N/A;	







# Activation Buffer - Ultra TGR BioSciences Pty Ltd (an Abcam Company)

Chemwatch: **5555-09**Version No: **7.1**Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Issue Date: **02/09/2024** Print Date: **19/09/2024** S.GHS.USA.EN.E

#### **SECTION 1 Identification**

Other means of identification

Product Identifier		
Product name	Activation Buffer - Ultra	
Chemical Name	Not Applicable	
Synonyms	Activation Buffer A	
Chemical formula	Not Applicable	

#### Recommended use of the chemical and restrictions on use

Not Available

Relevant identified uses	Use of Substances/mixtures for Laboratory Research Use Only. Do Not Use for diagnostic, therapeutic or clinical use.
Relevant identified uses	Use according to manufacturer's directions.

#### Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	TGR BioSciences Pty Ltd (an Abcam Company)	
Address	Jnit 3-4, 31 George Street Thebarton SA 5031 Australia	
Telephone	+61 08 7228 2141	
Fax	Not Available	
Website	www.tgrbiosciences.com	
Email	ADE.info@abcam.com	

#### Emergency phone number

Association / Organisation	Chemtrec Aus/North America/Revvity	
Emergency telephone numbers	+61290372994 (Mon-Fri 8am to 5pm)	
Other emergency telephone numbers	+1703-527-3887/+31505445971	

#### SECTION 2 Hazard(s) identification

#### Classification of the substance or mixture

Considered a Hazardous Substance by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). Not classified as Dangerous Goods for transport purposes.

#### NFPA 704 diamond



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification Serious Eye Damage/Eye Irritation Category 2A

#### Label elements

Hazard pictogram(s)



Activation Buffer - Ultra

Issue Date: **02/09/2024**Print Date: **19/09/2024** 

Signal word Warning

Hazard statement(s)

H319 Causes serious eye irritation.

#### Hazard(s) not otherwise classified

Not Applicable

#### Precautionary statement(s) Prevention

P280	Wear protective gloves, protective clothing, eye protection and face protection.
P264	Wash all exposed external body areas thoroughly after handling.

#### Precautionary statement(s) Response

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.

#### Precautionary statement(s) Storage

Not Applicable

#### Precautionary statement(s) Disposal

P501 Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

#### **SECTION 3 Composition / information on ingredients**

#### Substances

See section below for composition of Mixtures

#### Mixtures

CAS No	%[weight]	Name
151-21-3	<5	sodium lauryl sulfate
55965-84-9	<0.01	isothiazolinones, mixed
Not Available	balance	Ingredients determined not to be hazardous

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

#### **SECTION 4 First-aid measures**

#### Description of first aid measures

Eye Contact	If this product comes in contact with the eyes:  Wash out immediately with fresh running water.  Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.  Seek medical attention without delay; if pain persists or recurs seek medical attention.  Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs:  Immediately remove all contaminated clothing, including footwear.  Flush skin and hair with running water (and soap if available).  Seek medical attention in event of irritation.
Inhalation	<ul> <li>If fumes, aerosols or combustion products are inhaled remove from contaminated area.</li> <li>Other measures are usually unnecessary.</li> </ul>
Ingestion	<ul> <li>Immediately give a glass of water.</li> <li>First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.</li> </ul>

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

See Section 11

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

Treat symptomatically.

#### **SECTION 5 Fire-fighting measures**

#### Extinguishing media

The product contains a substantial proportion of water, therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas.

Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances. In such an event consider:

▶ foam.

#### Special hazards arising from the substrate or mixture

Fire Incompatibility None known.

#### Special protective equipment and precautions for fire-fighters

Fire Fighting Alert Fire B

▶ Alert Fire Brigade and tell them location and nature of hazard.

Chemwatch: 5555-09 Page 3 of 9 Issue Date: 02/09/2024 Version No: 7.1 Print Date: 19/09/2024

#### **Activation Buffer - Ultra**

	<ul> <li>Wear breathing apparatus plus protective gloves in the event of a fire.</li> <li>Prevent, by any means available, spillage from entering drains or water courses.</li> <li>Use fire fighting procedures suitable for surrounding area.</li> </ul>
	<ul> <li>The material is not readily combustible under normal conditions.</li> <li>However, it will break down under fire conditions and the organic component may burn.</li> <li>Not considered to be a significant fire risk.</li> <li>Heat may cause expansion or decomposition with violent rupture of containers.</li> </ul>
Fire/Explosion Hazard	Decomposes on heating and produces toxic fumes of: carbon dioxide (CO2) nitrogen oxides (NOx) sulfur oxides (SOx) other pyrolysis products typical of burning organic material.

#### **SECTION 6 Accidental release measures**

#### Personal precautions, protective equipment and emergency procedures

See section 8

#### **Environmental precautions**

See section 12

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

Minor Spills	<ul> <li>Clean up all spills immediately.</li> <li>Avoid breathing vapours and contact with skin and eyes.</li> <li>Control personal contact with the substance, by using protective equipment.</li> <li>Contain and absorb spill with sand, earth, inert material or vermiculite.</li> </ul>
Major Spills	Moderate hazard.  Clear area of personnel and move upwind.  Alert Fire Brigade and tell them location and nature of hazard.  Wear breathing apparatus plus protective gloves.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

#### **SECTION 7 Handling and storage**

Precautions for safe handling	
Safe handling	<ul> <li>DO NOT allow clothing wet with material to stay in contact with skin</li> <li>Avoid all personal contact, including inhalation.</li> <li>Wear protective clothing when risk of exposure occurs.</li> <li>Use in a well-ventilated area.</li> <li>Prevent concentration in hollows and sumps.</li> </ul>
Other information	<ul> <li>Store in original containers.</li> <li>Keep containers securely sealed.</li> <li>Store in a cool, dry, well-ventilated area.</li> <li>Store away from incompatible materials and foodstuff containers.</li> </ul>

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

Suitable container	Plastic tube or Plastic Bottle Polyethylene or polypropylene container. Packing as recommended by manufacturer. Check all containers are clearly labelled and free from leaks.
Storage incompatibility	None known

#### SECTION 8 Exposure controls / personal protection

#### **Control parameters**

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Not Available

#### Emergency Limits Ingradiant

ingredient	ICCL-I	IEEL-2		IEEL-3
sodium lauryl sulfate	3.9 mg/m3	43 mg/m3		260 mg/m3
Ingredient	Original IDLH		Revised IDLH	
sodium lauryl sulfate	Not Available		Not Available	
isothiazolinones, mixed	Not Available		Not Available	

#### Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
sodium lauryl sulfate	E	≤ 0.01 mg/m³
isothiazolinones, mixed	E	≤ 0.1 ppm
Notes:	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.	

Chemwatch: 5555-09 Page 4 of 9
Version No: 7.1

**Activation Buffer - Ultra** 

**Exposure controls** 

Appropriate engineering controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

Individual protection measures, such as personal protective equipment











Eye and face protection

Hands/feet protection

- Safety glasses with side shields.
- ► Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent]
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.

Skin protection

See Hand protection below

- ▶ Wear chemical protective gloves, e.g. PVC.
- Wear safety footwear or safety gumboots, e.g. Rubber

#### NOTE:

- ▶ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.
- ▶ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.

The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

Personal hygiene is a key element of effective hand care.

**Body protection** 

See Other protection below

Other protection

- Overalls.
- P.V.C apron.
- Barrier cream.
- ▶ Skin cleansing cream

#### Respiratory protection

Type AK-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

#### **SECTION 9 Physical and chemical properties**

#### Information on basic physical and chemical properties

Appearance	Liquid.		
Physical state	Liquid	Relative density (Water = 1)	Not Available
Odour	Characteristic	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable
pH (as supplied)	Not Available	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available
Heat of Combustion (kJ/g)	Not Available	Ignition Distance (cm)	Not Available
Flame Height (cm)	Not Available	Flame Duration (s)	Not Available
Enclosed Space Ignition Time Equivalent (s/m3)	Not Available	Enclosed Space Ignition Deflagration Density (g/m3)	Not Available

#### **SECTION 10 Stability and reactivity**

Issue Date: 02/09/2024

Print Date: 19/09/2024

Chemwatch: **5555-09** Page **5** of **9** 

Version No: 7.1

**Activation Buffer - Ultra** 

Reactivity

Chemical stability

Product is considered stable.
Product is considered stable.
Hazardous polymerisation will not occur.

See section 7

Conditions to avoid
Incompatible materials
See section 7

Hazardous decomposition products

See section 5

products			
SECTION 11 Toxicological in	nformation		
Information on toxicological ef	ffects		
Inhaled	Not normally a hazard due to non-volatile nature of product The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.		
Ingestion	Considered an unlikely route of entry in commercial/industrial environments  The material is not thought to produce adverse health effects following ingestion (as classified by EC Directives using animal models).  Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum.		
Skin Contact	There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons.  Open cuts, abraded or irritated skin should not be exposed to this material  Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.		
Eye	This material can cause eye irritation and damage in some persons		
Chronic	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.  There is some evidence that inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population.  There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population.		
	TOXICITY	IRRITATION	
Activation Buffer - Ultra	Not Available	Not Available	
	TOXICITY	IRRITATION	
	dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>	Eye (rabbit):100 mg/24 hr-moderate	
	Oral (Rat) LD50: 1288 mg/kg <sup>[2]</sup>	Eye: adverse effect observed (irreversible damage) <sup>[1]</sup>	
sodium lauryl sulfate	Eye: adverse effect observed (irritating) <sup>[1]</sup>		
		Skin (human): 25 mg/24 hr - mild	
		Skin: adverse effect observed (corrosive) <sup>[1]</sup>	
		Skin: adverse effect observed (irritating) $^{[1]}$	
	TOXICITY	IRRITATION	
	dermal (rat) LD50: >1008 mg/kg <sup>[1]</sup>	Eye: adverse effect observed (irreversible damage) <sup>[1]</sup>	
isothiazolinones, mixed	Inhalation (Rat) LC50: 0.171 mg/l4h <sup>[1]</sup>	Skin: adverse effect observed (corrosive) <sup>[1]</sup>	
	Oral (Rat) LD50: 53 mg/kg <sup>[2]</sup>	Skin: adverse effect observed (irritating) <sup>[1]</sup>	
Legend:	Nalue obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances		
SODIUM LAURYL SULFATE	Eye (None) None: None None rabbit None 250 ugSkin (rabbit):25 mg/24 hr-moderate Skin (None) None: None rabbit None 50 mg/24Eye (rabbit) 10: mg- Based on laboratory and animal testing, exposure to the material may result in irreversible effects and mutations in humans. Alkyl sulfates are irritating to the skin, harmful if swallowed and at risk of causing serious damage to the eyes. They are metabolised by the liver and excreted via urine. They produce dose-dependent toxicity depending on their structure. They do not cause cancer, reproductive or genetic defects. For alkyl sulfates; alkane sulfonates and alpha-olefin sulfonates Most chemicals of this category are not defined substances, but mixtures of homologues with different alkyl side chains. Common physical and/or biological pathways result in structurally similar breakdown products, and are, together with the surfactant properties, responsible for similar environmental behavior and essentially identical hazard profiles with regard to human health. Acute toxicity: These substances are well absorbed after ingestion; penetration through the skin is however, poor. After absorption, these chemicals are distributed mainly to the liver. In animals, signs of poisoning by mouth include lethargy, hair standing up, decreased motor activity and breathing rate, and diarrhea. Poisoning from skin contact caused irritation, tremor, tonic-clonic convulsions, breathing failure, and weight loss.		
ISOTHIAZOLINONES, MIXED	The following information refers to contact allergens as a group and	may not be openio to this product.	

Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions.

In light of potential adverse effects, and to ensure a harmonised risk assessment and management, the EU regulatory framework for biocides has been established with the objective of ensuring a high level of protection of human and animal health and the environment. To this aim, it is required that risk assessment of biocidal products is carried out before they can be placed on the market. A central element in

Issue Date: 02/09/2024

Print Date: 19/09/2024

Chemwatch: 5555-09 Page 6 of 9
Version No: 7.1

#### **Activation Buffer - Ultra**

Issue Date: 02/09/2024
Print Date: 19/09/2024

the risk assessment of the biocidal products are the utilization instructions that defines the dosage, application method and amount of applications and thus the exposure of humans and the environment to the biocidal substance.

Humans may be exposed to biocidal products in different ways in both occupational and domestic settings. Many biocidal products are intended for industrial sectors or professional uses only, whereas other biocidal products are commonly available for private use by non-professional users. No significant acute toxicological data identified in literature search.

Formaldehyde generators (releasers) are often used as preservatives. The maximum authorised concentration of free formaldehyde is 0.2% and must be labelled with the warning sign "contains formaldehyde" where the concentration exceeds 0.05%. The use of formaldehyde-releasing preservatives ensures that the level of free formaldehyde in the products is always low but sufficient to inhibit microbial growth - it disrupts metabolism to cause death of the organism. However there is a concern that formaldehyde generators can produce amines capable of causing cancers (nitrosamines) when used in formulations containing amines.

The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

# SODIUM LAURYL SULFATE & ISOTHIAZOLINONES, MIXED

Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia.

Acute Toxicity	×	Carcinogenicity	×
Skin Irritation/Corrosion	×	Reproductivity	×
Serious Eye Damage/Irritation	<b>✓</b>	STOT - Single Exposure	×
Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	×
Mutagenicity	×	Aspiration Hazard	×

Legend: X − Data either not available or does not fill the criteria for classification

✓ − Data available to make classification

#### **SECTION 12 Ecological information**

#### Toxicity

Activation Buffer - Ultra	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	4.8mg/l	2
	EC50	48h	Crustacea	0.939mg/l	1
sodium lauryl sulfate	LC50	96h	Fish	0.59mg/L	4
	EC0(ECx)	72h	Algae or other aquatic plants	30mg/l	1
	EC50	96h	Algae or other aquatic plants	0.4- 3.7mg/L	4
	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	0.006mg/L	2
	EC50	48h	Crustacea	0.007mg/l	2
isothiazolinones, mixed	LC50	96h	Fish	0.129mg/l	2
	EC50	96h	Algae or other aquatic plants	0.036mg/L	2
	NOEC(ECx)	48h	Algae or other aquatic plants	<0.001mg/L	2

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

DO NOT discharge into sewer or waterways

#### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
sodium lauryl sulfate	HIGH	HIGH

#### Bioaccumulative potential

Ingredient	Bioaccumulation
sodium lauryl sulfate	LOW (BCF = 7.15)

#### Mobility in soil

Ingredient	Mobility
sodium lauryl sulfate	LOW (Log KOC = 10220)

**Activation Buffer - Ultra** 

Issue Date: 02/09/2024 Print Date: 19/09/2024

#### **SECTION 13 Disposal considerations**

#### Waste treatment methods

Product / Packaging disposal Consult State Land Waste Management Authority for disposal.

#### **SECTION 14 Transport information**

#### Labels Required

Marine Pollutant	NO

Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

#### 14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

#### 14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
sodium lauryl sulfate	Not Available
isothiazolinones, mixed	Not Available

#### 14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
sodium lauryl sulfate	Not Available
isothiazolinones, mixed	Not Available

#### **SECTION 15 Regulatory information**

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

#### sodium lauryl sulfate is found on the following regulatory lists

US DOE Temporary Emergency Exposure Limits (TEELs)

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

#### isothiazolinones, mixed is found on the following regulatory lists

Not Applicable

#### **Additional Regulatory Information**

Not Applicable

#### **Federal Regulations**

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### Section 311/312 hazard categories

Flammable (Gases, Aerosols, Liquids, or Solids)	No
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	No
Acute toxicity (any route of exposure)	No
Reproductive toxicity	No
Skin Corrosion or Irritation	No
Respiratory or Skin Sensitization	No
Serious eye damage or eye irritation	Yes
Specific target organ toxicity (single or repeated exposure)	No
Aspiration Hazard	No
Germ cell mutagenicity	No

Chemwatch: 5555-09 Page 8 of 9

Issue Date: 02/09/2024 Version No: 7.1 Print Date: 19/09/2024 **Activation Buffer - Ultra** 

Simple Asphyxiant	No
Hazards Not Otherwise Classified	No

#### US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

None Reported

#### US. EPCRA Section 313 Toxic Release Inventory (TRI) (40 CFR 372)

None Reported

#### **Additional Federal Regulatory Information**

Not Applicable

#### State Regulations

#### US. California Proposition 65

None Reported

#### **Additional State Regulatory Information**

Not Applicable

#### **National Inventory Status**

National Inventory	Status
Australia - AIIC / Australia Non- Industrial Use	No (isothiazolinones, mixed)
Canada - DSL	Yes
Canada - NDSL	No (isothiazolinones, mixed)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (isothiazolinones, mixed)
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	No (isothiazolinones, mixed)
Taiwan - TCSI	Yes
Mexico - INSQ	No (isothiazolinones, mixed)
Vietnam - NCI	Yes
Russia - FBEPH	Yes
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

#### **SECTION 16 Other information**

Revision Date	02/09/2024
Initial Date	12/07/2022

#### **SDS Version Summary**

Version	Date of Update	Sections Updated
6.1	15/08/2024	Physical and chemical properties - Appearance, Identification of the substance / mixture and of the company / undertaking - Synonyms
7.1	02/09/2024	Physical and chemical properties - Appearance, Identification of the substance / mixture and of the company / undertaking - Synonyms

#### Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be

#### **Definitions and abbreviations**

- ▶ PC TWA: Permissible Concentration-Time Weighted Average
- ▶ PC STEL: Permissible Concentration-Short Term Exposure Limit
- ▶ IARC: International Agency for Research on Cancer
- ▶ ACGIH: American Conference of Governmental Industrial Hygienists
- ▶ STEL: Short Term Exposure Limit
- ▶ TEEL: Temporary Emergency Exposure Limit。
- ▶ IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- ▶ NOAEL: No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- ▶ TLV: Threshold Limit Value
- ▶ LOD: Limit Of Detection
- ▶ OTV: Odour Threshold Value

Issue Date: 02/09/2024 Chemwatch: 5555-09 Page 9 of 9 Version No: 7.1 Print Date: 19/09/2024

#### **Activation Buffer - Ultra**

- ▶ BCF: BioConcentration Factors
- ▶ BEI: Biological Exposure Index
- ▶ DNEL: Derived No-Effect Level
- ▶ PNEC: Predicted no-effect concentration
- ▶ AIIC: Australian Inventory of Industrial Chemicals
- ▶ DSL: Domestic Substances List
- ▶ NDSL: Non-Domestic Substances List
- ▶ IECSC: Inventory of Existing Chemical Substance in China
- ▶ EINECS: European INventory of Existing Commercial chemical Substances

- ELINCS: European List of Notified Chemical Substances
   NLP: No-Longer Polymers
   ENCS: Existing and New Chemical Substances Inventory
- ▶ KECI: Korea Existing Chemicals Inventory
- ▶ NZIoC: New Zealand Inventory of Chemicals
- ▶ PICCS: Philippine Inventory of Chemicals and Chemical Substances
- TSCA: Toxic Substances Control Act
   TCSI: Taiwan Chemical Substance Inventory
- INSQ: Inventario Nacional de Sustancias Químicas
- ▶ NCI: National Chemical Inventory
- ▶ FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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TEL (+61 3) 9572 4700.



