

Aldi ALMAT Laundry Liquid Concentrate 2L & 4L

ALDI Stores (A Limited Partnership) Chemwatch: 17-56986

Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements

Chemwatch Hazard Alert Code: 2

Issue Date: 19/08/2020 Print Date: 23/06/2021 S.GHS.AUS.EN

SECTION 1 Identification of the substance / mixture and of the company / undertaking

Product Identifier

Version No: 2.1.8.7

Product name	Aldi ALMAT Laundry Liquid Concentrate 2L & 4L		
Chemical Name	Not Applicable		
Synonyms	Tropical Escape; Sunshine Fresh; Spice Temptations; Soft Sensation; Arctic Breeze 2L & Spice Temptations; Botanic Escape 4L		
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains diethylenetriaminepenta(methylenephospacid) sodium and sodium dodecylbenzenesulfonate) Chemical formula Not Applicable			
		Other means of identification	Not Available

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses Concentrated laundry liquid for domestic use.

Details of the supplier of the safety data sheet

Registered company name	ALDI Stores (A Limited Partnership)	
Address	1 Sargents Road Minchinbury NSW 2770 Australia	
Telephone	61 2 9675 9000 (8:30am - 5:00pm)	
Fax	+61 2 9675 9199	
Website	Website http://www.aldi.com.au	
Email	customerservice@aldi.com.au	

Emergency telephone number

Association / Organisation	Poisons Information Centre (Australia)	
Emergency telephone numbers	13 11 26	
Other emergency telephone numbers	Not Available	

SECTION 2 Hazards identification

Classification of the substance or mixture

Poisons Schedule	Not Applicable	
Classification [1]	Serious Eye Damage/Eye Irritation Category 1, Reproductive Toxicity Category 1B, Acute Aquatic Hazard Category 2, Chronic Aquatic Hazard Category 2, Skin Corrosion/Irritation Category 2	
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI	

Label elements

Hazard pictogram(s)









Signal	word	Dange	1
Oigilai	word	Dunge	,,

Hazard statement(s)

H318	Causes serious eye damage.	
H360FD	May damage fertility. May damage the unborn child.	
H411	H411 Toxic to aquatic life with long lasting effects.	
H315 Causes skin irritation.		

Precautionary statement(s) Prevention

P201	Obtain special instructions before use.	
P280	P280 Wear protective gloves, protective clothing, eye protection and face protection.	
P273	P273 Avoid release to the environment.	
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.	
P308+P313	IF exposed or concerned: Get medical advice/ attention.	
P310	mmediately call a POISON CENTER/doctor/physician/first aider.	
P391	Collect spillage.	
P302+P352	IF ON SKIN: Wash with plenty of water.	
P332+P313	If skin irritation occurs: Get medical advice/attention.	
P362+P364	Take off contaminated clothing and wash it before reuse.	

Precautionary statement(s) Storage

P405 Store locked up.

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
68891-38-3	<10	sodium lauryl ether sulfate
68131-39-5	<5	alcohols C12-15 ethoxylated
57-55-6	<5	propylene glycol
25155-30-0	<5	sodium dodecylbenzenesulfonate
22042-96-2	<1	diethylenetriaminepenta(methylenephosphonic acid) sodium
61789-31-9	<1	coconut oil, sodium salt
2634-33-5	<1	1.2-benzisothiazoline-3-one
2372-82-9	<1	N-(3-aminopropyl)-N-dodecyl-1,3-propanediamine
1303-96-4	<1	sodium borate, decahydrate
Not Available	<1	fragrance, proprietary
Not Available	<1	enzymes, proprietary
Not Available	balance	#30nonaz
Legend:	,	nwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 -

Annex VI; 4. Classification drawn from C&L; * EU IOELVs available

SECTION 4 First aid measures

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Description of first aid measures

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Eye Contact	If this product comes in contact with the eyes: Immediately hold eyelids apart and flush the eye continuously with 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. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Transport to hospital or doctor without delay. 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	 If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.

Indication of any immediate medical attention and special treatment needed

► Seek medical advice.

As in all cases of suspected poisoning, follow the ABCDEs of emergency medicine (airway, breathing, circulation, disability, exposure), then the ABCDEs of toxicology (antidotes, basics, change absorption, change distribution, change elimination).

For poisons (where specific treatment regime is absent):

BASIC TREATMENT

- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- ▶ Administer oxygen by non-rebreather mask at 10 to 15 L/min.
- Monitor and treat, where necessary, for pulmonary oedema.
- ▶ Monitor and treat, where necessary, for shock.
- Anticipate seizures.
- DO NOT use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.

ADVANCED TREATMENT

- Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- Positive-pressure ventilation using a bag-valve mask might be of use.
- Monitor and treat, where necessary, for arrhythmias.
- F Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- Drug therapy should be considered for pulmonary oedema.
- Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- ► Treat seizures with diazepam.
- ▶ Proparacaine hydrochloride should be used to assist eye irrigation.

BRONSTEIN, A.C. and CURRANCE, P.L.

EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

SECTION 5 Firefighting measures

Extinguishing media

- Foam.
- Dry chemical powder.
- ▶ BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog Large fires only.

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

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Advice for firefighters

Fire Fighting	 Alert Fire Brigade and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Use water delivered as a fine spray to control fire and cool adjacent area. Avoid spraying water onto liquid pools. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire.
Fire/Explosion Hazard	 Combustible. Slight fire hazard when exposed to heat or flame. Heating may cause expansion or decomposition leading to violent rupture of containers. On combustion, may emit toxic fumes of carbon monoxide (CO). May emit acrid smoke. Mists containing combustible materials may be explosive. Combustion products include: carbon dioxide (CO2) nitrogen oxides (NOx) phosphorus oxides (POx) sulfur oxides (SOx) other pyrolysis products typical of burning organic material.
HAZCHEM	•3Z

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

Methods and material for containment and cleaning up		
Minor Spills	 Environmental hazard - contain spillage. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment. Contain and absorb spill with sand, earth, inert material or vermiculite. Wipe up. Place in a suitable, labelled container for waste disposal. 	
Major Spills	 Environmental hazard - contain spillage. Absorb or contain isothiazolinone liquid spills with sand, earth, inert material or vermiculite. The absorbent (and surface soil to a depth sufficient to remove all of the biocide) should be shovelled into a drum and treated with an 11% solution of sodium metabisulfite (Na2S2O5) or sodium bisulfite (NaHSO3), or 12% sodium sulfite (Na2SO3) and 8% hydrochloric acid (HCl). Glutathione has also been used to inactivate the isothiazolinones. Use 20 volumes of decontaminating solution for each volume of biocide, and let containers stand for at least 30 minutes to deactivate microbicide before disposal. If contamination of drains or waterways occurs, advise emergency services. After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using. 	

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

SECTION 7 Handling and storage

Precautions for 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.

Safe handling

- ▶ DO NOT enter confined spaces until atmosphere has been checked.
- Avoid smoking, naked lights or ignition sources.
- Avoid contact with incompatible materials.
- ▶ When handling, **DO NOT** eat, drink or smoke.
- ▶ Keep containers securely sealed when not in use.

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► Avoid physical damage to containers.

- Always wash hands with soap and water after handling.
- ▶ Work clothes should be laundered separately.
- Use good occupational work practice.
- ▶ Observe manufacturer's storage and handling recommendations contained within this SDS.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.
- Store in original containers.
- ► Keep containers securely sealed.
- ▶ No smoking, naked lights or ignition sources.
- ► Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- ▶ Protect containers against physical damage and check regularly for leaks.
- ▶ Observe manufacturer's storage and handling recommendations contained within this SDS.

Conditions for safe storage, including any incompatibilities

Suitable container

Other information

- ► Metal can or drum
- ▶ Packaging 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
Australia Exposure Standards	propylene glycol	Propane-1,2-diol: particulates only	10 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	propylene glycol	Propane-1,2-diol total: (vapour & particulates)	150 ppm / 474 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	sodium borate, decahydrate	Borates, tetra, sodium salts (decahydrate)	5 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	sodium borate, decahydrate	Borates, tetra, sodium salts (pentahydrate)	1 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	sodium borate, decahydrate	Borates, tetra, sodium salts (anhydrous)	1 mg/m3	Not Available	Not Available	Not Available