# Dilution Buffer - Ultra TGR BioSciences Pty Ltd (an Abcam Company)

Cheriwatch: 3535-16 Version No: 4.1 Safety Data Sheet according to OSHA HazCom Standard (2012) requirements Issue Date: **25/10/2022** Print Date: **19/09/2024** S.GHS.USA.EN.E

#### **SECTION 1 Identification**

Product Identifier		
Product name	Dilution Buffer - Ultra	
Chemical Name	Not Applicable	
Synonyms	Dilution Buffer A	
Chemical formula	Not Applicable	
Other means of identification	Not Available	

#### Recommended use of the chemical and restrictions on use

Delevent identified were	Use of Substances/mixtures for Laboratory Research Use Only. Do Not Use for diagnostic, therapeutic or clinical use.
Relevant identified uses	Use according to manufacturer's directions.

#### Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

- · · · · · · · · · · · · · · · · · · ·	
Registered company name	TGR BioSciences Pty Ltd (an Abcam Company)
Address	Unit 3-4, 31 George Street Thebarton SA 5031 Australia
Telephone	+61 08 7228 2141
Fax	Not Available
Website	www.tgrbiosciences.com
Email	ADE.info@abcam.com

#### Emergency phone number

Emergency phono number		
	Association / Organisation	Chemtrec Aus/North America/Revvity
	Emergency telephone numbers	+61290372994 (Mon-Fri 8am to 5pm)
	Other emergency telephone numbers	+1703-527-3887/+31505445971

#### SECTION 2 Hazard(s) identification

#### Classification of the substance or mixture

Not considered a Hazardous Substance by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). Not classified as Dangerous Goods for transport purposes.

#### NFPA 704 diamond



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification	Not Applicable	
Label elements		
Hazard pictogram(s)	Not Applicable	
Signal word	Not Applicable	

Chemwatch: 5555-18 Version No: 4.1

Page 2 of 8 **Dilution Buffer - Ultra**  Issue Date: 25/10/2022 Print Date: 19/09/2024

Not Applicable

#### Hazard(s) not otherwise classified

Not Applicable

#### Precautionary statement(s) Prevention

Not Applicable

#### Precautionary statement(s) Response

Not Applicable

#### Precautionary statement(s) Storage

Not Applicable

#### Precautionary statement(s) Disposal

P501 Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

#### **SECTION 3 Composition / information on ingredients**

#### Substances

See section below for composition of Mixtures

#### Mixtures

CAS No	%[weight]	Name	
55965-84-9	<0.01	isothiazolinones, mixed	
Not Available	balance	Ingredients determined not to be hazardous	

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

#### **SECTION 4 First-aid measures**

#### Description of first aid measures

Eye Contact	If this product comes in contact with eyes:  Wash out immediately with water.  If irritation continues, seek medical attention.  Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin or hair contact occurs:  ▶ Flush skin and hair with running water (and soap if available).  ▶ Seek medical attention in event of irritation.
Inhalation	<ul> <li>If fumes, aerosols or combustion products are inhaled remove from contaminated area.</li> <li>Other measures are usually unnecessary.</li> </ul>
Ingestion	<ul> <li>Immediately give a glass of water.</li> <li>First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.</li> </ul>

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

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

Treat symptomatically.

#### **SECTION 5 Fire-fighting measures**

#### Extinguishing media

The product contains a substantial proportion of water, therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas.

Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances. In such an event consider:

▶ foam.

#### Special hazards arising from the substrate or mixture

Fire Incompatibility ▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Special protective equipment	Special protective equipment and precautions for fire-fighters		
Fire Fighting	<ul> <li>Use water delivered as a fine spray to control fire and cool adjacent area.</li> <li>Do not approach containers suspected to be hot.</li> <li>Cool fire exposed containers with water spray from a protected location.</li> <li>If safe to do so, remove containers from path of fire.</li> </ul>		
Fire/Explosion Hazard	<ul> <li>The material is not readily combustible under normal conditions.</li> <li>However, it will break down under fire conditions and the organic component may burn.</li> <li>Not considered to be a significant fire risk.</li> <li>Heat may cause expansion or decomposition with violent rupture of containers.</li> <li>Decomposition may produce toxic fumes of:</li> <li>carbon dioxide (CO2)</li> <li>other pyrolysis products typical of burning organic material.</li> </ul>		

#### **SECTION 6 Accidental release measures**

Page 3 of 8

Chemwatch: **5555-18**Version No: **4.1** 

#### Dilution Buffer - Ultra

Issue Date: **25/10/2022**Print Date: **19/09/2024** 

#### Personal precautions, protective equipment and emergency procedures

See section 8

#### **Environmental precautions**

See section 12

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

Minor Spills	<ul> <li>Clean up all spills immediately.</li> <li>Avoid breathing vapours and contact with skin and eyes.</li> <li>Control personal contact with the substance, by using protective equipment.</li> <li>Contain and absorb spill with sand, earth, inert material or vermiculite.</li> </ul>
Major Spills	Minor hazard.  ► Clear area of personnel.  ► Alert Fire Brigade and tell them location and nature of hazard.  ► Control personal contact with the substance, by using protective equipment as required.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

#### **SECTION 7 Handling and storage**

#### Precautions for safe handling

Safe handling	<ul> <li>Limit all unnecessary personal contact.</li> <li>Wear protective clothing when risk of exposure occurs.</li> <li>Use in a well-ventilated area.</li> <li>Avoid contact with incompatible materials.</li> </ul>	
Other information	<ul> <li>Store in original containers.</li> <li>Keep containers securely sealed.</li> <li>Store in a cool, dry, well-ventilated area.</li> <li>Store away from incompatible materials and foodstuff containers.</li> </ul>	

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

Suitable container	Plastic tube or plastic bottle.  Polyethylene or polypropylene container.  Packing as recommended by manufacturer.  Check all containers are clearly labelled and free from leaks.
Storage incompatibility	▶ Avoid reaction with oxidising agents

#### SECTION 8 Exposure controls / personal protection

#### **Control parameters**

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Not Available

#### Emergency Limits

Ingredient	TEEL-1	TEEL-2		TEEL-3
Dilution Buffer - Ultra	Not Available	Not Available		Not Available
Ingredient	Original IDLH		Revised IDLH	
isothiazolinones, mixed	Not Available		Not Available	

#### Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit	
isothiazolinones, mixed	E	≤ 0.1 ppm	
Notes:	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.		

#### **Exposure controls**

# Appropriate engineering Appropriate engineering controls Contro

Individual protection measures, such as personal protective equipment









#### Eye and face protection

- Safety glasses with side shields
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience.

#### Skin protection

See Hand protection below

Chemwatch: **5555-18**Version No: **4.1** 

#### **Dilution Buffer - Ultra**

Issue Date: **25/10/2022**Print Date: **19/09/2024** 

Hands/feet protection	▶ Wear general protective gloves, eg. light weight rubber gloves.  The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.  The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.  Personal hygiene is a key element of effective hand care.
Body protection	See Other protection below
Other protection	No special equipment needed when handling small quantities.  OTHERWISE:  Overalls.  Barrier cream.  Eyewash unit.

#### Respiratory protection

Type AK-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

#### **SECTION 9 Physical and chemical properties**

#### Information on basic physical and chemical properties

illorillation on basic physical			
Appearance	Clear liquid.		
Physical state	Liquid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable
pH (as supplied)	Not Available	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available
Heat of Combustion (kJ/g)	Not Available	Ignition Distance (cm)	Not Available
Flame Height (cm)	Not Available	Flame Duration (s)	Not Available
Enclosed Space Ignition Time Equivalent (s/m3)	Not Available	Enclosed Space Ignition Deflagration Density (g/m3)	Not Available

#### **SECTION 10 Stability and reactivity**

Reactivity	See section 7
Chemical stability	Product is considered stable and hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

#### **SECTION 11 Toxicological information**

#### Information on toxicological effects

The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.		
The material has <b>NOT</b> been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.		
The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.		
Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).		
Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.		

Chemwatch: 5555-18

**Dilution Buffer - Ultra** 

Page 5 of 8 Issue Date: 25/10/2022 Print Date: 19/09/2024

Dilution Buffer - Ultra	TOXICITY	IRRITATION
Dilution Burier - Oitra	Not Available	Not Available
	TOXICITY	IRRITATION
	dermal (rat) LD50: >1008 mg/kg <sup>[1]</sup>	Eye: adverse effect observed (irreversible damage) <sup>[1]</sup>
isothiazolinones, mixed	Inhalation (Rat) LC50: 0.171 mg/l4h <sup>[1]</sup>	Skin: adverse effect observed (corrosive) <sup>[1]</sup>
	Oral (Rat) LD50: 53 mg/kg <sup>[2]</sup>	Skin: adverse effect observed (irritating) <sup>[1]</sup>
Legend:	Value obtained from Europe ECHA Registered Substact     specified data extracted from RTECS - Register of Toxic	ances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise Effect of chemical Substances

The following information refers to contact allergens as a group and may not be specific to this product.

Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions.

In light of potential adverse effects, and to ensure a harmonised risk assessment and management, the EU regulatory framework for biocides has been established with the objective of ensuring a high level of protection of human and animal health and the environment. To this aim, it is required that risk assessment of biocidal products is carried out before they can be placed on the market. A central element in the risk assessment of the biocidal products are the utilization instructions that defines the dosage, application method and amount of applications and thus the exposure of humans and the environment to the biocidal substance.

Humans may be exposed to biocidal products in different ways in both occupational and domestic settings. Many biocidal products are intended for industrial sectors or professional uses only, whereas other biocidal products are commonly available for private use by nonprofessional users. No significant acute toxicological data identified in literature search.

#### ISOTHIAZOLINONES, MIXED

Version No. 4.1

Formaldehyde generators (releasers) are often used as preservatives. The maximum authorised concentration of free formaldehyde is 0.2% and must be labelled with the warning sign "contains formaldehyde" where the concentration exceeds 0.05%. The use of formaldehydereleasing preservatives ensures that the level of free formaldehyde in the products is always low but sufficient to inhibit microbial growth - it disrupts metabolism to cause death of the organism. However there is a concern that formaldehyde generators can produce amines capable of causing cancers (nitrosamines) when used in formulations containing amines.

The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia.

Acute Toxicity	×	Carcinogenicity	×
Skin Irritation/Corrosion	×	Reproductivity	×
Serious Eye Damage/Irritation	×	STOT - Single Exposure	×
Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	×
Mutagenicity	×	Aspiration Hazard	×

Leaend:

— Data either not available or does not fill the criteria for classification - Data available to make classification

#### **SECTION 12 Ecological information**

#### Toxicity

Dilution Buffer - Ultra	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
isothiazolinones, mixed	EC50	72h	Algae or other aquatic plants	0.006mg/L	2
	EC50	48h	Crustacea	0.007mg/l	2
	LC50	96h	Fish	0.129mg/l	2
	EC50	96h	Algae or other aquatic plants	0.036mg/L	2
	NOEC(ECx)	48h	Algae or other aquatic plants	<0.001mg/L	2

Leaend:

Extracted from 1, IUCLID Toxicity Data 2, Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4, US EPA. Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

#### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients

#### Bioaccumulative potential

Ingredient	Bioaccumulation
	No Data available for all ingredients

**Dilution Buffer - Ultra** 

Issue Date: **25/10/2022**Print Date: **19/09/2024** 

#### Mobility in soil

Ingredient	Mobility
	No Data available for all ingredients

#### **SECTION 13 Disposal considerations**

#### Waste treatment methods

Product / Packaging disposal Consu

Consult State Land Waste Management Authority for disposal.

#### **SECTION 14 Transport information**

#### **Labels Required**

Marine Pollutant NO

Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

#### 14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
isothiazolinones, mixed	Not Available

#### 14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
isothiazolinones, mixed	Not Available

#### **SECTION 15 Regulatory information**

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

isothiazolinones, mixed is found on the following regulatory lists

Not Applicable

#### **Additional Regulatory Information**

Not Applicable

#### **Federal Regulations**

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### Section 311/312 hazard categories

Flammable (Gases, Aerosols, Liquids, or Solids)	No
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	No
Acute toxicity (any route of exposure)	No
Reproductive toxicity	No
Skin Corrosion or Irritation	No
Respiratory or Skin Sensitization	No
Serious eye damage or eye irritation	No
Specific target organ toxicity (single or repeated exposure)	No
Aspiration Hazard	No
Germ cell mutagenicity	No

Chemwatch: 5555-18

**Dilution Buffer - Ultra** 

Page 7 of 8 Issue Date: 25/10/2022 Version No: 4.1 Print Date: 19/09/2024

Simple Asphyxiant	
Hazards Not Otherwise Classified	

#### US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

None Reported

#### US. EPCRA Section 313 Toxic Release Inventory (TRI) (40 CFR 372)

None Reported

#### **Additional Federal Regulatory Information**

Not Applicable

#### State Regulations

#### US. California Proposition 65

None Reported

#### **Additional State Regulatory Information**

Not Applicable

#### **National Inventory Status**

National Inventory	Status
Australia - AIIC / Australia Non- Industrial Use	No (isothiazolinones, mixed)
Canada - DSL	Yes
Canada - NDSL	No (isothiazolinones, mixed)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (isothiazolinones, mixed)
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	No (isothiazolinones, mixed)
Taiwan - TCSI	Yes
Mexico - INSQ	No (isothiazolinones, mixed)
Vietnam - NCI	Yes
Russia - FBEPH	Yes
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

#### **SECTION 16 Other information**

Revision Date	25/10/2022
Initial Date	13/07/2022

#### **SDS Version Summary**

Version	Date of Update	Sections Updated
3.1	16/08/2022	Name
4.1	25/10/2022	Disposal considerations - Disposal, Handling and storage - Storage (storage incompatibility), Identification of the substance / mixture and of the company / undertaking - Synonyms

#### Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

#### **Definitions and abbreviations**

- ▶ PC TWA: Permissible Concentration-Time Weighted Average
- ▶ PC STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ▶ ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
   TEEL: Temporary Emergency Exposure Limit<sub>o</sub>
- ► IDLH: Immediately Dangerous to Life or Health Concentrations
- ▶ ES: Exposure Standard
- ▶ OSF: Odour Safety Factor
- ▶ NOAEL: No Observed Adverse Effect Level
- ▶ LOAEL: Lowest Observed Adverse Effect Level
- ▶ TLV: Threshold Limit Value
- LOD: Limit Of Detection
- ▶ OTV: Odour Threshold Value
- ▶ BCF: BioConcentration Factors

Issue Date: 25/10/2022 Chemwatch: 5555-18 Page 8 of 8 Version No: 4.1 Print Date: 19/09/2024

#### **Dilution Buffer - Ultra**

- ▶ BEI: Biological Exposure Index
- ▶ DNEL: Derived No-Effect Level
- ▶ PNEC: Predicted no-effect concentration
- ▶ AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
   NDSL: Non-Domestic Substances List
- ▶ IECSC: Inventory of Existing Chemical Substance in China
- ▶ EINECS: European INventory of Existing Commercial chemical Substances
- ▶ ELINCS: European List of Notified Chemical Substances
- NIP: No-Longer Polymers

  ENCS: Existing and New Chemical Substances Inventory

  KECI: Korea Existing Chemicals Inventory

  NZIoC: New Zealand Inventory of Chemicals

- ▶ PICCS: Philippine Inventory of Chemicals and Chemical Substances
- ► TSCA: Toxic Substances Control Act
- TCSI: Taiwan Chemical Substance Inventory
   INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
- ▶ FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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## Lysis Buffer B

## TGR BioSciences Pty Ltd (an Abcam Company)

Chemwatch: 5697-25 Version No: 2.1 Safety Data Sheet according to OSHA HazCom Standard (2012) requirements Issue Date: 02/09/2024 Print Date: 19/09/2024 S.GHS.USA.EN.E

#### **SECTION 1 Identification**

#### **Product Identifier** Product name Lysis Buffer B **Chemical Name** Not Applicable Synonyms Not Available

Chemical formula Not Applicable Other means of identification

Recommended use of the chemical and restrictions on use

Not Available

Use of Substances/mixtures for Laboratory Research Use Only. Do Not Use for diagnostic, therapeutic or clinical use. Relevant identified uses Use according to manufacturer's directions.

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

- · · · · · · · · · · · · · · · · · · ·	
Registered company name	TGR BioSciences Pty Ltd (an Abcam Company)
Address	Unit 3-4, 31 George Street Thebarton SA 5031 Australia
Telephone	+61 08 7228 2141
Fax	Not Available
Website	www.tgrbiosciences.com
Email	ADE.info@abcam.com

#### Emergency phone number

Zinoi gono y priorio nambor				
Association / Organisation	Chemtrec Aus/North America/Revvity			
Emergency telephone numbers	+61290372994 (Mon-Fri 8am to 5pm)			
Other emergency telephone numbers	+1703-527-3887/+31505445971			

#### SECTION 2 Hazard(s) identification

#### Classification of the substance or mixture

Considered a Hazardous Substance by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). Not classified as Dangerous Goods for transport purposes.

#### NFPA 704 diamond



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification Serious Eye Damage/Eye Irritation Category 2A

Label elements

Hazard pictogram(s)



Chemwatch: 5697-25 Version No: 2.1

Page 2 of 9 Lysis Buffer B Issue Date: 02/09/2024 Print Date: 19/09/2024

Signal word Warning

Hazard statement(s)

H319 Causes serious eye irritation.

#### Hazard(s) not otherwise classified

Not Applicable

#### Precautionary statement(s) Prevention

P280	Wear protective gloves, protective clothing, eye protection and face protection.
P264	Wash all exposed external body areas thoroughly after handling.

#### Precautionary statement(s) Response

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.

#### Precautionary statement(s) Storage

Not Applicable

#### Precautionary statement(s) Disposal

Not Applicable

#### **SECTION 3 Composition / information on ingredients**

#### Substances

See section below for composition of Mixtures

#### Mixtures

CAS No	%[weight]	Name	
9002-93-1	<2.5	<u>p-tert-octylphenol ethoxylate</u>	
55965-84-9	<0.01	isothiazolinones, mixed	
7681-49-4	>0.1	sodium fluoride	
Not Available	balance	Ingredients determined not to be hazardous	

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

#### **SECTION 4 First-aid measures**

### Description of first aid measures

Eye Contact	<ul> <li>If this product comes in contact with the eyes:</li> <li>Wash out immediately with fresh running water.</li> <li>Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
Skin Contact	If skin contact occurs:  Immediately remove all contaminated clothing, including footwear.  Flush skin and hair with running water (and soap if available).  Seek medical attention in event of irritation.