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
propylene glycol	30 mg/m3	330 mg/m3	2,000 mg/m3
propylene glycol	30 mg/m3	1,300 mg/m3	7,900 mg/m3
sodium dodecylbenzenesulfonate	2.1 mg/m3	23 mg/m3	87 mg/m3
sodium borate, decahydrate	6 mg/m3	190 mg/m3	1,100 mg/m3
sodium borate, decahydrate	6 mg/m3	88 mg/m3	530 mg/m3

Ingredient	Original IDLH	Revised IDLH
sodium lauryl ether sulfate	Not Available	Not Available
alcohols C12-15 ethoxylated	Not Available	Not Available
propylene glycol	Not Available	Not Available
sodium dodecylbenzenesulfonate	Not Available	Not Available
diethylenetriaminepenta(methylenephosphonic acid) sodium	Not Available	Not Available
coconut oil, sodium salt	Not Available	Not Available
1,2-benzisothiazoline-3-one	Not Available	Not Available
N-(3-aminopropyl)-N-dodecyl- 1,3-propanediamine	Not Available	Not Available
sodium borate, decahydrate	Not Available	Not Available

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Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit	
sodium lauryl ether sulfate	Е	≤ 0.01 mg/m³	
alcohols C12-15 ethoxylated	E	≤ 0.1 ppm	
sodium dodecylbenzenesulfonate	Е	≤ 0.01 mg/m³	
diethylenetriaminepenta(methylenephosphonic acid) sodium	Е	≤ 0.01 mg/m³	
1,2-benzisothiazoline-3-one	Е	≤ 0.01 mg/m³	
N-(3-aminopropyl)-N-dodecyl- 1,3-propanediamine	Е	≤ 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.

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. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure.

General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air)	0.25-0.5 m/s (50-100 f/min)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5-10 m/s (500-2000 f/min.)

Appropriate engineering controls

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood - local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used

Personal protection









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

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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. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

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. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:

- · frequency and duration of contact,
- · chemical resistance of glove material,
- glove thickness and
- dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).

- When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
- · When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.

Hands/feet protection

- \cdot Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use.
- Contaminated gloves should be replaced.

As defined in ASTM F-739-96 in any application, gloves are rated as:

- Excellent when breakthrough time > 480 min
- Good when breakthrough time > 20 min
- Fair when breakthrough time < 20 min
- · Poor when glove material degrades

For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended.

It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.

Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task. Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:

- · Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.
- · Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

- Butyl rubber gloves
- · Nitrile rubber gloves (Note: Nitric acid penetrates nitrile gloves in a few minutes.)

Body protection

See Other protection below

Other protection

- Overalls.
- P.V.C apron.Barrier cream.
- Skin cleansing cream.
- Eye wash unit.

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

'Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the *computer-generated* selection:

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Material	CPI
Material	CFI

Respiratory protection

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

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required. Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

PE/EVAL/PE A

* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	AK-AUS P2	-	AK-PAPR-AUS / Class 1 P2
up to 50 x ES	-	AK-AUS / Class 1 P2	-
up to 100 x ES	-	AK-2 P2	AK-PAPR-2 P2 ^

^ - Full-face

 $A(All \ classes) = Organic \ vapours, \ B \ AUS \ or \ B1 = Acid \ gasses, \ B2 = Acid \ gas \ or \ hydrogen \ cyanide(HCN), \ B3 = Acid \ gas \ or \ hydrogen \ cyanide(HCN), \ E = Sulfur \ dioxide(SO2), \ G = Agricultural \ chemicals, \ K = Ammonia(NH3), \ Hg = Mercury, \ NO = Oxides \ of \ nitrogen, \ MB = Methyl \ bromide, \ AX = Low \ boiling point \ organic \ compounds(below \ 65 \ degC)$

- 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 Opaque white viscous liquid with fragrant odour; mixes with water.			
Physical state	Liquid	Relative density (Water = 1)	1.03
Odour	Fragrant	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	8-9	Decomposition temperature	Not Available
Melting point / freezing point (°C)	~0 (freezing pt.)	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	~100	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	~80
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Miscible	pH as a solution (%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	 Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.