# Inhalation

- If fumes, aerosols or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.
- Ingestion
- Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

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

See Section 11

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

Treat symptomatically.

#### **SECTION 5 Fire-fighting measures**

#### **Extinguishing media**

- There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

#### Special hazards arising from the substrate or mixture

Fire Incompatibility • Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

#### Special protective equipment and precautions for fire-fighters

Fire Fighting

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves in the event of a fire. Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding area.

Page 3 of 9

Lysis Buffer B

Issue Date: 02/09/2024 Chemwatch: 5697-25 Version No: 2.1 Print Date: 19/09/2024

Fire/Explosion Hazard

- ▶ The material is not readily combustible under normal conditions.
- However, it will break down under fire conditions and the organic component may burn.
- ▶ Not considered to be a significant fire risk.
- Heat may cause expansion or decomposition with violent rupture of containers.

Decomposition may produce toxic fumes of:

carbon dioxide (CO2)

other pyrolysis products typical of burning organic material.

May emit poisonous fumes. May emit corrosive fumes.

#### **SECTION 6 Accidental release measures**

#### Personal precautions, protective equipment and emergency procedures

#### **Environmental precautions**

See section 12

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

Minor Spills	<ul> <li>Clean up all spills immediately.</li> <li>Avoid breathing vapours and contact with skin and eyes.</li> <li>Control personal contact with the substance, by using protective equipment.</li> <li>Contain and absorb spill with sand, earth, inert material or vermiculite.</li> </ul>
Major Spills	Moderate hazard.  Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

#### **SECTION 7 Handling and storage**

Frecautions for Sale Handling	
Safe handling	<ul> <li>DO NOT allow clothing wet with material to stay in contact with skin</li> <li>Avoid all personal contact, including inhalation.</li> <li>Wear protective clothing when risk of exposure occurs.</li> <li>Use in a well-ventilated area.</li> <li>Avoid contact with moisture.</li> </ul>
Other information	<ul> <li>Store in original containers.</li> <li>Keep containers securely sealed.</li> <li>Store in a cool, dry, well-ventilated area.</li> <li>Store away from incompatible materials and foodstuff containers.</li> </ul>

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

Suitable container	Plastic Bottles  Polyethylene or polypropylene container. Packing as recommended by manufacturer. Check all containers are clearly labelled and free from leaks.
Storage incompatibility	Avoid reaction with oxidising agents

#### SECTION 8 Exposure controls / personal protection

#### **Control parameters**

#### Occupational Exposure Limits (OEL)

#### INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US OSHA Permissible Exposure Limits (PELs) Table Z-1	sodium fluoride	Fluorides (as F)	2.5 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Limits (PELs) Table Z-2	sodium fluoride	Fluoride as dust	2.5 mg/m3	Not Available	Not Available	(Z37.28-1969)
US NIOSH Recommended Exposure Limits (RELs)	sodium fluoride	Sodium fluoride (as F)	2.5 mg/m3	Not Available	Not Available	[*Note: The REL also applies to other inorganic, solid fluorides (as F).]

#### Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
sodium fluoride	17 mg/m3	90 mg/m3	1,100 mg/m3

Ingredient	Original IDLH	Revised IDLH
p-tert-octylphenol ethoxylate	Not Available	Not Available
isothiazolinones, mixed	Not Available	Not Available
sodium fluoride	250 mg/m3	Not Available

#### Occupational Exposure Banding

Lysis Buffer B

Issue Date: **02/09/2024**Print Date: **19/09/2024** 

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
p-tert-octylphenol ethoxylate	E	≤ 0.1 ppm
isothiazolinones, mixed	E	≤ 0.1 ppm
Notes:	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.	

#### **Exposure controls**

# Appropriate engineering controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

# Individual protection measures, such as personal protective equipment











#### Eye and face protection

- Safety glasses with side shields
- ► Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent]
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.

#### Skin protection

#### See Hand protection below

▶ Wear chemical protective gloves, e.g. PVC.

#### Hands/feet protection

▶ Wear safety footwear or safety gumboots, e.g. Rubber
The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in

advance and has therefore to be checked prior to the application.

The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

Personal hygiene is a key element of effective hand care.

#### Body protection

See Other protection below

#### Other protection

- Overalls.P.V.C apron.
- Barrier cream.
- Barrier cream.
- Skin cleansing cream.

#### Respiratory protection

Type AK-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

#### **SECTION 9 Physical and chemical properties**

#### Information on basic physical and chemical properties

Appearance	Liquid.		
Physical state	Liquid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable
pH (as supplied)	Not Available	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available
Heat of Combustion (kJ/g)	Not Available	Ignition Distance (cm)	Not Available
Flame Height (cm)	Not Available	Flame Duration (s)	Not Available

Page 5 of 9

Lysis Buffer B

Chemwatch: 5697-25 Issue Date: 02/09/2024 Version No: 2.1 Print Date: 19/09/2024

Enclosed Space Ignition Time Equivalent (s/m3)	Not Available	Enclosed Space Ignition Deflagration Density (g/m3)	Not Available

#### **SECTION 10 Stability and reactivity**

Reactivity	See section 7
Chemical stability	<ul> <li>Unstable in the presence of incompatible materials.</li> <li>Product is considered stable.</li> <li>Hazardous polymerisation will not occur.</li> </ul>
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

#### **SECTION 11 Toxicological information**

#### Information on toxicological effects

Inhaled	Not normally a hazard due to non-volatile nature of product The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
Ingestion	The material has <b>NOT</b> been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.
Skin Contact	There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons.  Open cuts, abraded or irritated skin should not be exposed to this material  Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
Eye	This material can cause eye irritation and damage in some persons.
Chronic	Ample evidence from experiments exists that there is a suspicion this material directly reduces fertility.  Based on experience with animal studies, exposure to the material may result in toxic effects to the development of the foetus, at levels which do not cause significant toxic effects to the mother.  There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment.

Lysis Buffer B	TOXICITY	IRRITATION
	Not Available	Not Available
	TOXICITY	IRRITATION
p-tert-octylphenol ethoxylate	Oral (Rat) LD50: 1800 mg/kg <sup>[2]</sup>	Eye (rabbit): 1 mg - moderate
		Skin (human): 2 mg/3d -l - mild
	TOXICITY	IRRITATION
	dermal (rat) LD50: >1008 mg/kg <sup>[1]</sup>	Eye: adverse effect observed (irreversible damage) <sup>[1]</sup>
isothiazolinones, mixed	Inhalation (Rat) LC50: 0.171 mg/l4h <sup>[1]</sup>	Skin: adverse effect observed (corrosive) <sup>[1]</sup>
	Oral (Rat) LD50: 53 mg/kg <sup>[2]</sup>	Skin: adverse effect observed (irritating) <sup>[1]</sup>
	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>	Eye (rabbit): 20 mg/24h-moderate
sodium fluoride	Oral (Rat) LD50: >25<2000 mg/kg <sup>[1]</sup>	Eye: adverse effect observed (irritating) <sup>[1]</sup>
		Skin: no adverse effect observed (not irritating) <sup>[1]</sup>

Leaend:

1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

Octoxynols:

#### Octoxynols of various chain lengths as well as octoxynol salts and organic acids function in cosmetics either as surfactants-emulsifying agents, surfactants-cleansing agents, surfactant-solubilizing agents, or surfactants-hydrotropes in a wide variety of cosmetic products at concentrations ranging from 0.0008% to 25%, with most less than 5.0%. The octoxynols are chemically similar to nonoxynols.. Long-chain nonoxynols (9 and above) were considered safe as used, whereas short-chain nonoxynols (8 and below) were considered safe as used in rinse-off products and safe at concentrations less than 5% in leave-on formulations. Acute exposure of hamsters to Octoxynol-9 by

Humans have regular contact with alcohol ethoxylates through a variety of industrial and consumer products such as soaps, detergents and other cleaning products. Exposure to these chemicals can occur through swallowing, inhalation, or contact with the skin or eyes. Studies of acute toxicity show that relatively high volumes would have to occur to produce any toxic response. No death due to poisoning with alcohol ethoxylates has ever been reported.

Both laboratory and animal testing has shown that there is no evidence for alcohol ethoxylates (AEs) causing genetic damage, mutations or cancer. No adverse reproductive or developmental effects were observed.

#### ISOTHIAZOLINONES, MIXED

P-TERT-OCTYLPHENOL

**ETHOXYLATE** 

The following information refers to contact allergens as a group and may not be specific to this product.

bronchopulmonary lavage produced pneumonia, pulmonary edema, and intra-alveolar hemorrhage.

Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions.

In light of potential adverse effects, and to ensure a harmonised risk assessment and management, the EU regulatory framework for biocides has been established with the objective of ensuring a high level of protection of human and animal health and the environment. To this aim, it is required that risk assessment of biocidal products is carried out before they can be placed on the market. A central element in

Chemwatch: **5697-25** Page **6** of **9**Version No: **2.1** 

Lysis Buffer B

Page 6 of 9 Issue Date: 02/09/2024
Print Date: 19/09/2024

the risk assessment of the biocidal products are the utilization instructions that defines the dosage, application method and amount of applications and thus the exposure of humans and the environment to the biocidal substance. Humans may be exposed to biocidal products in different ways in both occupational and domestic settings. Many biocidal products are intended for industrial sectors or professional uses only, whereas other biocidal products are commonly available for private use by nonprofessional users. No significant acute toxicological data identified in literature search. Formaldehyde generators (releasers) are often used as preservatives. The maximum authorised concentration of free formaldehyde is 0.2% and must be labelled with the warning sign "contains formaldehyde" where the concentration exceeds 0.05%. The use of formaldehydereleasing preservatives ensures that the level of free formaldehyde in the products is always low but sufficient to inhibit microbial growth - it disrupts metabolism to cause death of the organism. However there is a concern that formaldehyde generators can produce amines capable of causing cancers (nitrosamines) when used in formulations containing amines. The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce SODIUM FLUORIDE conjunctivitis The substance is classified by IARC as Group 3: Lysis Buffer B & SODIUM NOT classifiable as to its carcinogenicity to humans. **FLUORIDE** Evidence of carcinogenicity may be inadequate or limited in animal testing. Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating ISOTHIAZOLINONES, MIXED compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset & SODIUM FLUORIDE of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia.

Acute Toxicity	×	Carcinogenicity	×
Skin Irritation/Corrosion	×	Reproductivity	×
Serious Eye Damage/Irritation	<b>*</b>	STOT - Single Exposure	×
Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	×
Mutagenicity	×	Aspiration Hazard	×

Legend:

X − Data either not available or does not fill the criteria for classification
 ✓ − Data available to make classification

#### **SECTION 12 Ecological information**

#### **Toxicity**

	Endpoint	Test Duration (hr)	Species	Value	Source
Lysis Buffer B	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
p-tert-octylphenol ethoxylate	LC50	96h	Fish	>2.8<3.2mg/L	4
	EC50(ECx)	96h	Fish	3mg/L	5
	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	0.006mg/L	2
	EC50	48h	Crustacea	0.007mg/l	2
isothiazolinones, mixed	LC50	96h	Fish	0.129mg/l	2
	EC50	96h	Algae or other aquatic plants	0.036mg/L	2
	NOEC(ECx)	48h	Algae or other aquatic plants	<0.001mg/L	2
	Endpoint	Test Duration (hr)	Species	Value	Source
	BCF	672h	Fish	<0.66	7
	EC50	72h	Algae or other aquatic plants	>121.8mg/L	4
sodium fluoride	EC50	48h	Crustacea	36.2mg/L	5
	LC50	96h	Fish	38-68mg/l	4
	EC50	96h	Algae or other aquatic plants	43mg/l	2
	NOEC(ECx)	2160h	Fish	3.1mg/l	4
Legend:	Ecotox databa		CHA Registered Substances - Ecotoxicological Infon Aquatic Hazard Assessment Data 6. NITE (Japan)		

#### DO NOT discharge into sewer or waterways.

#### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
p-tert-octylphenol ethoxylate	HIGH	HIGH
sodium fluoride	LOW	LOW

#### **Bioaccumulative potential**

Version No: 2.1 Lysis Buffer B

LOW (Log KOC = 14.3)

Page 7 of 9 Issue Date: 02/09/2024 Print Date: 19/09/2024

Ingredient	Bioaccumulation
p-tert-octylphenol ethoxylate	HIGH (LogKOW = 4.863)
sodium fluoride	LOW (BCF = 6.4)
Mobility in soil	
Ingredient	Mobility
p-tert-octylphenol ethoxylate	LOW (Log KOC = 699.2)

#### **SECTION 13 Disposal considerations**

#### Waste treatment methods

Product / Packaging disposal Consult State Land Waste Management Authority for disposal.

#### **SECTION 14 Transport information**

#### Labels Required

sodium fluoride

Marine Pollutant	NO

Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

#### 14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

#### 14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
p-tert-octylphenol ethoxylate	Not Available
isothiazolinones, mixed	Not Available
sodium fluoride	Not Available

#### 14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
p-tert-octylphenol ethoxylate	Not Available
isothiazolinones, mixed	Not Available
sodium fluoride	Not Available

#### **SECTION 15 Regulatory information**

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

#### p-tert-octylphenol ethoxylate is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

#### isothiazolinones, mixed is found on the following regulatory lists

Not Applicable

#### sodium fluoride is found on the following regulatory lists

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

US - Massachusetts - Right To Know Listed Chemicals

US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)

US CWA (Clean Water Act) - List of Hazardous Substances US DOE Temporary Emergency Exposure Limits (TEELs)

US EPA Integrated Risk Information System (IRIS)

US NIOSH Recommended Exposure Limits (RELs)

US OSHA Permissible Exposure Limits (PELs) Table Z-1

US OSHA Permissible Exposure Limits (PELs) Table Z-2

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

#### **Additional Regulatory Information**

Not Applicable

#### **Federal Regulations**

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### Section 311/312 hazard categories

Flammable (Gases, Aerosols, Liquids, or Solids) No Chemwatch: 5697-25 Page 8 of 9 Version No: 2.1

Lysis Buffer B

Issue Date: 02/09/2024 Print Date: 19/09/2024

Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	No
Acute toxicity (any route of exposure)	No
Reproductive toxicity	No
Skin Corrosion or Irritation	No
Respiratory or Skin Sensitization	No
Serious eye damage or eye irritation	Yes
Specific target organ toxicity (single or repeated exposure)	No
Aspiration Hazard	No
Germ cell mutagenicity	No
Simple Asphyxiant	No
Hazards Not Otherwise Classified	No

#### US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

Name	Reportable Quantity in Pounds (lb)	Reportable Quantity in kg
sodium fluoride	1000	454

#### US. EPCRA Section 313 Toxic Release Inventory (TRI) (40 CFR 372)

None Reported

#### **Additional Federal Regulatory Information**

Not Applicable

#### State Regulations

#### US. California Proposition 65

None Reported

#### **Additional State Regulatory Information**

Not Applicable

#### **National Inventory Status**

National Inventory	Status
Australia - AIIC / Australia Non- Industrial Use	No (isothiazolinones, mixed)
Canada - DSL	Yes
Canada - NDSL	No (p-tert-octylphenol ethoxylate; isothiazolinones, mixed; sodium fluoride)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (p-tert-octylphenol ethoxylate; isothiazolinones, mixed)
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	No (isothiazolinones, mixed)
Taiwan - TCSI	Yes
Mexico - INSQ	No (p-tert-octylphenol ethoxylate; isothiazolinones, mixed)
Vietnam - NCI	Yes
Russia - FBEPH	Yes
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

#### **SECTION 16 Other information**

Revision Date	02/09/2024
Initial Date	02/09/2024

#### Other information

Chemwatch: 5697-25 Version No: 2.1

Lysis Buffer B

Issue Date: 02/09/2024 Print Date: 19/09/2024

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

#### **Definitions and abbreviations**

- ▶ PC TWA: Permissible Concentration-Time Weighted Average
- ▶ PC STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- ▶ STEL: Short Term Exposure Limit
- ► TEEL: Temporary Emergency Exposure Limit。
- ▶ IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- ▶ OTV: Odour Threshold Value
- ▶ BCF: BioConcentration Factors
- ▶ BEI: Biological Exposure Index
- ▶ DNEL: Derived No-Effect Level
- ▶ PNEC: Predicted no-effect concentration
- AIIC: Australian Inventory of Industrial Chemicals
- ▶ DSL: Domestic Substances List
- ▶ NDSL: Non-Domestic Substances List
- ▶ IECSC: Inventory of Existing Chemical Substance in China
- EINECS: European INventory of Existing Commercial chemical Substances
   ELINCS: European List of Notified Chemical Substances
- NLP: No-Longer Polymers
- ► ENCS: Existing and New Chemical Substances Inventory
- ▶ KECI: Korea Existing Chemicals Inventory
- NZIoC: New Zealand Inventory of Chemicals
- PICCS: Philippine Inventory of Chemicals and Chemical Substances
   TSCA: Toxic Substances Control Act
- TCSI: Taiwan Chemical Substance Inventory
- ▶ INSQ: Inventario Nacional de Sustancias Químicas
- ▶ NCI: National Chemical Inventory
- ▶ FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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TEL (+61 3) 9572 4700.



## **Supplement B**

#### TGR BioSciences Pty Ltd (an Abcam Company)

Chemwatch: 5697-23 Version No: 2.1 Safety Data Sheet according to OSHA HazCom Standard (2012) requirements Issue Date: **02/09/2024** Print Date: **19/09/2024** S.GHS.USA.EN.E

#### **SECTION 1 Identification**

Product Identifier		
Product name	Supplement B	
Chemical Name	Not Applicable	
Synonyms	Not Available	
Chemical formula	Not Applicable	
Other means of identification	Not Available	

#### Recommended use of the chemical and restrictions on use

	Use of Substances/mixtures for Laboratory Research Use Only. Do Not Use for diagnostic, therapeutic or clinical use.
	Use according to manufacturer's directions.

#### Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

- · · · · · · · · · · · · · · · · · · ·	
Registered company name	TGR BioSciences Pty Ltd (an Abcam Company)
Address	Unit 3-4, 31 George Street Thebarton SA 5031 Australia
Telephone	+61 08 7228 2141
Fax	Not Available
Website	www.tgrbiosciences.com
Email	ADE.info@abcam.com

#### Emergency phone number

=me:gene) p.nene namae.	
Association / Organisation	Chemtrec Aus/North America/Revvity
Emergency telephone numbers	+61290372994 (Mon-Fri 8am to 5pm)
Other emergency telephone numbers	+1703-527-3887/+31505445971

#### SECTION 2 Hazard(s) identification

#### Classification of the substance or mixture

Considered a Hazardous Substance by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). Not classified as Dangerous Goods for transport purposes.