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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 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	Accidental ingestion of the material may be damaging to the health of the individual. Ingestion of propylene glycol produced reversible central nervous system depression in humans following ingestion of 60 ml. Symptoms included increased heart-rate (tachycardia), excessive sweating (diaphoresis) and grand mal seizures in a 15 month child who ingested large doses (7.5 ml/day for 8 days) as an ingredient of vitamin preparation. Excessive repeated ingestions may cause hypoglycaemia (low levels of glucose in the blood stream) among susceptible individuals; this may result in muscular weakness, incoordination and mental confusion. Very high doses given during feeding studies to rats and dogs produce central nervous system depression (although one-third of that produced by ethanol), haemolysis and insignificant kidney changes. In humans propylene glycol is partly excreted unchanged in the urine and partly metabolised as lactic and pyruvic acid. Lactic acidosis may result. Taken by mouth, isothiazolinones have moderate to high toxicity. The major signs of toxicity are severe stomach irritation, lethargy, and inco-ordination. Ingestion of anionic surfactants may produce diarrhoea, bloated stomach, and occasional vomiting.
Skin Contact	This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions. Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. A 0.5% solution of 1,2-benzisothiazoline-3-one (BIT) is irritating to the skin. Even 0.05% can cause allergy, according to patch tests, with reddening of the skin. Provocation tests with BIT showed the material to be sensitizing. Of 20 metal workers with skin inflammation, four were shown to have been sensitized to BIT in cutting oils. Cases of contact eczema in workers producing polyacrylate emulsions for paints and wax polish, in which BIT was the preservative, have been described. Similar findings have been described in the paper-making industry, in the rubber industry, in the control laboratory of a chemical plant and among workers producing ceramic moulds where BIT was added to the mould oil. Solutions of isothiazolinones may be irritating or even damaging to the skin, depending on concentration. A concentration of over 0.1% can irritate, and over 0.5% can cause severe irritation. Anionic surfactants can cause skin redness and pain, as well as a rash. Cracking, scaling and blistering can occur. 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.
Еуе	If applied to the eyes, this material causes severe eye damage. Solutions containing isothiazolinones may damage the mucous membranes and cornea. Animal testing showed very low concentrations (under 0.1%) did not cause irritation, while higher levels (3-5.5%) produced severe irritation and damage to the eye. Direct eye contact with some anionic surfactants in high concentration can cause severe damage to the cornea. Low concentrations can cause discomfort, excess blood flow, and corneal clouding and swelling. Recovery may take several days.
Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to a population. Ample evidence exists from experimentation that reduced human fertility is directly caused by exposure to the Ample evidence exists, from results in experimentation, that developmental disorders are directly caused by the material. Based on experience with animal studies, exposure to the material may result in toxic effects to the develop levels which do not cause significant toxic effects to the mother. Substance accumulation, in the human body, may occur and may cause some concern following repeated coccupational exposure. In animal testing, 1,2-benzisothiazoline-3-one (BIT) did not cause toxicity to the embryo or birth defects. The cause mutations or an increase in cancer. Mild anaemia, reduction in food intake and changes in organ weighong-term study. The isothiazolinones are known contact sensitisers. Sensitisation is more likely with the chlorinated species non-chlorinated species. Prolonged or repeated skin contact may cause degreasing, followed by drying, cracking and skin inflammating Exposure to sulfonates can cause an imbalance in cellular salts and therefore cellular function. Airborne sulfonates can cause an imbalance in cellular salts and therefore cellular function. Airborne sulfonates can cause an imbalance, minor dermal allergies.	

Propylene glycol is thought to be sensitizing following the regular use of topical creams by eczema patients. Testing in humans showed that 16% of exposed individuals, irritation occurred, with 12.5% showing toxic or allergic reactions. The reaction responses reached their maximum on the second day or later. Reactions were seasonal in nature, with a maximum in winter. Undiluted propylene glycol tested on human skin produced no irritation under open conditions, but when applied under occlusive conditions for 2 weeks, it produced severe redness, swelling and blistering, probably due to both sweat retention and irritation. Animal testing shows propylene glycol may lead to fragility in red blood cells.

Not Available Not Available Not Available	Aldi ALMAT Laundry Liquid Concentrate 2L &	TOXICITY	IRRITATION
Crall(Rat) LD50; 1600 mg/kg ^[2] Eye: adverse effect observed (irritating) ^[1] Skin (rabbit):25 mg/24 hr moderate		Not Available	Not Available
Skin (rabbit):25 mg/24 hr moderate		TOXICITY	IRRITATION
TOXICITY IRRITATION		Oral(Rat) LD50; 1600 mg/kg ^[2]	Eye: adverse effect observed (irritating) ^[1]
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Oral(Rat) LD50; 10000-15000 mg/kg ^[2] Skin: adverse effect observed (irritating) ^[1] TOXICITY IRRITATION		dermal (rat) LD50: >10000 mg/kg ^[2]	Eye: no adverse effect observed (not irritating) ^[1]
coconut oil, sodium salt	aciu, Souluiii	Oral(Rat) LD50; 10000-15000 mg/kg ^[2]	Skin: adverse effect observed (irritating) ^[1]
		TOXICITY	IRRITATION
Tet / Wallasio	coconut oil, sodium sait	Not Available	Not Available
TOXICITY IRRITATION		TOXICITY	IRRITATION
1,2-benzisothiazoline-3-one dermal (rat) LD50: >2000 mg/kg ^[1] Eye: adverse effect observed (irreversible damage) ^[1]	1,2-benzisothiazoline-3-one	dermal (rat) LD50: >2000 mg/kg ^[1]	
Oral(Rat) LD50; 454 mg/kg ^[1] Skin: no adverse effect observed (not irritati		Oral(Rat) LD50; 454 mg/kg ^[1]	Skin: no adverse effect observed (not irritating) ^[1]
TOXICITY IRRITATION		TOXICITY	IRRITATION
N-(3-aminopropyl)-N-dodecyl- 1,3-propanediamine dermal (rat) LD50: >600 mg/kg[1] Skin (rabbit): Corrosive *	`	dermal (rat) LD50: >600 mg/kg ^[1]	Skin (rabbit): Corrosive *
Oral(Rat) LD50; >25<200 mg/kg ^[1] Skin: adverse effect observed (corrosive) ^[1]	ı,ə-propaneulanıne	Oral(Rat) LD50; >25<200 mg/kg ^[1]	Skin: adverse effect observed (corrosive) ^[1]
TOXICITY IRRITATION		TOXICITY	IRRITATION
sodium borate, decahydrate Dermal (rabbit) LD50: >10000 mg/kg ^[2] Eye: adverse effect observed (irritating) ^[1]	sodium borate, decahydrate	Dermal (rabbit) LD50: >10000 mg/kg ^[2]	Eye: adverse effect observed (irritating) ^[1]
Oral(Mouse) LD50; 2000 mg/kg ^[2] Skin: no adverse effect observed (not irritati		Oral(Mouse) LD50; 2000 mg/kg ^[2]	Skin: no adverse effect observed (not irritating) ^[1]

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 - Register of Toxic Effect of chemical Substances

SODIUM LAURYL ETHER SULFATE

ALCOHOLS C12-15 ETHOXYLATED

* [CESIO]

Alcohol ethoxysulfates (AES) are of low acute toxicity. Neat AES are irritant to the skin and

The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

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. Studies show that alcohol ethoxylates have low toxicity through swallowing and skin contact. Animal studies show these chemicals may produce gastrointestinal irritation, stomach ulcers, hair standing up, diarrhea and lethargy. Slight to severe irritation occurred when undiluted alcohol ethyoxylates were applied to the skin and eyes of animals. These chemicals show no indication of genetic toxicity or potential to cause mutations and cancers. Toxicity is thought to be substantially lower than that of nonylphenol ethoxylates.

Some of the oxidation products of this group of substances may have sensitizing properties. As they cause less irritation, nonionic surfactants are often preferred to ionic surfactants in topical products. However, their tendency to auto-oxidise also increases their irritation. Due to their irritating effect it is difficult to diagnose allergic contact dermatitis (ACD) by patch testing. 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.

Tri-ethylene glycol ethers undergo enzymatic oxidation to toxic alkoxy acids. They may irritate the skin and the eyes. At high oral doses, they may cause depressed reflexes, flaccid muscle tone, breathing difficulty and coma. Death may result in experimental animal. However, repeated exposure may cause dose dependent damage to the kidneys as well as reproductive and developmental defects.