#### NFPA 704 diamond



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification | Serious Eye Damage/Eye Irritation Category 2A

#### Label elements

Hazard pictogram(s)



Page 2 of 9

Supplement B

Issue Date: **02/09/2024**Print Date: **19/09/2024** 

Signal word Warning

Hazard statement(s)

H319 Causes serious eye irritation.

#### Hazard(s) not otherwise classified

Not Applicable

#### Precautionary statement(s) Prevention

P280	Wear protective gloves, protective clothing, eye protection and face protection.
P264	Wash all exposed external body areas thoroughly after handling.

#### Precautionary statement(s) Response

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.

#### Precautionary statement(s) Storage

Not Applicable

#### Precautionary statement(s) Disposal

Not Applicable

#### **SECTION 3 Composition / information on ingredients**

#### Substances

See section below for composition of Mixtures

#### Mixtures

CAS No	%[weight]	Name
151-21-3	<5	sodium lauryl sulfate
55965-84-9	<0.01	isothiazolinones, mixed
Not Available	balance	Ingredients determined not to be hazardous

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

#### **SECTION 4 First-aid measures**

#### Description of first aid measures

Eye Contact	If this product comes in contact with the eyes:  Wash out immediately with fresh running water.  Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.  Seek medical attention without delay; if pain persists or recurs seek medical attention.  Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs:  Immediately remove all contaminated clothing, including footwear.  Flush skin and hair with running water (and soap if available).  Seek medical attention in event of irritation.
Inhalation	If fumes, aerosols or combustion products are inhaled remove from contaminated area.     Other measures are usually unnecessary.
Ingestion	Immediately give a glass of water.     First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

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

See Section 11

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

Treat symptomatically.

#### **SECTION 5 Fire-fighting measures**

#### Extinguishing media

The product contains a substantial proportion of water, therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas.

Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances. In such an event consider:

▶ foam.

#### Special hazards arising from the substrate or mixture

Fire Incompatibility None known.

#### Special protective equipment and precautions for fire-fighters

Fire Fighting

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves in the event of a fire.
- Prevent, by any means available, spillage from entering drains or water courses.

Chemwatch: 5697-23 Page 3 of 9 Version No: 2.1

#### Supplement B

Issue Date: 02/09/2024 Print Date: 19/09/2024

Use fire fighting procedures suitable for surrounding area. ▶ The material is not readily combustible under normal conditions. ▶ However, it will break down under fire conditions and the organic component may burn. ▶ Not considered to be a significant fire risk. ▶ Heat may cause expansion or decomposition with violent rupture of containers. Fire/Explosion Hazard Decomposes on heating and produces toxic fumes of: carbon dioxide (CO2) nitrogen oxides (NOx) sulfur oxides (SOx) other pyrolysis products typical of burning organic material.

#### **SECTION 6 Accidental release measures**

#### Personal precautions, protective equipment and emergency procedures

See section 8

#### **Environmental precautions**

See section 12

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

Minor Spills	<ul> <li>Clean up all spills immediately.</li> <li>Avoid breathing vapours and contact with skin and eyes.</li> <li>Control personal contact with the substance, by using protective equipment.</li> <li>Contain and absorb spill with sand, earth, inert material or vermiculite.</li> </ul>
Major Spills	Moderate hazard.  ▶ Clear area of personnel and move upwind.  ▶ Alert Fire Brigade and tell them location and nature of hazard.  ▶ Wear breathing apparatus plus protective gloves.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

#### **SECTION 7 Handling and storage**

## Precautions for safe handling

Safe handling	DO NOT allow clothing wet with material to stay in contact with skin     Avoid all personal contact, including inhalation.     Wear protective clothing when risk of exposure occurs.     Use in a well-ventilated area.     Prevent concentration in hollows and sumps.
Other information	<ul> <li>Store in original containers.</li> <li>Keep containers securely sealed.</li> <li>Store in a cool, dry, well-ventilated area.</li> <li>Store away from incompatible materials and foodstuff containers.</li> </ul>

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

Suitable container	Plastic tube or Plastic Bottle Polyethylene or polypropylene container. Packing as recommended by manufacturer. Check all containers are clearly labelled and free from leaks.
Storage incompatibility	None known

#### SECTION 8 Exposure controls / personal protection

#### **Control parameters**

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Not Available

#### **Emergency Limits**

Ingredient	TEEL-1	TEEL-2		TEEL-3
sodium lauryl sulfate	3.9 mg/m3	43 mg/m3		260 mg/m3
Ingredient	Original IDLH		Revised IDLH	
sodium lauryl sulfate	Not Available		Not Available	
isothiazolinones, mixed	Not Available		Not Available	

#### Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
sodium lauryl sulfate	E	≤ 0.01 mg/m³
isothiazolinones, mixed	E	≤ 0.1 ppm
Notes:	Occupational exposure banding is a process of assigning chemicals into adverse health outcomes associated with exposure. The output of this p to a range of exposure concentrations that are expected to protect work	process is an occupational exposure band (OEB), which corresponds

#### **Exposure controls**

Page 4 of 9

Chemwatch: 5697-23 Version No: 2.1

Issue Date: 02/09/2024 Print Date: 19/09/2024

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Appropriate engineering controls Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Individual protection measures, such as personal protective equipment Safety glasses with side shields Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent] Eye and face protection Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task Skin protection See Hand protection below ▶ Wear chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber NOTE: ▶ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. Hands/feet protection The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Personal hygiene is a key element of effective hand care. **Body protection** See Other protection below

Supplement B

Other protection

- Overalls
- P.V.C apron
- Barrier cream.
- Skin cleansing cream.

#### Respiratory protection

Type AK-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

#### **SECTION 9 Physical and chemical properties**

#### Information on basic physical and chemical properties

Appearance	Liquid.		
Physical state	Liquid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable
pH (as supplied)	Not Available	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available
Heat of Combustion (kJ/g)	Not Available	Ignition Distance (cm)	Not Available
Flame Height (cm)	Not Available	Flame Duration (s)	Not Available
Enclosed Space Ignition Time Equivalent (s/m3)	Not Available	Enclosed Space Ignition Deflagration Density (g/m3)	Not Available

#### **SECTION 10 Stability and reactivity**

Reactivity See section 7

Chemwatch: 5697-23 Version No: 2.1

Supplement B

Issue Date: 02/09/2024 Print Date: 19/09/2024

Chemical stability	<ul> <li>Unstable in the presence of incompatible materials.</li> <li>Product is considered stable.</li> <li>Hazardous polymerisation will not occur.</li> </ul>
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

#### **SECTION 11 Toxicological information**

Inhaled	Not normally a hazard due to non-volatile nature of product The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.		
Ingestion	Considered an unlikely route of entry in commercial/industrial environments  The material is not thought to produce adverse health effects following ingestion (as classified by EC Directives using animal models).  Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum.		
Skin Contact	There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons.  Open cuts, abraded or irritated skin should not be exposed to this material  Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.		
Eye	This material can cause eye irritation and damage in sor	me persons.	
Chronic	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.  There is some evidence that inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population.  There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population.		
		duct is more likely to cause a sensitisation reaction in some persons compared to	
		duct is more likely to cause a sensitisation reaction in some persons compared to	
Supplement B	general population.		
Supplement B	general population.  TOXICITY	IRRITATION	
Supplement B	general population.  TOXICITY  Not Available	IRRITATION  Not Available	
Supplement B	general population.  TOXICITY  Not Available  TOXICITY	IRRITATION  Not Available  IRRITATION	
Supplement B	general population.  TOXICITY  Not Available  TOXICITY  dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>	IRRITATION  Not Available  IRRITATION  Eye (rabbit):100 mg/24 hr-moderate	
<u> </u>	general population.  TOXICITY  Not Available  TOXICITY  dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>	IRRITATION  Not Available  IRRITATION  Eye (rabbit):100 mg/24 hr-moderate  Eye: adverse effect observed (irreversible damage) <sup>[1]</sup>	
<u> </u>	general population.  TOXICITY  Not Available  TOXICITY  dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>	IRRITATION  Not Available  IRRITATION  Eye (rabbit):100 mg/24 hr-moderate  Eye: adverse effect observed (irreversible damage) <sup>[1]</sup> Eye: adverse effect observed (irritating) <sup>[1]</sup>	
<u> </u>	general population.  TOXICITY  Not Available  TOXICITY  dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>	IRRITATION  Not Available  IRRITATION  Eye (rabbit):100 mg/24 hr-moderate  Eye: adverse effect observed (irreversible damage) <sup>[1]</sup> Eye: adverse effect observed (irritating) <sup>[1]</sup> Skin (human): 25 mg/24 hr - mild	
<u> </u>	general population.  TOXICITY  Not Available  TOXICITY  dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>	IRRITATION  Not Available  IRRITATION  Eye (rabbit):100 mg/24 hr-moderate  Eye: adverse effect observed (irreversible damage) <sup>[1]</sup> Eye: adverse effect observed (irritating) <sup>[1]</sup> Skin (human): 25 mg/24 hr - mild  Skin: adverse effect observed (corrosive) <sup>[1]</sup>	
sodium lauryl sulfate	general population.  TOXICITY  Not Available  TOXICITY  dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup> Oral (Rat) LD50: 1288 mg/kg <sup>[2]</sup>	IRRITATION  Not Available  IRRITATION  Eye (rabbit):100 mg/24 hr-moderate  Eye: adverse effect observed (irreversible damage) <sup>[1]</sup> Eye: adverse effect observed (irritating) <sup>[1]</sup> Skin (human): 25 mg/24 hr - mild  Skin: adverse effect observed (corrosive) <sup>[1]</sup> Skin: adverse effect observed (irritating) <sup>[1]</sup>	
<u> </u>	general population.  TOXICITY  Not Available  TOXICITY  dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup> Oral (Rat) LD50: 1288 mg/kg <sup>[2]</sup>	IRRITATION  Not Available  IRRITATION  Eye (rabbit):100 mg/24 hr-moderate  Eye: adverse effect observed (irreversible damage) <sup>[1]</sup> Eye: adverse effect observed (irritating) <sup>[1]</sup> Skin (human): 25 mg/24 hr - mild  Skin: adverse effect observed (corrosive) <sup>[1]</sup> Skin: adverse effect observed (irritating) <sup>[1]</sup> IRRITATION	

specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

## SODIUM LAURYL SULFATE

Eye (None) None: None None rabbit None 250 ugSkin (rabbit):25 mg/24 hr-moderate Skin (None) None: None rabbit None 50 mg/24Eye (rabbit) 10: mg-

Based on laboratory and animal testing, exposure to the material may result in irreversible effects and mutations in humans. Alkyl sulfates are irritating to the skin, harmful if swallowed and at risk of causing serious damage to the eyes. They are metabolised by the liver and excreted via urine. They produce dose-dependent toxicity depending on their structure. They do not cause cancer, reproductive or

#### For alkyl sulfates; alkane sulfonates and alpha-olefin sulfonates

Most chemicals of this category are not defined substances, but mixtures of homologues with different alkyl side chains. Common physical and/or biological pathways result in structurally similar breakdown products, and are, together with the surfactant properties, responsible for similar environmental behavior and essentially identical hazard profiles with regard to human health.

Acute toxicity: These substances are well absorbed after ingestion; penetration through the skin is however, poor. After absorption, these chemicals are distributed mainly to the liver.

In animals, signs of poisoning by mouth include lethargy, hair standing up, decreased motor activity and breathing rate, and diarrhea. Poisoning from skin contact caused irritation, tremor, tonic-clonic convulsions, breathing failure, and weight loss.

#### ISOTHIAZOLINONES, MIXED

The following information refers to contact allergens as a group and may not be specific to this product.

Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions.

In light of potential adverse effects, and to ensure a harmonised risk assessment and management, the EU regulatory framework for biocides has been established with the objective of ensuring a high level of protection of human and animal health and the environment. To this aim, it is required that risk assessment of biocidal products is carried out before they can be placed on the market. A central element in the risk assessment of the biocidal products are the utilization instructions that defines the dosage, application method and amount of applications and thus the exposure of humans and the environment to the biocidal substance.

Chemwatch: 5697-23

Supplement B

Page 6 of 9 Issue Date: 02/09/2024 Version No: 2.1 Print Date: 19/09/2024

> Humans may be exposed to biocidal products in different ways in both occupational and domestic settings. Many biocidal products are intended for industrial sectors or professional uses only, whereas other biocidal products are commonly available for private use by nonprofessional users. No significant acute toxicological data identified in literature search.

Formaldehyde generators (releasers) are often used as preservatives. The maximum authorised concentration of free formaldehyde is 0.2% and must be labelled with the warning sign "contains formaldehyde" where the concentration exceeds 0.05%. The use of formaldehydereleasing preservatives ensures that the level of free formaldehyde in the products is always low but sufficient to inhibit microbial growth - it disrupts metabolism to cause death of the organism. However there is a concern that formaldehyde generators can produce amines capable of causing cancers (nitrosamines) when used in formulations containing amines.

The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

#### **SODIUM LAURYL SULFATE &** ISOTHIAZOLINONES, MIXED

Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia.

Acute Toxicity	×	Carcinogenicity	×
Skin Irritation/Corrosion	×	Reproductivity	×
Serious Eye Damage/Irritation	<b>~</b>	STOT - Single Exposure	×
Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	×
Mutagenicity	×	Aspiration Hazard	×

Legend:

💢 – Data either not available or does not fill the criteria for classification Data available to make classification

#### **SECTION 12 Ecological information**

#### Toxicity

Supplement B	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	4.8mg/l	2
	EC50	48h	Crustacea	0.939mg/l	1
sodium lauryl sulfate	LC50	96h	Fish 0.59		4
	EC0(ECx)	72h	Algae or other aquatic plants	30mg/l	1
	EC50	96h	Algae or other aquatic plants	0.4- 3.7mg/L	4
	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	0.006mg/L	2
	EC50	48h	Crustacea	0.007mg/l	2
isothiazolinones, mixed	LC50	96h	Fish	0.129mg/l	2
	EC50	96h	Algae or other aquatic plants	0.036mg/L	2
					2

Legend:

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

DO NOT discharge into sewer or waterways

#### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
sodium lauryl sulfate	HIGH	HIGH

#### Bioaccumulative potential

Ingredient	Bioaccumulation
sodium lauryl sulfate	LOW (BCF = 7.15)

#### Mobility in soil

Ingredient	Mobility
sodium lauryl sulfate	LOW (Log KOC = 10220)

#### **SECTION 13 Disposal considerations**

Chemwatch: **5697-23**Version No: **2.1** 

Supplement B

Issue Date: 02/09/2024 Print Date: 19/09/2024

#### Waste treatment methods

Product / Packaging disposal Consult State Land Waste Management Authority for disposal.

#### **SECTION 14 Transport information**

#### **Labels Required**

Marine Pollutant	NO

Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

#### 14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

#### 14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
sodium lauryl sulfate	Not Available
isothiazolinones, mixed	Not Available

#### 14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
sodium lauryl sulfate	Not Available
isothiazolinones, mixed	Not Available

#### **SECTION 15 Regulatory information**

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

#### sodium lauryl sulfate is found on the following regulatory lists

US DOE Temporary Emergency Exposure Limits (TEELs)

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

#### isothiazolinones, mixed is found on the following regulatory lists

Not Applicable

#### Additional Regulatory Information

Not Applicable

#### **Federal Regulations**

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### Section 311/312 hazard categories

Flammable (Gases, Aerosols, Liquids, or Solids)	
Gas under pressure	No
Explosive	No
Self-heating Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	No
Acute toxicity (any route of exposure)	No
Reproductive toxicity	No
Skin Corrosion or Irritation	No
Respiratory or Skin Sensitization	No
Serious eye damage or eye irritation	Yes
Specific target organ toxicity (single or repeated exposure)	No
Aspiration Hazard	No
Germ cell mutagenicity	No
Simple Asphyxiant	No
Hazards Not Otherwise Classified	No

Supplement B

Issue Date: 02/09/2024 Version No: 2.1 Print Date: 19/09/2024

#### US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

#### US. EPCRA Section 313 Toxic Release Inventory (TRI) (40 CFR 372)

None Reported

#### **Additional Federal Regulatory Information**

Not Applicable

#### State Regulations

#### US. California Proposition 65

None Reported

#### **Additional State Regulatory Information**

Not Applicable

#### National Inventory Status

National inventory Status	
National Inventory	Status
Australia - AIIC / Australia Non- Industrial Use	No (isothiazolinones, mixed)
Canada - DSL	Yes
Canada - NDSL	No (isothiazolinones, mixed)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (isothiazolinones, mixed)
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	No (isothiazolinones, mixed)
Taiwan - TCSI	Yes
Mexico - INSQ	No (isothiazolinones, mixed)
Vietnam - NCI	Yes
Russia - FBEPH	Yes
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

#### **SECTION 16 Other information**

Revision Date	02/09/2024
Initial Date	02/09/2024

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

#### **Definitions and abbreviations**

- ▶ PC TWA: Permissible Concentration-Time Weighted Average
- ▶ PC STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
   ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
- ► TEEL: Temporary Emergency Exposure Limit。
- ▶ IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level ▶ TLV: Threshold Limit Value
- ▶ LOD: Limit Of Detection
- OTV: Odour Threshold Value
- ▶ BCF: BioConcentration Factors ▶ BEI: Biological Exposure Index
- ▶ DNEL: Derived No-Effect Level
- ▶ PNEC: Predicted no-effect concentration
- AIIC: Australian Inventory of Industrial Chemicals
- ▶ DSL: Domestic Substances List
- NDSL: Non-Domestic Substances List
- ▶ IECSC: Inventory of Existing Chemical Substance in China
- ▶ EINECS: European INventory of Existing Commercial chemical Substances
- ▶ ELINCS: European List of Notified Chemical Substances
- NLP: No-Longer Polymers
- ► ENCS: Existing and New Chemical Substances Inventory
- ▶ KECI: Korea Existing Chemicals Inventory

Chemwatch: 5697-23 Page 9 of 9 Issue Date: 02/09/2024 Version No: 2.1 Print Date: 19/09/2024

Supplement B

- NZIoC: New Zealand Inventory of Chemicals
  PICCS: Philippine Inventory of Chemicals and Chemical Substances
- ► TSCA: Toxic Substances Control Act
- ▶ TCSI: Taiwan Chemical Substance Inventory
- ▶ INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
  FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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TEL (+61 3) 9572 4700.