The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. for Tergitol 25-L-9: Neodol 25-9 Neodol 25-7 *Shell Canada ** Huntsman (for Teric 12A9)

The acute oral toxicity of propylene glycol is very low; large amounts are needed to cause perceptible health damage in humans. Serious toxicity generally occurs only at blood concentrations over 1 g/L, which requires extremely high intake over a relatively short period of time; this is nearly impossible with consuming foods or supplements which contain 1g/kg of PG at most. Poisonings are usually due to injection through a vein or accidental swallowing of large amounts by children. The potential for long-term oral toxicity is also low.

Prolonged contact with propylene glycol is essentially non-irritating to the skin. Undiluted propylene glycol is minimally irritating to the eye, and can produce a slight, temporary inflammation of the conjunctiva. Exposure to mists may cause irritation of both the eve and the upper airway. Inhalation of propylene glycol vapours may be irritating to some individuals. It is therefore recommended that propylene glycol not be used in applications where inhalation exposure or human eye contact with the spray mists of these materials is likely, such as fogs for theatrical productions or antifreeze solutions for emergency eye wash stations.

Propylene glycol is metabolized in humans to pyruvic acid, acetic acid, lactic acid and propionaldehyde; the last of which is potentially hazardous.

Propylene glycol show s no evidence of causing cancer or genetic toxicity. Research has suggested that individuals who cannot tolerate propylene glycol probably experience a special form of irritation, but they only rarely develop allergic contact dermatitis. Other investigators believe that the incidence of allergic contact dermatitis in people exposed to propylene glycol may be greater than 2% in patients with eczema.

One study strongly suggests a connection between airborne concentrations of propylene glycol in houses and development of asthma and allergic reactions, such as inflammation of the nose and hives, in children.

Another study suggested that the concentration of PGEs (propylene glycol and glycol ethers) in indoor air is linked to increased risk of developing numerous respiratory and immune disorders in children, including asthma, hay fever, eczema and allergies, with increased risk ranging from 50% to 180%. This concentration has been linked to use of water-based paints and water-based system cleansers.

Patients with bladder inflammation and vulvodynia (chronic pain of the vulva) may be especially sensitive to propylene glycol. Women suffering with yeast infections may notice that some over the counter creams cause intense burning. Post-menopausal women who require the use of an oestrogen cream may notice that creams made with propylene glycol often cause extremely uncomfortable burning along the vulva and around the anus. Some electronic cigarette users who inhale propylene glycol vapour may experience dryness of the throat or shortness of breath.

Adverse responses to administration of drugs which use propylene glycol as an incipient have been seen in a number of people especially at high doses. These include low blood pressure,

PROPYLENE GLYCOL

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ACID) SODIUM

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SODIUM DODECYLBENZENESULFONATE

DIETHYLENETRIAMINEPENTA(METHYLENEPHOSPHONIC

slow heart rate, ECG abnormalities, heartbeat irregularities, lactic acidosis, breakdown of red cells and cardiac arrest.

Linear alkyl benzene sulfonates are derived from strong corrosive acids. Animal testing has

shown they can cause skin reactions, eye irritation, sluggishness, passage of frequent watery

stools, weakness and may lead to death. They may also react with surfaces of the mouth and intestines, depending on the concentration exposed to. There is no evidence of harm to the

For ATMP (aminotris(methylenephosphonic acid)) and its salts:

ATMP acid, the monosodium salt and hexasodium salts cause serious eye irritation, while the disodium to pentasodium salts do not cause eye irritation. The low pH would predict that ATMP acid should be severely irritant or corrosive to skin as well as eyes.

Acute toxicity: In animals, ATMP has low acute toxicity.

Sensitisation: Based on animal data and human exposure reports, ATMP is not classified with respect to skin sensitization.

Toxicity after repeated exposure: Not classified.

unborn baby or tendency to cause cancer.

Genetic toxicity / mutation-causing potential: ATMP and its salts do not cause genetic toxicity or mutations.

Cancer-causing potential: ATMP sodium salts and the acid are not expected to cause cancer. Reproductive toxicity: Based on animal testing, ATMP and its salts do not cause reproductive toxicity.

Animal testing to date have not shown phosphonic acids or their salts to induce skin sensitisation. However, testing has been incomplete.