# Reaction Buffer 1 - Ultra TGR BioSciences Pty Ltd (an Abcam Company)

Chemwatch: **5555-14**Version No: **4.1**Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Issue Date: **25/10/2022** Print Date: **19/09/2024** S.GHS.USA.EN.E

#### **SECTION 1 Identification**

Product Identifier				
Product name Reaction Buffer 1 - Ultra				
Chemical Name	ot Applicable			
Synonyms Reaction Buffer 1 - MPSU; Reaction Buffer 2 – Ultra; Reaction Buffer 2 & Reaction Buffer 3 - MPSU				
Chemical formula	Not Applicable			
Other means of identification	Reaction Buffer 1 - MPSU, Reaction Buffer 2 - Ultra, Reaction Buffer 2 -MPSU, Reaction Buffer 3 - MPSU			

#### Recommended use of the chemical and restrictions on use

Relevant identified uses	Use of Substances/mixtures for Laboratory Research Use Only. Do Not Use for diagnostic, therapeutic or clinical use.	
	Relevant identified uses	Use according to manufacturer's directions.

#### Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	TGR BioSciences Pty Ltd (an Abcam Company)			
Address	nit 3-4, 31 George Street Thebarton SA 5031 Australia			
Telephone	08 7228 2141			
Fax	Not Available			
Website	www.tgrbiosciences.com			
Email	ADE.info@abcam.com			

#### Emergency phone number

Association / Organisation	Chemtrec Aus/North America/Revvity		
Emergency telephone numbers	+61290372994 (Mon-Fri 8am to 5pm)		
Other emergency telephone numbers	+1703-527-3887/+31505445971		

#### SECTION 2 Hazard(s) identification

#### Classification of the substance or mixture

Not considered a Hazardous Substance by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). Not classified as Dangerous Goods for transport purposes.

#### NFPA 704 diamond



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification	Not Applicable
Label elements	
Hazard pictogram(s)	Not Applicable
Signal word	Not Applicable

Chemwatch: 5555-14 Page 2 of 8 Version No: 4.1

Reaction Buffer 1 - Ultra

Issue Date: 25/10/2022 Print Date: 19/09/2024

Not Applicable

#### Hazard(s) not otherwise classified

Not Applicable

#### Precautionary statement(s) Prevention

Not Applicable

#### Precautionary statement(s) Response

Not Applicable

#### Precautionary statement(s) Storage

Not Applicable

#### Precautionary statement(s) Disposal

P501 Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

#### **SECTION 3 Composition / information on ingredients**

#### Substances

See section below for composition of Mixtures

#### Mixtures

CAS No	%[weight]	Name	
55965-84-9	<0.01	isothiazolinones, mixed Ingredients determined not to be hazardous	
Not Available	balance		

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

#### **SECTION 4 First-aid measures**

#### Description of first aid measures

Eye Contact	If this product comes in contact with eyes:  Wash out immediately with water.  If irritation continues, seek medical attention.  Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin or hair contact occurs:  ▶ Flush skin and hair with running water (and soap if available).  ▶ Seek medical attention in event of irritation.
Inhalation  Inhalation  Inhalation  In fumes, aerosols or combustion products are inhaled remove from contaminated area.  Other measures are usually unnecessary.	
<ul> <li>Ingestion</li> <li>First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.</li> </ul>	

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

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

Treat symptomatically.

#### **SECTION 5 Fire-fighting measures**

#### **Extinguishing media**

The product contains a substantial proportion of water, therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas.

Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances. In such an event consider:

▶ foam.

#### Special hazards arising from the substrate or mixture

Fire Incompatibility ▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Special protective equipment and precautions for fire-fighters				
Fire Fighting	<ul> <li>Use water delivered as a fine spray to control fire and cool adjacent area.</li> <li>Do not approach containers suspected to be hot.</li> <li>Cool fire exposed containers with water spray from a protected location.</li> <li>If safe to do so, remove containers from path of fire.</li> </ul>			
Fire/Explosion Hazard	<ul> <li>The material is not readily combustible under normal conditions.</li> <li>However, it will break down under fire conditions and the organic component may burn.</li> <li>Not considered to be a significant fire risk.</li> <li>Heat may cause expansion or decomposition with violent rupture of containers.</li> <li>Decomposition may produce toxic fumes of: carbon dioxide (CO2) other pyrolysis products typical of burning organic material.</li> </ul>			

#### **SECTION 6 Accidental release measures**

Chemwatch: 5555-14 Page 3 of 8

Version No: 4.1 Reaction Buffer 1 - Ultra Print Date: 19/09/2024

#### Personal precautions, protective equipment and emergency procedures

See section 8

#### **Environmental precautions**

See section 12

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

Minor Spills	<ul> <li>Clean up all spills immediately.</li> <li>Avoid breathing vapours and contact with skin and eyes.</li> <li>Control personal contact with the substance, by using protective equipment.</li> <li>Contain and absorb spill with sand, earth, inert material or vermiculite.</li> </ul>			
Major Spills	Minor hazard.  ▶ Clear area of personnel.  ▶ Alert Fire Brigade and tell them location and nature of hazard.  ▶ Control personal contact with the substance, by using protective equipment as required.			

Personal Protective Equipment advice is contained in Section 8 of the SDS.

#### **SECTION 7 Handling and storage**

Precautions for safe handling				
Safe handling	<ul> <li>Limit all unnecessary personal contact.</li> <li>Wear protective clothing when risk of exposure occurs.</li> <li>Use in a well-ventilated area.</li> <li>Avoid contact with incompatible materials.</li> </ul>			
Other information	<ul> <li>Store in original containers.</li> <li>Keep containers securely sealed.</li> <li>Store in a cool, dry, well-ventilated area.</li> <li>Store away from incompatible materials and foodstuff containers.</li> </ul>			

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

Suitable container	Plastic tube or plastic bottle.  Polyethylene or polypropylene container.  Packing as recommended by manufacturer.  Check all containers are clearly labelled and free from leaks.	
Storage incompatibility	Storage incompatibility    Avoid reaction with oxidising agents	

#### SECTION 8 Exposure controls / personal protection

#### **Control parameters**

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Not Available

#### Emergency Limits

Ingredient	TEEL-1	TEEL-2		TEEL-3
Reaction Buffer 1 - Ultra	Not Available	Not Available		Not Available
Ingredient	Original IDLH		Revised IDLH	
isothiazolinones, mixed	Not Available		Not Available	

#### Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
isothiazolinones, mixed	E	≤ 0.1 ppm
Notes:	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.	

#### Exposure controls

#### Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. Appropriate engineering The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. controls Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Individual protection measures, such as personal protective equipment Safety glasses with side shields Chemical goggles. Eye and face protection Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Skin protection See Hand protection below

Issue Date: 25/10/2022

Chemwatch: 5555-14 Page 4 of 8 Issue Date: 25/10/2022 Version No: 4.1 Print Date: 19/09/2024

#### Reaction Buffer 1 - Ultra

Hands/feet protection	▶ Wear general protective gloves, eg. light weight rubber gloves.  The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.  The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.  Personal hygiene is a key element of effective hand care.
Body protection	See Other protection below
Other protection	No special equipment needed when handling small quantities.  OTHERWISE:  Overalls.  Barrier cream.  Eyewash unit.

#### Respiratory protection

Type AK-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

## **SECTION 9 Physical and chemical properties**

#### Information on basic physical and chemical properties

illorillation on basic physical			
Appearance	Clear liquid.		
Physical state	Liquid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable
pH (as supplied)	Not Available	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available
Heat of Combustion (kJ/g)	Not Available	Ignition Distance (cm)	Not Available
Flame Height (cm)	Not Available	Flame Duration (s)	Not Available
Enclosed Space Ignition Time Equivalent (s/m3)	Not Available	Enclosed Space Ignition Deflagration Density (g/m3)	Not Available

#### **SECTION 10 Stability and reactivity**

Reactivity	See section 7
Chemical stability	Product is considered stable and hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

#### **SECTION 11 Toxicological information**

#### Information on toxicological effects

Inhaled	The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
Ingestion	The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.
Skin Contact	The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.
Eye	Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).
Chronic	Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.

Chemwatch: 5555-14 Parties No: 4.1

Reaction Buffer 1 - Ultra

Page 5 of 8 Issue Date: 25/10/2022
Print Date: 19/09/2024

Reaction Buffer 1 - Ultra	TOXICITY	IRRITATION	
	Not Available	Not Available	
isothiazolinones, mixed	TOXICITY	IRRITATION	
	dermal (rat) LD50: >1008 mg/kg <sup>[1]</sup>	Eye: adverse effect observed (irreversible damage) <sup>[1]</sup>	
	Inhalation (Rat) LC50: 0.171 mg/l4h <sup>[1]</sup>	Skin: adverse effect observed (corrosive) <sup>[1]</sup>	
	Oral (Rat) LD50: 53 mg/kg <sup>[2]</sup>	Skin: adverse effect observed (irritating) <sup>[1]</sup>	
Legend:	d: 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwis specified data extracted from RTECS - Register of Toxic Effect of chemical Substances		

The following information refers to contact allergens as a group and may not be specific to this product.

Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions.

In light of potential adverse effects, and to ensure a harmonised risk assessment and management, the EU regulatory framework for biocides has been established with the objective of ensuring a high level of protection of human and animal health and the environment. To this aim, it is required that risk assessment of biocidal products is carried out before they can be placed on the market. A central element in the risk assessment of the biocidal products are the utilization instructions that defines the dosage, application method and amount of applications and thus the exposure of humans and the environment to the biocidal substance.

Humans may be exposed to biocidal products in different ways in both occupational and domestic settings. Many biocidal products are intended for industrial sectors or professional uses only, whereas other biocidal products are commonly available for private use by non-professional users. No significant acute toxicological data identified in literature search.

#### ISOTHIAZOLINONES, MIXED

Formaldehyde generators (releasers) are often used as preservatives. The maximum authorised concentration of free formaldehyde is 0.2% and must be labelled with the warning sign "contains formaldehyde" where the concentration exceeds 0.05%. The use of formaldehyde-releasing preservatives ensures that the level of free formaldehyde in the products is always low but sufficient to inhibit microbial growth - it disrupts metabolism to cause death of the organism. However there is a concern that formaldehyde generators can produce amines capable of causing cancers (nitrosamines) when used in formulations containing amines.

The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia.

Acute Toxicity	×	Carcinogenicity	×
Skin Irritation/Corrosion	×	Reproductivity	×
Serious Eye Damage/Irritation	×	STOT - Single Exposure	×
Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	×
Mutagenicity	×	Aspiration Hazard	×

Legend:

💢 – Data either not available or does not fill the criteria for classification

Data available to make classification

#### **SECTION 12 Ecological information**

#### Toxicity

Reaction Buffer 1 - Ultra	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
isothiazolinones, mixed	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	0.006mg/L	2
	EC50	48h	Crustacea	0.007mg/l	2
	LC50	96h	Fish	0.129mg/l	2
	EC50	96h	Algae or other aquatic plants	0.036mg/L	2
	NOEC(ECx)	48h	Algae or other aquatic plants	<0.001mg/L	2

Legend:

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

#### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients

#### Bioaccumulative potential

Ingredient	Bioaccumulation
	No Data available for all ingredients

#### Page 6 of 8

#### Reaction Buffer 1 - Ultra

Issue Date: **25/10/2022**Print Date: **19/09/2024** 

#### Mobility in soil

Ingredient	Mobility
	No Data available for all ingredients

#### **SECTION 13 Disposal considerations**

#### Waste treatment methods

Product / Packaging disposal Consult State Land Waste Management Authority for disposal.

#### **SECTION 14 Transport information**

#### **Labels Required**

Marine Pollutant NO

Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

#### 14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

#### 14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
isothiazolinones, mixed	Not Available

#### 14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
isothiazolinones, mixed	Not Available

#### **SECTION 15 Regulatory information**

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

isothiazolinones, mixed is found on the following regulatory lists

Not Applicable

#### **Additional Regulatory Information**

Not Applicable

#### **Federal Regulations**

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### Section 311/312 hazard categories

Flammable (Gases, Aerosols, Liquids, or Solids)	No
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	No
Acute toxicity (any route of exposure)	No
Reproductive toxicity	No
Skin Corrosion or Irritation	No
Respiratory or Skin Sensitization	No
Serious eye damage or eye irritation	No
Specific target organ toxicity (single or repeated exposure)	No
Aspiration Hazard	No
Germ cell mutagenicity	No

Chemwatch: 5555-14 Page 7 of 8

Reaction Buffer 1 - Ultra

Simple Asphyxiant No Hazards Not Otherwise Classified No

#### US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

Version No: 4.1

#### US. EPCRA Section 313 Toxic Release Inventory (TRI) (40 CFR 372)

None Reported

#### **Additional Federal Regulatory Information**

Not Applicable

#### State Regulations

#### US. California Proposition 65

None Reported

#### **Additional State Regulatory Information**

Not Applicable

#### **National Inventory Status**

National Inventory	Status	
Australia - AIIC / Australia Non- Industrial Use	No (isothiazolinones, mixed)	
Canada - DSL	Yes	
Canada - NDSL	No (isothiazolinones, mixed)	
China - IECSC	Yes	
Europe - EINEC / ELINCS / NLP	No (isothiazolinones, mixed)	
Japan - ENCS	Yes	
Korea - KECI	Yes	
New Zealand - NZIoC	Yes	
Philippines - PICCS	Yes	
USA - TSCA	No (isothiazolinones, mixed)	
Taiwan - TCSI	Yes	
Mexico - INSQ	No (isothiazolinones, mixed)	
Vietnam - NCI	Yes	
Russia - FBEPH	Yes	
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.	

#### **SECTION 16 Other information**

Revision Date	25/10/2022
Initial Date	12/07/2022

#### **SDS Version Summary**

Version	Date of Update	Sections Updated
3.1	19/07/2022	Name
4.1	25/10/2022	Disposal considerations - Disposal, Handling and storage - Storage (storage incompatibility), Identification of the substance / mixture and of the company / undertaking - Synonyms

#### Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

#### **Definitions and abbreviations**

- ▶ PC TWA: Permissible Concentration-Time Weighted Average
- ▶ PC STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ▶ ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
   TEEL: Temporary Emergency Exposure Limit<sub>o</sub>
- ► IDLH: Immediately Dangerous to Life or Health Concentrations
- ▶ ES: Exposure Standard
- ▶ OSF: Odour Safety Factor
- ▶ NOAEL: No Observed Adverse Effect Level
- ▶ LOAEL: Lowest Observed Adverse Effect Level
- ► TLV: Threshold Limit Value
- LOD: Limit Of Detection
- ▶ OTV: Odour Threshold Value
- ▶ BCF: BioConcentration Factors

Issue Date: 25/10/2022

Print Date: 19/09/2024

Issue Date: 25/10/2022 Chemwatch: 5555-14 Page 8 of 8 Version No: 4.1 Print Date: 19/09/2024

#### Reaction Buffer 1 - Ultra

- BEI: Biological Exposure IndexDNEL: Derived No-Effect Level
- ▶ PNEC: Predicted no-effect concentration
- ▶ AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
   NDSL: Non-Domestic Substances List
- ▶ IECSC: Inventory of Existing Chemical Substance in China
- ▶ EINECS: European INventory of Existing Commercial chemical Substances
- ▶ ELINCS: European List of Notified Chemical Substances
- NIP: No-Longer Polymers

  ENCS: Existing and New Chemical Substances Inventory

  KECI: Korea Existing Chemicals Inventory

  NZIoC: New Zealand Inventory of Chemicals

- ▶ PICCS: Philippine Inventory of Chemicals and Chemical Substances

- TSCA: Toxic Substances Control Act
   TCSI: Taiwan Chemical Substance Inventory
   INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
- ▶ FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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TEL (+61 3) 9572 4700.



# AlphaLISA CaptSure<sup>™</sup> Acceptor Beads (2mg/mL) TGR BioSciences Pty Ltd (an Abcam Company)

Chemwatch: 5555-20 Version No: 3.1 Safety Data Sheet according to OSHA HazCom Standard (2012) requirements Issue Date: **25/10/2022** Print Date: **19/09/2024** S.GHS.USA.EN.E

#### **SECTION 1 Identification**

Product Identifier		
Product name	AlphaLISA CaptSure™ Acceptor Beads (2mg/mL)	
Chemical Name	Not Applicable	
Synonyms	Alpha 615 CaptSure™ Acceptor Beads (2mg/mL) _ Multiplex; Alpha 545 CaptSure2™ Acceptor Beads (2mg/mL) _ Multiplex; Alpha 615 anti-p-AKT(1/2/3) (Ser473) (mlgG1) Acceptor Beads; Alpha 615 anti-p-ERK (mlgG1) Acceptor Beads	
Chemical formula	Not Applicable	
Other means of identification	Alpha 545 CaptSure2 Acceptor Beads (2mg/mL)_MPSU, Alpha 615 CaptSure Acceptor Beads (2mg/mL)_MPSU	

#### Recommended use of the chemical and restrictions on use

Relevant identified uses	Use of Substances/mixtures for Laboratory Research Use Only. Do Not Use for diagnostic, therapeutic or clinical use.  Use according to manufacturer's directions.
	Ose according to manufacturer's directions.

#### Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	TGR BioSciences Pty Ltd (an Abcam Company)	
Address	Unit 3-4, 31 George Street Thebarton SA 5031 Australia	
Telephone	+61 08 7228 2141	
Fax	Not Available	
Website	www.tgrbiosciences.com	
Email	ADE.info@abcam.com	

#### **Emergency phone number**

• • •		
Association / Organisati	Chemtrec Aus/North America/Revvity	
Emergency telepho number	+61290372994 (Mon-Fri 8am to 5pm)	
Other emergency telepho		

#### SECTION 2 Hazard(s) identification

#### Classification of the substance or mixture

Not considered a Hazardous Substance by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). Not classified as Dangerous Goods for transport purposes.

#### NFPA 704 diamond



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification	Not Applicable	
Label elements		

Hazard pictogram(s)	Not Applicable
Signal word	Not Applicable

Chemwatch: 5555-20 Page 2 of 8

AlphaLISA CaptSure™ Acceptor Beads (2mg/mL)

Issue Date: 25/10/2022 Print Date: 19/09/2024

#### Hazard statement(s)

Not Applicable

Version No: 3.1

#### Hazard(s) not otherwise classified

Not Applicable

#### Precautionary statement(s) Prevention

Not Applicable

#### Precautionary statement(s) Response

Not Applicable

#### Precautionary statement(s) Storage

Not Applicable

#### Precautionary statement(s) Disposal

P501 Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

#### **SECTION 3 Composition / information on ingredients**

#### Substances

See section below for composition of Mixtures

#### Mixtures

CAS No	%[weight]	Name
55965-84-9	<0.01	isothiazolinones, mixed
Not Available	balance	Ingredients determined not to be hazardous

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

#### **SECTION 4 First-aid measures**

#### Description of first aid measures

Eye Contact	If this product comes in contact with eyes:  Wash out immediately with water.  If irritation continues, seek medical attention.  Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin or hair contact occurs:  ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation.
Inhalation	<ul> <li>If fumes, aerosols or combustion products are inhaled remove from contaminated area.</li> <li>Other measures are usually unnecessary.</li> </ul>
Ingestion	<ul> <li>Immediately give a glass of water.</li> <li>First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.</li> </ul>

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

See Section 11

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

Treat symptomatically.

#### **SECTION 5 Fire-fighting measures**

#### Extinguishing media

- ▶ There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

#### Special hazards arising from the substrate or mixture

Fire Incompatibility None known.

#### Special protective equipment and precautions for fire-fighters

Fire Fighting	<ul> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Wear breathing apparatus plus protective gloves in the event of a fire.</li> <li>Prevent, by any means available, spillage from entering drains or water courses.</li> <li>Use fire fighting procedures suitable for surrounding area.</li> </ul>
Fire/Explosion Hazard	<ul> <li>Non combustible.</li> <li>Not considered a significant fire risk, however containers may burn.</li> </ul>

## **SECTION 6 Accidental release measures**

#### Personal precautions, protective equipment and emergency procedures

See section 8

#### **Environmental precautions**

See section 12

Page 3 of 8

#### AlphaLISA CaptSure™ Acceptor Beads (2mg/mL)

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

#### Minor Spills

- ▶ Clean up all spills immediately
- Avoid contact with skin and eves
- Wear impervious gloves and safety glasses.
- Use dry clean up procedures and avoid generating dust.

#### Major Spills

- ► Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Control personal contact with the substance, by using protective equipment and dust respirator.
   Prevent spillage from entering drains, sewers or water courses.

Personal Protective Equipment advice is contained in Section 8 of the SDS

#### **SECTION 7 Handling and storage**

#### Precautions for safe handling

Chemwatch: 5555-20

Version No: 3.1

#### Safe handling

- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Avoid contact with incompatible materials.

#### Other information

- Store in original containers.
- ▶ Keep containers securely sealed.
- Store in a cool, dry area protected from environmental extremes.
- Store away from incompatible materials and foodstuff containers.

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

Suitable container

Brown tube or bottle

- Lined metal can, lined metal pail/ can.
- Plastic pail.
- Polyliner drum.
- Packing as recommended by manufacturer.

Storage incompatibility

lone known

#### SECTION 8 Exposure controls / personal protection

#### Control parameters

Occupational Exposure Limits (OEL)

#### INGREDIENT DATA

Not Available

#### Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
AlphaLISA CaptSure™ Acceptor Beads (2mg/mL)	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
isothiazolinones, mixed	Not Available	Not Available

#### Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
isothiazolinones, mixed	E	≤ 0.1 ppm
Notes:	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.	

#### **Exposure controls**

# Appropriate engineering controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

# Individual protection measures, such as personal protective equipment









## Eye and face protection

- ▶ Safety glasses with side shields
- Chemical goggles
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience.

#### Skin protection

#### See Hand protection below

#### Hands/feet protection

The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

Personal hygiene is a key element of effective hand care.

Issue Date: 25/10/2022

Print Date: 19/09/2024

#### AlphaLISA CaptSure™ Acceptor Beads (2mg/mL)

Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.

• polychloroprene.

• nitrile rubber.

• butyl rubber.

See Other protection below

No special equipment needed when handling small quantities.

OTHERWISE:

• Overalls.

• Barrier cream.

• Evewash unit.

#### Respiratory protection

Type AK-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

- · Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures
- The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurement data, and frequency and likelihood of the worker's exposure ensure users are not subject to high thermal loads which may result in heat stress or distress due to personal protective equipment (powered, positive flow, full face apparatus may be an option).
- · Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory protection. These may be government mandated or vendor recommended.
- · Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a complete respiratory protection program.
- · Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)
- · Use approved positive flow mask if significant quantities of dust becomes airborne
- · Try to avoid creating dust conditions.

#### **SECTION 9 Physical and chemical properties**

#### Information on basic physical and chemical properties White Lyophilysed pellet Appearance Physical state Divided Solid Relative density (Water = 1) Not Available Partition coefficient n-octanol Odour Not Available Not Available Auto-ignition temperature Odour threshold Not Available Not Applicable (°C) Decomposition pH (as supplied) Not Applicable Not Available temperature (°C) Melting point / freezing point Not Available Viscosity (cSt) Not Available (°C) Initial boiling point and Not Available Molecular weight (g/mol) Not Applicable boiling range (°C) Flash point (°C) Not Applicable Taste Not Available **Evaporation rate** Not Available **Explosive properties** Not Available Flammability Not Applicable Oxidising properties Not Available Surface Tension (dyn/cm or Upper Explosive Limit (%) Not Applicable Not Applicable Lower Explosive Limit (%) Not Applicable Volatile Component (%vol) Not Available Vapour pressure (kPa) Not Available Gas group Not Available Solubility in water Miscible pH as a solution (1%) Not Available Vapour density (Air = 1) Not Available VOC g/L Not Available Heat of Combustion (kJ/g) Not Available Ignition Distance (cm) Not Available Flame Duration (s) Flame Height (cm) Not Available Not Available **Enclosed Space Ignition Enclosed Space Ignition** Not Available Not Available Time Equivalent (s/m3) Deflagration Density (g/m3)

#### **SECTION 10 Stability and reactivity**

Reactivity	See section 7
Chemical stability	Product is considered stable and hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

#### **SECTION 11 Toxicological information**

#### Information on toxicological effects

Inhale

The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

Chemwatch: **5555-20** Page **5** of **8** 

Version No. 3.1

AlphaLISA CaptSure™ Acceptor Beads (2mg/mL)

Issue Date: **25/10/2022**Print Date: **19/09/2024** 

Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled. If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack Ingestion of corroborating animal or human evidence The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an Skin Contact occupational setting. Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may cause transient Eve discomfort characterised by tearing or conjunctival redness (as with windburn). Slight abrasive damage may also result. Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course. Chronic Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis, caused by particles less than 0.5 micron penetrating and remaining in the lung. TOXICITY IRRITATION AlphaLISA CaptSure™ Acceptor Beads (2mg/mL) Not Available Not Available TOXICITY IRRITATION dermal (rat) LD50: >1008 mg/kg<sup>[1]</sup> Eye: adverse effect observed (irreversible damage)  $^{[1]}$ isothiazolinones, mixed Inhalation (Rat) LC50: 0.171 mg/l4h<sup>[1]</sup> Skin: adverse effect observed (corrosive)<sup>[1]</sup> Oral (Rat) LD50: 53 mg/kg<sup>[2]</sup> Skin: adverse effect observed (irritating)[1] 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise Legend: specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

The following information refers to contact allergens as a group and may not be specific to this product.

Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions.

In light of potential adverse effects, and to ensure a harmonised risk assessment and management, the EU regulatory framework for biocides has been established with the objective of ensuring a high level of protection of human and animal health and the environment. To this aim, it is required that risk assessment of biocidal products is carried out before they can be placed on the market. A central element in the risk assessment of the biocidal products are the utilization instructions that defines the dosage, application method and amount of applications and thus the exposure of humans and the environment to the biocidal substance.

Humans may be exposed to biocidal products in different ways in both occupational and domestic settings. Many biocidal products are intended for industrial sectors or professional uses only, whereas other biocidal products are commonly available for private use by non-professional users.

## ISOTHIAZOLINONES, MIXED

Formaldehyde generators (releasers) are often used as preservatives. The maximum authorised concentration of free formaldehyde is 0.2% and must be labelled with the warning sign "contains formaldehyde" where the concentration exceeds 0.05%. The use of formaldehyde-releasing preservatives ensures that the level of free formaldehyde in the products is always low but sufficient to inhibit microbial growth - it disrupts metabolism to cause death of the organism. However there is a concern that formaldehyde generators can produce amines capable of causing cancers (nitrosamines) when used in formulations containing amines.

The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia.

#### AlphaLISA CaptSure™ Acceptor Beads (2mg/mL) & ISOTHIAZOLINONES, MIXED

No significant acute toxicological data identified in literature search.

Acute Toxicity	×	Carcinogenicity	×
Skin Irritation/Corrosion	×	Reproductivity	×
Serious Eye Damage/Irritation	×	STOT - Single Exposure	×
Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	×
Mutagenicity	×	Aspiration Hazard	×

Legend:

★ – Data either not available or does not fill the criteria for classification
✓ – Data available to make classification

#### **SECTION 12 Ecological information**

#### Toxicity

AlphaLISA CaptSure™ Acceptor Beads (2mg/mL)	Not Available	Test Duration (hr)  Not Available	Species  Not Available	Value Not Available	Source Not Available
isothiazolinones, mixed	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	0.006mg/L	2
	EC50	48h	Crustacea	0.007mg/l	2

Version No: 3.1

#### AlphaLISA CaptSure™ Acceptor Beads (2mg/mL)

Issue Date: **25/10/2022**Print Date: **19/09/2024** 

LC50	96h	Fish	0.129mg/l	2
EC50	96h	Algae or other aquatic plants	0.036mg/L	2
NOEC(ECx)	48h	Algae or other aquatic plants	<0.001mg/L	2

Legend:

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

#### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients

#### **Bioaccumulative potential**

Ingredient	Bioaccumulation	
	No Data available for all ingredients	
	-	

#### Mobility in soil

Ingredient	Mobility	
	No Data available for all ingredients	

#### **SECTION 13 Disposal considerations**

#### Waste treatment methods

Product / Packaging disposal	Consult State Land Waste Management Authority for disposal.

#### **SECTION 14 Transport information**

#### Labels Required

Marine Pollutant	NO NO

Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

#### 14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
isothiazolinones, mixed	Not Available

#### 14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
isothiazolinones, mixed	Not Available

#### **SECTION 15 Regulatory information**

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

isothiazolinones, mixed is found on the following regulatory lists

Not Applicable

#### **Additional Regulatory Information**

Not Applicable

#### **Federal Regulations**

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### Section 311/312 hazard categories

Flammable (Gases, Aerosols, Liquids, or Solids)	
Gas under pressure	No
Explosive	No
Self-heating Self-heating	No
Pyrophoric (Liquid or Solid)	No
	No
Corrosive to metal	No

Chemwatch: **5555-20** Page **7** of **8** 

Version No: 3.1

#### AlphaLISA CaptSure™ Acceptor Beads (2mg/mL)

Issue Date: **25/10/2022**Print Date: **19/09/2024** 

Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	No
Acute toxicity (any route of exposure)	No
Reproductive toxicity	No
Skin Corrosion or Irritation	No
Respiratory or Skin Sensitization	No
Serious eye damage or eye irritation	No
Specific target organ toxicity (single or repeated exposure)	No
Aspiration Hazard	No
Germ cell mutagenicity	No
Simple Asphyxiant	No
Hazards Not Otherwise Classified	No

#### US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

None Reported

#### US. EPCRA Section 313 Toxic Release Inventory (TRI) (40 CFR 372)

None Reported

#### **Additional Federal Regulatory Information**

Not Applicable

#### State Regulations

#### US. California Proposition 65

None Reported

#### **Additional State Regulatory Information**

Not Applicable

#### **National Inventory Status**

National Inventory	Status	
Australia - AIIC / Australia Non- Industrial Use	No (isothiazolinones, mixed)	
Canada - DSL	Yes	
Canada - NDSL	No (isothiazolinones, mixed)	
China - IECSC	Yes	
Europe - EINEC / ELINCS / NLP	No (isothiazolinones, mixed)	
Japan - ENCS	Yes	
Korea - KECI	Yes	
New Zealand - NZIoC	Yes	
Philippines - PICCS	Yes	
USA - TSCA	No (isothiazolinones, mixed)	
Taiwan - TCSI	Yes	
Mexico - INSQ	No (isothiazolinones, mixed)	
Vietnam - NCI	Yes	
Russia - FBEPH	Yes	
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.	

#### **SECTION 16 Other information**

Revision Date	25/10/2022
Initial Date	13/07/2022

#### **SDS Version Summary**

Version	Date of Update	Sections Updated
3.1	25/10/2022	Disposal considerations - Disposal, Handling and storage - Storage (storage incompatibility)

#### Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Chemwatch: 5555-20 Page 8 of 8 Issue Date: 25/10/2022 Version No: 3.1

Print Date: 19/09/2024 AlphaLISA CaptSure™ Acceptor Beads (2mg/mL)

#### **Definitions and abbreviations**

- PC TWA: Permissible Concentration-Time Weighted Average
   PC STEL: Permissible Concentration-Short Term Exposure Limit
- ► IARC: International Agency for Research on Cancer
- ▶ ACGIH: American Conference of Governmental Industrial Hygienists
- ▶ STEL: Short Term Exposure Limit
- ► TEEL: Temporary Emergency Exposure Limit。
- ▶ IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure StandardOSF: Odour Safety Factor
- ▶ NOAEL: No Observed Adverse Effect Level
- ▶ LOAEL: Lowest Observed Adverse Effect Level
- ▶ TLV: Threshold Limit Value
- ▶ LOD: Limit Of Detection
- ▶ OTV: Odour Threshold Value
- ▶ BCF: BioConcentration Factors
- ▶ BEI: Biological Exposure Index
- ▶ DNEL: Derived No-Effect Level
- ▶ PNEC: Predicted no-effect concentration
- ▶ AIIC: Australian Inventory of Industrial Chemicals
- ▶ DSL: Domestic Substances List
- ▶ NDSL: Non-Domestic Substances List
- ▶ IECSC: Inventory of Existing Chemical Substance in China
- EINECS: European Inventory of Existing Commercial chemical Substances
   ELINCS: European List of Notified Chemical Substances
   NLP: No-Longer Polymers

- ▶ ENCS: Existing and New Chemical Substances Inventory
- ▶ KECI: Korea Existing Chemicals Inventory
- NZIoC: New Zealand Inventory of Chemicals
   PICCS: Philippine Inventory of Chemicals and Chemical Substances
- ► TSCA: Toxic Substances Control Act
- TCSI: Taiwan Chemical Substance Inventory
- ▶ INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
- ▶ FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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TEL (+61 3) 9572 4700.



# Alpha Streptavidin Donor Beads (2mg/mL) TGR BioSciences Pty Ltd (an Abcam Company)

Chemwatch: **5555-08**Version No: **4.1**Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Issue Date: **25/10/2022** Print Date: **19/09/2024** S.GHS.USA.EN.E

#### **SECTION 1 Identification**

Product Identifier		
Product name	Alpha Streptavidin Donor Beads (2mg/mL)	
Chemical Name	Not Applicable	
Synonyms	Not Available	
Chemical formula	Not Applicable	
Other means of identification	Not Available	

#### Recommended use of the chemical and restrictions on use

Relevant identified uses	Use of Substances/mixtures for Laboratory Research Use Only. Do Not Use for diagnostic, therapeutic or clinical use.
	Use according to manufacturer's directions.

#### Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

- · · · · · · · · · · · · · · · · · · ·		
Registered company name	TGR BioSciences Pty Ltd (an Abcam Company)	
Address	nit 3-4, 31 George Street Thebarton SA 5031 Australia	
Telephone	08 7228 2141	
Fax	Not Available	
Website	www.tgrbiosciences.com	
Email	ADE.info@abcam.com	

#### Emergency phone number

zmorgonoy phono numbor		
	Association / Organisation	Chemtrec Aus/North America/Revvity
	Emergency telephone numbers	+61290372994 (Mon-Fri 8am to 5pm)
	Other emergency telephone numbers	+1703-527-3887/+31505445971

#### SECTION 2 Hazard(s) identification

#### Classification of the substance or mixture

Not considered a Hazardous Substance by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). Not classified as Dangerous Goods for transport purposes.

#### NFPA 704 diamond



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification	Not Applicable
Label elements	
Hazard pictogram(s)	Not Applicable
Signal word	Not Applicable

Chemwatch: **5555-08** Page **2** of **7** 

Version No: 4.1

#### Alpha Streptavidin Donor Beads (2mg/mL)

Issue Date: 25/10/2022 Print Date: 19/09/2024

Not Applicable

#### Hazard(s) not otherwise classified

Not Applicable

#### Precautionary statement(s) Prevention

Not Applicable

#### Precautionary statement(s) Response

Not Applicable

#### Precautionary statement(s) Storage

Not Applicable

#### Precautionary statement(s) Disposal

P501

Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

#### **SECTION 3 Composition / information on ingredients**

#### Substances

See section below for composition of Mixtures

#### Mixtures

CAS No	%[weight]	Name
Not Available	100	Ingredients determined not to be hazardous

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

#### **SECTION 4 First-aid measures**

#### Description of first aid measures

Eye Contact	If this product comes in contact with eyes:  Wash out immediately with water.  If irritation continues, seek medical attention.  Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact  If skin or hair contact occurs:  Flush skin and hair with running water (and soap if available).  Seek medical attention in event of irritation.	
Inhalation	<ul> <li>If fumes, aerosols or combustion products are inhaled remove from contaminated area.</li> <li>Other measures are usually unnecessary.</li> </ul>
Ingestion	<ul> <li>Immediately give a glass of water.</li> <li>First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.</li> </ul>

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

See Section 11

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

Treat symptomatically.

#### **SECTION 5 Fire-fighting measures**

#### Extinguishing media

The product contains a substantial proportion of water, therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas.

Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances. In such an event consider:

foam.

#### Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.
----------------------	-------------

#### Special protective equipment and precautions for fire-fighters

# Fire Fighting Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves in the event of a fire. Prevent, by any means available, spillage from entering drains or water courses. Use fire fighting procedures suitable for surrounding area. The material is not readily combustible under normal conditions. However, it will break down under fire conditions and the organic component may burn. Not considered to be a significant fire risk. Heat may cause expansion or decomposition with violent rupture of containers. Decomposes on heating and produces toxic fumes of: carbon dioxide (CO2) nitrogen oxides (NOx) other pyrolysis products typical of burning organic material.