<

For aliphatic fatty acids (and salts)

Acute oral (gavage) toxicity:

The acute oral LD50 values in rats for both were greater than >2000 mg/kg bw Clinical signs were generally associated with poor condition following administration of high doses (salivation, diarrhoea, staining, piloerection and lethargy). There were no adverse effects on body weight in any study In some studies, excess test substance and/or irritation in the gastrointestinal tract was observed at necropsy.

Skin and eye irritation potential, with a few stated exceptions, is chain length dependent and decreases with increasing chain length

According to several OECD test regimes the animal skin irritation studies indicate that the C6-10 aliphatic acids are severely irritating or corrosive, while the C12 aliphatic acid is irritating, and the C14-22 aliphatic acids generally are not irritating or mildly irritating.

Human skin irritation studies using more realistic exposures (30-minute,1-hour or 24-hours) indicate that the aliphatic acids have sufficient, good or very good skin compatibility. Animal eye irritation studies indicate that among the aliphatic acids, the C8-12 aliphatic acids are irritating to the eye while the C14-22 aliphatic acids are not irritating.

Eye irritation potential of the ammonium salts does not follow chain length dependence; the C18 ammonium salts are corrosive to the eyes.

Dermal absorption:

The in vitro penetration of C10, C12, C14, C16 and C18 fatty acids (as sodium salt solutions) through rat skin decreases with increasing chain length. At 86.73 ug C16/cm2 and 91.84 ug C18/cm2, about 0.23% and less than 0.1% of the C16 and C18 soap solutions is absorbed after 24 h exposure, respectively.

Sensitisation:

No sensitisation data were located.

Repeat dose toxicity:

Repeated dose oral (gavage or diet) exposure to aliphatic acids did not result in systemic toxicity with NOAELs greater than the limit dose of 1000 mg/kg bw. .

Mutagenicity

Aliphatic acids do not appear to be mutagenic or clastogenic in vitro or in vivo Carcinogenicity

No data were located for carcinogenicity of aliphatic fatty acids.

Reproductive toxicity

No effects on fertility or on reproductive organs, or developmental effects were observed in studies on aliphatic acids and the NOAELs correspond to the maximum dose tested. The weight of evidence supports the lack of reproductive and developmental toxicity potential of the aliphatic acids category.

Given the large number of substances in this category, their closely related chemical structure, expected trends in physical chemical properties, and similarity of toxicokinetic properties, both mammalian and aquatic endpoints were filled using read-across to the closest structural analogue, and selecting the most conservative supporting substance effect level. Structure-activity relationships are not evident for the mammalian toxicity endpoints. That is, the low mammalian toxicity of this category of substances limits the ability to discern structural effects on biological activity. Regardless, the closest structural analogue with the most conservative effect value was selected for read across. Irritation is observed for chain lengths up to a cut-off" at or near 12 carbons).

Metabolism:

The aliphatic acids share a common degradation pathway in which they are metabolized to

COCONUT OIL, SODIUM SALT

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acetyl-CoA or other key metabolites in all living systems. Common biological pathways result in structurally similar breakdown products, and are, together with the physico-chemical properties, responsible for similar environmental behavior and essentially identical hazard profiles with regard to human health.

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Differences in metabolism or biodegradability of even and odd numbered carbon chain compounds or saturated/ unsaturated compounds are not expected; even-and odd-numbered carbon chain compounds, and the saturated and unsaturated compounds are naturally occurring and are expected to be metabolized and biodegraded in the same manner. The acid and alkali salt forms of the homologous aliphatic acid are expected to have many similar physicochemical and toxicological properties when they become bioavailable; therefore, data read across is used for those instances where data are available for the acid form but not the salt, and vice versa. In the gastrointestinal tract, acids and bases are absorbed in the undissociated (non-ionised) form by simple diffusion or by facilitated diffusion. It is expected that both the acids and the salts will be present in (or converted to) the acid form in the stomach. This means that for both aliphatic acid or aliphatic acid salt, the same compounds eventually enter the small intestine, where equilibrium, as a result of increased pH, will shift towards dissociation (ionised form).

Hence, the situation will be similar for compounds originating from acids and therefore no differences in uptake are anticipated

Note that the saturation or unsaturation level is not a factor in the toxicity of these substances and is not a critical component of the read across process..