#### SECTION 6 Accidental release measures

Chemwatch: 5555-08 Page 3 of 7

#### Alpha Streptavidin Donor Beads (2mg/mL)

Issue Date: 25/10/2022 Print Date: 19/09/2024

#### Personal precautions, protective equipment and emergency procedures

See section 8

Version No: 4.1

#### **Environmental precautions**

See section 12

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

wellous and material for containment and occaring up	
Minor Spills	<ul> <li>Clean up all spills immediately.</li> <li>Avoid breathing vapours and contact with skin and eyes.</li> <li>Control personal contact with the substance, by using protective equipment.</li> <li>Contain and absorb spill with sand, earth, inert material or vermiculite.</li> </ul>
Major Spills	Minor hazard.  ► Clear area of personnel.  ► Alert Fire Brigade and tell them location and nature of hazard.  ► Control personal contact with the substance, by using protective equipment as required.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

#### **SECTION 7 Handling and storage**

Precautions for safe handling		
Safe handling	<ul> <li>Limit all unnecessary personal contact.</li> <li>Wear protective clothing when risk of exposure occurs.</li> <li>Use in a well-ventilated area.</li> <li>Avoid contact with incompatible materials.</li> </ul>	
Other information	<ul> <li>Store in original containers.</li> <li>Keep containers securely sealed.</li> <li>Store in a cool, dry, well-ventilated area.</li> <li>Store away from incompatible materials and foodstuff containers.</li> </ul>	

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

Suitable container	Brown tube or brown bottle.  Polyethylene or polypropylene container. Packing as recommended by manufacturer. Check all containers are clearly labelled and free from leaks.
Storage incompatibility None known	

#### SECTION 8 Exposure controls / personal protection

when making a final choice.

Personal hygiene is a key element of effective hand care.

#### **Control parameters**

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Not Available

#### Emergency Limits

Ingredient	TEEL-1	TEEL-2		TEEL-3
Alpha Streptavidin Donor Beads (2mg/mL)	Not Available	Not Available		Not Available
Ingredient	Original IDLH		Revised IDLH	
Alpha Streptavidin Donor	Not Available		Not Available	

Exposure controls	
Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are:  Process controls which involve changing the way a job activity or process is done to reduce the risk.  Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.
Individual protection measures, such as personal protective equipment	
Eye and face protection	<ul> <li>Safety glasses with side shields</li> <li>Chemical goggles.</li> <li>Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience.</li> </ul>
Skin protection	See Hand protection below
Hands/feet protection	Wear general protective gloves, eg. light weight rubber gloves. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed

Chemwatch: **5555-08**Version No: **4.1** 

#### Alpha Streptavidin Donor Beads (2mg/mL)

Issue Date: **25/10/2022** Print Date: **19/09/2024** 

Body protection	See Other protection below
Other protection	No special equipment needed when handling small quantities.  OTHERWISE:  Overalls.  Barrier cream.  Eyewash unit.

#### **SECTION 9 Physical and chemical properties**

Appearance	Blue liquid; mixes with water.		
Physical state	Liquid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable
pH (as supplied)	Not Available	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available
Heat of Combustion (kJ/g)	Not Available	Ignition Distance (cm)	Not Available
Flame Height (cm)	Not Available	Flame Duration (s)	Not Available
Enclosed Space Ignition Time Equivalent (s/m3)	Not Available	Enclosed Space Ignition Deflagration Density (g/m3)	Not Available

#### **SECTION 10 Stability and reactivity**

Reactivity	See section 7
Chemical stability Product is considered stable and hazardous polymerisation will not occur.	
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

## **SECTION 11 Toxicological information**

Information	on	toxicological	effects

ormation on toxicological el	fects		
Inhaled		ture of product se health effects or irritation of the respiratory tract (as classified by EC Directives using animal e requires that exposure be kept to a minimum and that suitable control measures be used in an	
Ingestion	The material has <b>NOT</b> been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.		
Skin Contact	The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.		
Eye	Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).		
Chronic	Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.		
Alpha Streptavidin Donor	TOXICITY	IRRITATION	
Beads (2mg/mL)	Not Available	Not Available	
Legend:	Value obtained from Europe ECHA Regist     specified data extracted from RTECS - Regist	ered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise ster of Toxic Effect of chemical Substances	

Chemwatch: **5555-08** Page **5** of **7** 

Version No: 4.1 Alpha Streptavidin Donor Beads (2mg/mL)

Issue Date: 25/10/2022

Print Date: 19/09/2024

Alpha Streptavidin Donor Beads (2mg/mL)	No significant acute toxicological data identified in literature search.		
Acute Toxicity	X	Carcinogenicity	×
Skin Irritation/Corrosion	×	Reproductivity	×
Serious Eye Damage/Irritation	×	STOT - Single Exposure	×
Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	×
Mutagenicity	×	Aspiration Hazard	×

Legend: X – Data either not available or does not fill the criteria for classification

- Data available to make classification

#### **SECTION 12 Ecological information**

#### Toxicity

Alaka Ctaratavidia Danas	Endpoint	Test Duration (hr)	Species	Value	Source
Alpha Streptavidin Donor Beads (2mg/mL)	Not Available	Not Available	Not Available	Not Available	Not Available
Legend:	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data				

#### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients

#### Bioaccumulative potential

Ingredient Bioaccumulation	
	No Data available for all ingredients

#### Mobility in soil

Ingredient	Mobility
	No Data available for all ingredients

#### **SECTION 13 Disposal considerations**

#### Waste treatment methods

Product / Packaging disposal	Consult State Land Waste Management Authority for disposal.
------------------------------	---

#### **SECTION 14 Transport information**

#### Labels Required

Labeis Acquired		
Marine Pollutant	NO	

Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

#### 14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Froduct Hairie	Group	
14.7.3. Transport in bulk in accordance with the IGC Code		
Product name	Ship Type	

#### **SECTION 15 Regulatory information**

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

#### **Additional Regulatory Information**

Not Applicable

#### **Federal Regulations**

Version No: 4.1

#### Alpha Streptavidin Donor Beads (2mg/mL)

Issue Date: **25/10/2022**Print Date: **19/09/2024** 

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### Section 311/312 hazard categories

Flammable (Gases, Aerosols, Liquids, or Solids)	No
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	No
Acute toxicity (any route of exposure)	No
Reproductive toxicity	No
Skin Corrosion or Irritation	No
Respiratory or Skin Sensitization	No
Serious eye damage or eye irritation	No
Specific target organ toxicity (single or repeated exposure)	No
Aspiration Hazard	No
Germ cell mutagenicity	No
Simple Asphyxiant	No
Hazards Not Otherwise Classified	No

#### US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

None Reported

#### US. EPCRA Section 313 Toxic Release Inventory (TRI) (40 CFR 372)

None Reported

#### **Additional Federal Regulatory Information**

Not Applicable

#### State Regulations

#### US. California Proposition 65

None Reported

#### Additional State Regulatory Information

Not Applicable

#### **National Inventory Status**

reactional involvery otatao	
National Inventory	Status
Australia - AIIC / Australia Non- Industrial Use	Not Available
Canada - DSL	Not Available
Canada - NDSL	Not Available
China - IECSC	Not Available
Europe - EINEC / ELINCS / NLP	Not Available
Japan - ENCS	Not Available
Korea - KECI	Not Available
New Zealand - NZIoC	Not Available
Philippines - PICCS	Not Available
USA - TSCA	Not Available
Taiwan - TCSI	Not Available
Mexico - INSQ	Not Available
Vietnam - NCI	Not Available
Russia - FBEPH	Not Available
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

#### **SECTION 16 Other information**

Revision Date	25/10/2022
Initial Date	12/07/2022

Chemwatch: 5555-08 Version No: 4.1

#### Alpha Streptavidin Donor Beads (2mg/mL)

Issue Date: 25/10/2022 Print Date: 19/09/2024

#### **SDS Version Summary**

Version	Date of Update	Sections Updated
3.1	16/08/2022	Name
4.1	25/10/2022	Disposal considerations - Disposal, Handling and storage - Storage (storage incompatibility)

#### Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

#### **Definitions and abbreviations**

- ▶ PC TWA: Permissible Concentration-Time Weighted Average
- ▶ PC STEL: Permissible Concentration-Short Term Exposure Limit
- ► IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- ▶ STEL: Short Term Exposure Limit
- ► TEEL: Temporary Emergency Exposure Limit。
- ▶ IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- ► TLV: Threshold Limit Value
- ▶ LOD: Limit Of Detection
- OTV: Odour Threshold Value
- ▶ BCF: BioConcentration Factors
- ▶ BEI: Biological Exposure Index
- ▶ DNEL: Derived No-Effect Level
- ▶ PNEC: Predicted no-effect concentration
- AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
- ▶ NDSL: Non-Domestic Substances List
- ▶ IECSC: Inventory of Existing Chemical Substance in China
- ▶ EINECS: European INventory of Existing Commercial chemical Substances
- ▶ ELINCS: European List of Notified Chemical Substances
- NLP: No-Longer Polymers
- ► ENCS: Existing and New Chemical Substances Inventory
- ▶ KECI: Korea Existing Chemicals Inventory
- NZIoC: New Zealand Inventory of Chemicals
- ▶ PICCS: Philippine Inventory of Chemicals and Chemical Substances
- TSCA: Toxic Substances Control Act TCSI: Taiwan Chemical Substance Inventory
- INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
- ▶ FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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TEL (+61 3) 9572 4700.



## Positive Control Lysate - Ultra TGR BioSciences Pty Ltd (an Abcam Company)

Chemwatch: **5555-32** Version No: **4.1** Safety Data Sheet according to OSHA HazCom Standard (2012) requirements Issue Date: **25/10/2022** Print Date: **19/09/2024** S.GHS.USA.EN.E

#### **SECTION 1 Identification**

Product Identifier	
Product name	Positive Control Lysate - Ultra
Chemical Name	Not Applicable
Synonyms	Not Available
Chemical formula	Not Applicable
Other means of identification	Not Available

#### Recommended use of the chemical and restrictions on use

Relevant identified uses	Use of Substances/mixtures for Laboratory Research Use Only. Do Not Use for diagnostic, therapeutic or clinical use.
	Use according to manufacturer's directions.

#### Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	TGR BioSciences Pty Ltd (an Abcam Company)
Address	Unit 3-4, 31 George Street Thebarton SA 5031 Australia
Telephone	+61 08 7228 2141
Fax	Not Available
Website	www.tgrbiosciences.com
Email	ADE.info@abcam.com

#### Emergency phone number

Association / Organisation	Chemtrec Aus/North America/Revvity
Emergency telephone numbers	+61290372994 (Mon-Fri 8am to 5pm)
Other emergency telephone numbers	+1703-527-3887/+31505445971

#### SECTION 2 Hazard(s) identification

#### Classification of the substance or mixture

Not considered a Hazardous Substance by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). Not classified as Dangerous Goods for transport purposes.

#### NFPA 704 diamond



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification	Not Applicable
Label elements	
Hazard pictogram(s)	Not Applicable
Signal word	Not Applicable

Chemwatch: 5555-32 Page 2 of 8

#### Positive Control Lysate - Ultra

Issue Date: 25/10/2022 Print Date: 19/09/2024

Not Applicable

Version No: 4.1

#### Hazard(s) not otherwise classified

Not Applicable

#### Precautionary statement(s) Prevention

Not Applicable

#### Precautionary statement(s) Response

Not Applicable

#### Precautionary statement(s) Storage

Not Applicable

#### Precautionary statement(s) Disposal

P501 Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

#### **SECTION 3 Composition / information on ingredients**

#### Substances

See section below for composition of Mixtures

#### **Mixtures**

CAS No	%[weight]	Name
55965-84-9	<0.01	isothiazolinones, mixed
9002-93-1	>0.1	p-tert-octylphenol ethoxylate
Not Available	balance	Ingredients determined not to be hazardous

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

#### **SECTION 4 First-aid measures**

#### Description of first aid measures

Eye Contact	If this product comes in contact with eyes:  Wash out immediately with water.  If irritation continues, seek medical attention.  Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin or hair contact occurs:  ▶ Flush skin and hair with running water (and soap if available).  ▶ Seek medical attention in event of irritation.
Inhalation	<ul> <li>If fumes, aerosols or combustion products are inhaled remove from contaminated area.</li> <li>Other measures are usually unnecessary.</li> </ul>
Ingestion	<ul> <li>Immediately give a glass of water.</li> <li>First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.</li> </ul>

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

See Section 11

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

Treat symptomatically.

#### **SECTION 5 Fire-fighting measures**

#### Extinguishing media

- There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

#### Special hazards arising from the substrate or mixture

Fire Incompatibility None known.

#### Special protective equipment and precautions for fire-fighters

## Fire Fighting

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves in the event of a fire.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding area.

#### Fire/Explosion Hazard

▶ Not considered a significant fire risk, however containers may burn.

#### **SECTION 6 Accidental release measures**

#### Personal precautions, protective equipment and emergency procedures

See section 8

#### **Environmental precautions**

See section 12

Chemwatch: 5555-32 Version No: 4.1

#### Positive Control Lysate - Ultra

Issue Date: 25/10/2022 Print Date: 19/09/2024

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

Minor Spills	<ul> <li>Clean up all spills immediately.</li> <li>Avoid contact with skin and eyes.</li> <li>Wear impervious gloves and safety glasses.</li> <li>Use dry clean up procedures and avoid generating dust.</li> </ul>
Major Spills	<ul> <li>Clear area of personnel and move upwind.</li> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Control personal contact with the substance, by using protective equipment and dust respirator.</li> <li>Prevent spillage from entering drains, sewers or water courses.</li> </ul>

Personal Protective Equipment advice is contained in Section 8 of the SDS

#### **SECTION 7 Handling and storage**

#### Precautions for safe handling

# Safe handling

- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Avoid contact with incompatible materials
- Other information
- Store in original containers. Keep containers securely sealed.
- Store in a cool, dry area protected from environmental extremes.
- Store away from incompatible materials and foodstuff containers.

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

#### Suitable container

- Polvethylene or polypropylene container.
- Packing as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

Storage incompatibility None known

#### SECTION 8 Exposure controls / personal protection

#### **Control parameters**

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Not Available

#### Emergency Limits

Ingredient	TEEL-1	TEEL-2		TEEL-3
Positive Control Lysate - Ultra	Not Available	Not Available		Not Available
Ingredient	Original IDLH		Revised IDLH	
isothiazolinones, mixed	Not Available		Not Available	
p-tert-octylphenol ethoxylate	Not Available		Not Available	

#### Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit	
isothiazolinones, mixed	E	≤ 0.1 ppm	
p-tert-octylphenol ethoxylate	E	≤ 0.1 ppm	
Notes:	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.		

#### Exposure controls

#### Appropriate engineering controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

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









## Eye and face protection

- Safety glasses with side shields
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience.

#### Skin protection

#### See Hand protection below

#### Hands/feet protection

The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

Personal hygiene is a key element of effective hand care.

#### Positive Control Lysate - Ultra

	Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.  • polychloroprene.  • nitrile rubber.  • butyl rubber.
Body protection	See Other protection below
Other protection	No special equipment needed when handling small quantities.  OTHERWISE:  Overalls.  Barrier cream.  Eyewash unit.

#### Respiratory protection

Type AK-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

- · Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures.
- The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurement data, and frequency and likelihood of the worker's exposure ensure users are not subject to high thermal loads which may result in heat stress or distress due to personal protective equipment (powered, positive flow, full face apparatus may be an option).
- Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory protection. These may be government mandated or vendor recommended.
- · Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a complete respiratory protection program.
- · Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)
- · Use approved positive flow mask if significant quantities of dust becomes airborne.
- · Try to avoid creating dust conditions.

#### **SECTION 9 Physical and chemical properties**

Appearance	White Lyophilysed pellet.		
Physical state	Divided Solid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable
pH (as supplied)	Not Applicable	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Applicable
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available
Heat of Combustion (kJ/g)	Not Available	Ignition Distance (cm)	Not Available
Flame Height (cm)	Not Available	Flame Duration (s)	Not Available
Enclosed Space Ignition Time Equivalent (s/m3)	Not Available	Enclosed Space Ignition Deflagration Density (g/m3)	Not Available

#### **SECTION 10 Stability and reactivity**

Reactivity	See section 7
Chemical stability	Product is considered stable and hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

#### **SECTION 11 Toxicological information**

#### Information on toxicological effects

Inhale

The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

Chemwatch: **5555-32**Version No: **4.1** 

#### Positive Control Lysate - Ultra

Issue Date: **25/10/2022**Print Date: **19/09/2024** 

Pessive with reported exercision, variation, any electrical and control of control control in the control in				
Sin Contact  Sin Contact  The recitable control types  Foolitive Control types  Logorith  Logori		disability if excessive concentrations of particulate are inhaled.  If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be		
The restartal is not fought to produce advance heath effects or eith initiation following contact (an desarted by CD inventions, and in information compatitions and interest of the compatition and interest of the compatition and interest of the compatition and interest on the c	Ingestion	The state of the s	on systems as	s "harmful by ingestion". This is because of the lack
decoming of the control characterised by tearing or compacting and entires (see with windburn). Slight absorate eatings may also result.	Skin Contact	The material is not thought to produce adverse health effects or skin irritatio models). Nevertheless, good hygiene practice requires that exposure be ke		
Chronic Long removance in plant particles in present particles and particles are another of cause.  Positive Control Lysae.  In	Eye		* * * * * * * * * * * * * * * * * * * *	
Not Available   Not Available   Not Available   Not Available	Chronic	animal models); nevertheless exposure by all routes should be minimised a Long term exposure to high dust concentrations may cause changes in lung	is a matter of	course.
Not Available   Not Available   Not Available   Not Available	Decitive Control I veets	TOXICITY	RITATION	
Softhiazolimones, mixed   Inhabation (Fatal LCSIO 0.171 mg/sht <sup>-1</sup>   Silen: adverse effect observed (innersity)   Inhabation (Fatal LCSIO 0.171 mg/sht <sup>-1</sup>   Silen: adverse effect observed (innersity)   Inhabation (Fatal LCSIO 0.171 mg/sht <sup>-1</sup>   Silen: adverse effect observed (innersity)   Inhabation (Fatal LCSIO 0.171 mg/sht <sup>-1</sup>   Silen: adverse effect observed (innersity)   Inhabation (Fatal LCSIO 0.171 mg/sht <sup>-1</sup>   Silen: adverse effect observed (innersity)   Inhabation (Fatal LCSIO 0.171 mg/sht <sup>-1</sup>   Silen: adverse effect observed (innersity)   Inhabation (Fatal LCSIO 0.171 mg/sht <sup>-1</sup>   Silen: adverse effect observed (innersity)   Inhabation (Fatal LCSIO 0.171 mg/sht <sup>-1</sup>   Silen: adverse effect observed (innersity)   Inhabation (Fatal LCSIO 0.171 mg/sht <sup>-1</sup>   Silen: adverse effect observed (innersity)   Inhabation (Fatal LCSIO 0.171 mg/sht <sup>-1</sup>   Silen: adverse effect observed (innersity)   Inhabation (Fatal LCSIO 0.171 mg/sht <sup>-1</sup>   Silen: adverse effect observed (innersity)   Inhabation (Fatal LCSIO 0.171 mg/sht <sup>-1</sup>   Silen: adverse effect observed (innersity)   Inhabation (Fatal LCSIO 0.171 mg/sht <sup>-1</sup>   Silen: adverse effect observed (innersity)   Inhabation (Fatal LCSIO 0.171 mg/sht <sup>-1</sup>   Silen: adverse effect observed (innersity)   Inhabation (Fatal LCSIO 0.171 mg/sht <sup>-1</sup>   Silen: adverse effect observed (innersity)   Inhabation (Fatal LCSIO 0.171 mg/sht <sup>-1</sup>   Silen: adverse effect observed (innersity)   Inhabation (Fatal LCSIO 0.171 mg/sht <sup>-1</sup>   Silen: adverse effect observed (innersity)   Inhabation (Fatal LCSIO 0.171 mg/sht <sup>-1</sup>   Silen: adverse effect observed (innersity)   Inhabation (Fatal LCSIO 0.171 mg/sht <sup>-1</sup>   Silen: adverse effect observed (innersity)   Inhabation (Fatal LCSIO 0.171 mg/sht <sup>-1</sup>   Silen: adverse effect observed (innersity)   Inhabation (innersity)   Inh				
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Inhalation (Rut) LCSC: 0.171 mg/shl/1)  Oral (Rat) LDSC: 50 mg/slg <sup>-12</sup> Sixtin adverse effect observed (cornosive) <sup>[1]</sup> ptert-octylphenol ethoxylate  TOXICITY  IRRITATION  Oral (Rat) LDSC: 1800 mg/slg <sup>-12</sup> Eye (rabbit): 1 mg - moderate  Sixtin (human): 2 mg/sd -1 - mid  Legend:  1. Value obtained from FILESC: Register of State Effect of chemical Substances  Sixtin (human): 2 mg/sd -1 - mid  1. Value obtained from FILESC: Register of State Effect of chemical Substances  Sixtin (human): 2 mg/sd -1 - mid  1. Value obtained from FILESC: Register of State Effect of chemical Substances  The following information refers to contact allergens as a group and may not be specific to this product.  Contact allergins quickly manifest themselves as contact occurs, more rarely as utilication or Quincke's oederna. The pathogenesis of contact decreams involves a cell-mediated (T hymphocytes) immune reaction of the delayed type. Other allergic six in reactions, e.g. contact, uricans, involves antibody-mediated rimmune reactions.  International contact involves a cell-mediated (T hymphocytes) immune reaction of the delayed type. Other allergic six involves into the manifest in the second orange of the second orange of the products of contact decreams and the environment to the initial seasonsment of the bloodial products are only to the second orange of the second oran				fect observed (irreversible damage) <sup>[1]</sup>
P-TERT-OCTYLPHONO  Cord (Rai) LD50: 83 mg/kg <sup>[2]</sup> Skin: adverse effect observed (imitating) <sup>[1]</sup> IRRITATION  Oral (Rai) LD50: 1800 mg/kg <sup>[2]</sup> Eye (rabbi): 1 mg - moderate  Skin (human): 2 mg/dd - mid  Legend:  1. Value obtained from Europe ECHA Registered Substances - Acute roxicity 2. Value obtained from manufacturer's SDS. Unless otherwise appealined date extracted from RTECS - Register of Toxic Effect of chemical Substances  The following information refers to contact allergens as a group and may not be specific to this product.  Contact allergens quickly manifest themselves as contact of comment and substances.  The following information refers to contact allergens as a group and may not be specific to this product.  Contact allergens quickly manifest themselves as contact of comment and substances.  In light of potential adverse effects, and to ensure a harmonised risk assessment and management, the EU regulatory framework for booked has been established with the objective of ensuring in july level of production of human and emiliar and the environment. To the first assessment of the blocklid products are than ullication instructions had defines the following explications and them the exposure of humans and the environment to the blocklid products are comment and defines the following explication method and summon of the first assessment of the blocklid products are than ullication instructions had defines the following explication method and summon of the first assessment of the blocklid products are than ullication instructions that defines the following explication and the three exposures of humans and the environment to the blocklid products are commonly washing the products are commonly washing the products are commonly washing the products are commonly with the warming aging "oral of the first three products as always for the blocklid products are summer to the blocklid products are commonly washing the products are commonly with a product and the products are commonly produced and products in inf	isothiazolinones, mixed			
TOXICITY   IRRITATION				
P-tert-octylphenol sthoxylate  Crail (Earl) LD50: 1800 mg/kg <sup>[2]</sup> Eye (rabbil): 1 mg - moderate  Skin (human): 2 mg/60-1 - mid  Legend:  1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Registered Substances - Acute toxicity 2. Value obtained from surfaces of contract and surfaces of toxicity 3 metal and surfaces of the surface of toxicity 3 metal and surfaces of the surface of toxicity 3 metal and surfaces of the surface of toxicity 3 metal and surfaces of the surface of the		Ofal (Rat) LD50. 55 mg/kg <sup>c</sup> <sup>2</sup>	iii. auveise ei	nect observed (irritating). 7
Legend:  1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified date extracted from RTECS - Register of Toxic Effect of chemical Substances  The following information refers to contact allergens as a group and may not be specific to this product.  Contact allerging quickly manifest themselves as contact excerns, more rarely as unboran or Culinick's cedema. The pathogenesis of contact allergines quickly manifest themselves as contact excerns, more rarely as unboran or Culinick's cedema. The pathogenesis of contact accessment with the contact allergines quickly manifest themselves as contact excerns, more rarely as unboran or Culinick's cedema. The pathogenesis of contact accessment and contact and contact and accessment and management, the EU regulatory framework for bloodies has been established with the objective of ensuring a high level of protection of human and animal health and the environment. To the limitation in the risk assessment of the bloodies has been established with the objective of ensuring a high level of protection of human and animal health and the environment. To the limitation in the risk assessment of the bloodies has been established with the description of the objective of ensuring a high level of protection of human and animal health and the environment to the biodical substance.  Humans may be exposed to bloodial products are intended for industrial sectors or professional uses only, whereas other bloodial products are intended for industrial sectors or professional uses only, whereas other bloodial products are intended for industrial sectors professional uses only, whereas other bloodial products are common to the commentation of the formaticity of the commentation of the formaticity of the products and the professional uses.  ISOTHIAZOLINONES, MIXED  ISOTHIAZOLINONES, MIXED  ISOTHIAZOLINONES, MIXED  INDUSTRIAL SECONDA AND ASSESS ANEW SECONDA AND ASSESS AND ASSESS AND ASSESS AND ASSESS AND ASSESS		TOXICITY	RITATION	
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The following information refers to contact allergens as a group and may not be specific to this product.  Contact allergies quickly manifest themselves as contact eczema, more rarely as utilicaria or Quincke's oedema. The pathogenesis of contact eczema involves a relich-motives a cell-motivated of Tymphocytes) immune reaction of the delayed briter allergies give in reactions, e.g. contact utilizatis, involves antibo-privated and immune reactions.  Unitaria, involve antibo-privated and immune reactions.  It is required that ink assessment and management, the EU regulatory framework for bloodes has been established with the objective of nearing in high level of protection of human and animal health and the environment. To this aim, it is required that ink assessment and management, the EU regulatory framework for bloodes has been established with the objective of nearing in a high level of protection of human and management in the risk assessment of the blooded sproducts are designed to the products and products and the relieved of applications and thus the exposure of humans and the environment to the blooded substance.  Humans may be exposed to blooded products in different ways in both occupational and domestic settings. Many blooded for industrial sectors or professional uses only, whereas other blooded products are commonly available for private use by monitorial products and the products and an advance of the promotection of the products and an advance of the promotection and advanced for industrial sectors or professional uses only, whereas other blooded products and products and products and an advanced for industrial sectors or professional uses only, whereas other blooded products and an advanced for industrial sectors or professional uses of products and an advanced to the products		Sk	in (human): 2	! mg/3d -l - mild
Contact allergies quickly manifest themselves as contact eczena, more rarely as uniteriation of Outnote's oederma. The pathogenesis of contact eczena involves a cell-incellated (If ymphocytes) immune reactions of the delayed ymp. Chlera allergies desir reactions, e.g., contact urticaria, involve antibody-mediated immune reactions.  In light of potential adverser effects, and to ensure a harmonised risk assessment and management, the EU regulatory framework for biocides has been established with the objective of ensuring a high level of protection of human and animal health and the environment. To this earn, it is required thair risk assessment of biocided products is element on the placed or the market. A central element in spiriture and the provision of the protection of human and animal health and the environment of applications and thus the exposure of humans and the environment to the biocidial substance.  Humans may be exposed to biocidal products in effortent ways in both occupational and domestic settings. Many biocidal products are intended for industrial sectors or professional uses only, whereas other biocidial products are commonly available for private use by non-professional users.  Formaldehyde generators (releasers) are often used as preservatives. The maximum authorised concentration of free formaldehyde in the products are intended for industrial sectors or professional users.  Formaldehyde generators (releasers) are often used as preservatives. The maximum authorised concentration exceeds 0.05%. The user of formaldehyde in the products is always to with sufficient to inhibit microbial growth - if the material and by the initiating to the eye, with products or a concern hat foreign concentration exceeds 0.05%. The user of formaldehyde in the products is always to with sufficient to inhibit microbial growth - if the material and by the initiating to the eye, with products or a concern hat foreign sufficient products or cause of the substance.  The material may be initiating to the eye, with prof	Legend:			
P-TERT-OCTYLPHENOL ETHOXYLATE  P-TERT-OCTYLPHENOL (8 and below) were considered safe as used, whereas short-chain nonoxynols (8 and below) were considered safe as used in rinse-off products and seas used in rinse-off products and safe at concentrations less than 50% in leave-on formulations. Acute exposure of hamsters to Octoxynol-9 by bronchopulations as used in rinse-off products and seas used in rinse-off prod	ISOTHIAZOLINONES, MIXED	biocides has been established with the objective of ensuring a high level of protection of human and animal health and the environment. To this aim, it is required that risk assessment of biocidal products is carried out before they can be placed on the market. A central element in the risk assessment of the biocidal products are the utilization instructions that defines the dosage, application method and amount of applications and thus the exposure of humans and the environment to the biocidal substance.  Humans may be exposed to biocidal products in different ways in both occupational and domestic settings. Many biocidal products are intended for industrial sectors or professional uses only, whereas other biocidal products are commonly available for private use by non-professional users.  Formaldehyde generators (releasers) are often used as preservatives. The maximum authorised concentration of free formaldehyde is 0.2% and must be labelled with the warning sign "contains formaldehyde" where the concentration exceeds 0.05%. The use of formaldehyde-releasing preservatives ensures that the level of free formaldehyde in the products is always low but sufficient to inhibit microbial growth - it disrupts metabolism to cause death of the organism. However there is a concern that formaldehyde generators can produce amines capable of causing cancers (nitrosamines) when used in formulations containing amines.  The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.  The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.  Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating comp		
Vitra & ISOTHIAZOLINONES, MIXED   No significant acute toxicological data identified in literature search.		Octoxynols of various chain lengths as well as octoxynol salts and organic acids function in cosmetics either as surfactants-emulsifying agents, surfactants-cleansing agents, surfactant-solubilizing agents, or surfactants-hydrotropes in a wide variety of cosmetic products at concentrations ranging from 0.0008% to 25%, with most less than 5.0%. The octoxynols are chemically similar to nonoxynols Long-chain nonoxynols (9 and above) were considered safe as used, whereas short-chain nonoxynols (8 and below) were considered safe as used in rinse-off products and safe at concentrations less than 5% in leave-on formulations. Acute exposure of hamsters to Octoxynol-9 by bronchopulmonary lavage produced pneumonia, pulmonary edema, and intra-alveolar hemorrhage.  Humans have regular contact with alcohol ethoxylates through a variety of industrial and consumer products such as soaps, detergents and other cleaning products. Exposure to these chemicals can occur through swallowing, inhalation, or contact with the skin or eyes. Studies of acute toxicity show that relatively high volumes would have to occur to produce any toxic response. No death due to poisoning with alcohol ethoxylates has ever been reported.  Both laboratory and animal testing has shown that there is no evidence for alcohol ethoxylates (AEs) causing genetic damage, mutations or		
Skin Irritation/Corrosion  Serious Eye Damage/Irritation  Respiratory or Skin  X  STOT - Repeated Exposure  X  STOT - Repeated Exposure	Ultra & ISOTHIAZOLINONES,			
Skin Irritation/Corrosion  Serious Eye Damage/Irritation  Respiratory or Skin  X  STOT - Repeated Exposure  X  STOT - Repeated Exposure	Acute Toxicity	X	nogenicity	×
Damage/Irritation Respiratory or Skin	·			
Respiratory or Skin	•	X STOT - Single	Exposure	×
sensitisation Sensitisation	Respiratory or Skin	X STOT - Repeated	Exposure	×

Page 6 of 8

Positive Control Lysate - Ultra

Issue Date: **25/10/2022**Print Date: **19/09/2024** 

Mutagenicity X Aspiration Hazard

Legend: X – Data either not available or does not fill the criteria for classification

- Data available to make classification

#### **SECTION 12 Ecological information**

#### **Toxicity**

Version No: 4.1

Danisira Cantaal Larata	Endpoint	Test Duration (hr)	Species	Value	Source
Positive Control Lysate - Ultra	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
isothiazolinones, mixed	EC50	72h	Algae or other aquatic plants	0.006mg/L	2
	EC50	48h	Crustacea	0.007mg/l	2
	LC50	96h	Fish	0.129mg/l	2
	EC50	96h	Algae or other aquatic plants	0.036mg/L	2
	NOEC(ECx)	48h	Algae or other aquatic plants	<0.001mg/L	2
	Endpoint	Test Duration (hr)	Species	Value	Source
p-tert-octylphenol ethoxylate	LC50	96h	Fish	>2.8<3.2mg/L	4
	EC50(ECx)	96h	Fish	3mg/L	5
Legend:	Ecotox databas		ECHA Registered Substances - Ecotoxicological Infor C Aquatic Hazard Assessment Data 6. NITE (Japan)		

#### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
p-tert-octylphenol ethoxylate	HIGH	HIGH

#### Bioaccumulative potential

zioacoaiiiaiaii o potoiiiai	
Ingredient	Bioaccumulation
p-tert-octylphenol ethoxylate	HIGH (LogKOW = 4.863)

#### Mobility in soil

Ingredient	Mobility
p-tert-octylphenol ethoxylate	LOW (Log KOC = 699.2)

#### **SECTION 13 Disposal considerations**

#### Waste treatment methods

Product / Packaging disposal Consult State Land Waste Management Authority for disposal.
--

#### **SECTION 14 Transport information**

#### **Labels Required**

Marine Pollutant	NO

Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

#### 14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group	
isothiazolinones, mixed	Not Available	
p-tert-octylphenol ethoxylate	Not Available	

#### 14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type	
isothiazolinones, mixed	Not Available	
p-tert-octylphenol ethoxylate	Not Available	

Positive Control Lysate - Ultra

Issue Date: **25/10/2022**Print Date: **19/09/2024** 

#### **SECTION 15 Regulatory information**

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

#### isothiazolinones, mixed is found on the following regulatory lists

Not Applicable

#### p-tert-octylphenol ethoxylate is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

#### **Additional Regulatory Information**

Not Applicable

#### **Federal Regulations**

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### Section 311/312 hazard categories

a continue in the individual categories	
Flammable (Gases, Aerosols, Liquids, or Solids)	No
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	No
Acute toxicity (any route of exposure)	No
Reproductive toxicity	
Skin Corrosion or Irritation	
Respiratory or Skin Sensitization	
Serious eye damage or eye irritation	No
Specific target organ toxicity (single or repeated exposure)	No
Aspiration Hazard	
Germ cell mutagenicity	
Simple Asphyxiant	
Hazards Not Otherwise Classified	

#### US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

None Reported

#### US. EPCRA Section 313 Toxic Release Inventory (TRI) (40 CFR 372)

None Reported

#### **Additional Federal Regulatory Information**

Not Applicable

#### State Regulations

#### US. California Proposition 65

None Reported

#### **Additional State Regulatory Information**

Not Applicable

## **National Inventory Status**

National Inventory Status				
National Inventory	Status			
Australia - AIIC / Australia Non- Industrial Use	No (isothiazolinones, mixed)			
Canada - DSL	Yes			
Canada - NDSL	No (isothiazolinones, mixed; p-tert-octylphenol ethoxylate)			
China - IECSC	Yes			
Europe - EINEC / ELINCS / NLP	No (isothiazolinones, mixed; p-tert-octylphenol ethoxylate)			
Japan - ENCS	Yes			
Korea - KECI	Yes			
New Zealand - NZIoC	Yes			

Version No: 4.1

#### **Positive Control Lysate - Ultra**

Issue Date: 25/10/2022 Print Date: 19/09/2024

National Inventory	Status		
Philippines - PICCS	Yes		
USA - TSCA	No (isothiazolinones, mixed)		
Taiwan - TCSI	Yes		
Mexico - INSQ	No (isothiazolinones, mixed; p-tert-octylphenol ethoxylate)		
Vietnam - NCI	Yes		
Russia - FBEPH	Yes		
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.		

#### **SECTION 16 Other information**

Revision Date	25/10/2022	
Initial Date	19/07/2022	

#### **SDS Version Summary**

Version	Date of Update	Sections Updated
3.1	31/08/2022	Composition / information on ingredients - Ingredients
4.1	25/10/2022	Disposal considerations - Disposal, Handling and storage - Storage (storage incompatibility), Handling and storage - Storage (suitable container)

#### Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be

#### **Definitions and abbreviations**

- ▶ PC TWA: Permissible Concentration-Time Weighted Average
- ▶ PC STEL: Permissible Concentration-Short Term Exposure Limit
- ▶ IARC: International Agency for Research on Cancer
- ▶ ACGIH: American Conference of Governmental Industrial Hygienists
- ▶ STEL: Short Term Exposure Limit
- ► TEEL: Temporary Emergency Exposure Limit。
- ▶ IDLH: Immediately Dangerous to Life or Health Concentrations
- ▶ ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level
- ▶ LOAEL: Lowest Observed Adverse Effect Level
- ▶ TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- ▶ BCF: BioConcentration Factors
- ▶ BEI: Biological Exposure Index
- ▶ DNEL: Derived No-Effect Level
- ▶ PNEC: Predicted no-effect concentration
- ▶ AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
- NDSL: Non-Domestic Substances List
- ▶ IECSC: Inventory of Existing Chemical Substance in China
- ▶ EINECS: European INventory of Existing Commercial chemical Substances
- ▶ ELINCS: European List of Notified Chemical Substances
- NLP: No-Longer Polymers
- ▶ ENCS: Existing and New Chemical Substances Inventory
- KECI: Korea Existing Chemicals Inventory
   NZIoC: New Zealand Inventory of Chemicals
- ▶ PICCS: Philippine Inventory of Chemicals and Chemical Substances
- TSCA: Toxic Substances Control Act
- ▶ TCSI: Taiwan Chemical Substance Inventory
- ▶ INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
   FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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