Toxicokinetics:

The turnover of the [14C] surfactants in the rat showed that there was no significant difference in the rate or route of excretion of 14C given by intraperitoneal or subcutaneous administration. The main route of excretion was as 14CO2 in the expired air at 6 h after administration. The remaining material was incorporated in the body. Longer fatty acid chains are more readily incorporated than shorter chains. At ca. 1.55 and 1.64 mg/kg bw, 71% of the C16:0 and 56% of the C18:0 was incorporated and 21% and 38% was excreted as 14CO2, respectively.

Glycidyl fatty acid esters (GEs), one of the main contaminants in processed oils, are mainly formed during the deodorisation step in the refining process of edible oils and therefore occur in almost all refined edible oils. GEs are potential carcinogens, due to the fact that they readily hydrolyze into the free form glycidol in the gastrointestinal tract, which has been found to induce turnours in various rat tissues. Therefore, significant effort has been devoted to inhibit and eliminate the formation of GEs

GEs contain a common terminal epoxide group but exhibit different fatty acid compositions. This class of compounds has been reported in edible oils after overestimation of 3-monochloropropane-1,2-diol (3-MCPD) fatty acid esters analysed by an indirect method, 3-MCPD esters have been studied as food processing contaminants and are found in various food types and food ingredients, particularly in refined edible oils. 3-Monochloropropane-1,2-diol (3-MCPD) and 2-monochloropropane-1,3-diol (2-MCPD) are chlorinated derivatives of glycerol (1,2,3-propanetriol). 3- and 2-MCPD and their fatty acid esters are among non-volatile chloropropanols, Glycidol is associated with the formation and decomposition of 3- and 2-MCPD. It forms monoesters with fatty acids (GE) during the refining of vegetable oils. Chloropropanols are formed in HVP during the hydrochloric acid-mediated hydrolysis step of the manufacturing process. In food production, chloropropanols form from the reaction of endogenous or added chloride with glycerol or acylglycerol.

Although harmful effects on humans and animals have not been demonstrated, the corresponding hydrolysates, 3-MCPD and glycidol, have been identified as rodent genotoxic carcinogens, ultimately resulting in the formation of kidney tumours (3-MCPD) and tumours at other tissue sites (glycidol). Therefore, 3-MCPD and glycidol have been categorised as "possible human carcinogens" (group 2B) and "probably carcinogenic to humans" (group 2A), respectively, by the International Agency for Research on Cancer (IARC).

Diacylglyceride (DAG) based oils produced by one company were banned from the global market due to "high levels" of GEs.

Several reports have also suggested that a bidirectional transformation process may occur not only between glycidol and 3-MCPD but also their esterified forms in the presence of chloride ions. The transformation rate of glycidol to 3-MCPD was higher than that of 3-MCPD to glycidol under acidic conditions in the presence of chloride ion.

Precursors of GEs in refined oils have been identified as partial acylglycerols, that is, DAGs and monoacylglycerides (MAGs); however, whether they also originate from triacylglycerides (TAGs) is still a topic of controversial debates. Several authors noted that pure TAGs were stable during heat treatment (such as 235 deg C) for 3 h and were therefore not involved in the formation of GEs. However, experimental results have shown that small amounts of GEs are present in a heat-treated oil model consisting of almost 100% TAGs. The formation of GEs from TAGs can be attributed to the pyrolysis of TAGs to DAGs and MAGs. In contrast, 3-MCPD esters in refined oils can be obtained from TAG . Presently, the mechanism for the formation of GE intermediates and the relationship between GEs and 3-MCPD esters are still unknown. Fatty acid salts of low acute toxicity. Their potential to irritate the skin and eyes is dependent on chain length.

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

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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. In addition, potential exposure of non-users of biocidal products (i.e. the general public) may occur indirectly via the environment, for example through drinking water, the food chain, as well as through atmospheric and residential exposure. Particular attention should be paid to the exposure of vulnerable sub-populations, such as the elderly, pregnant women, and children. Also pets and other domestic animals can be exposed indirectly following the application of biocidal products. Furthermore, exposure to biocides may vary in terms of route (inhalation, dermal contact, and ingestion) and pathway (food, drinking water, residential, occupational) of exposure, level, frequency and duration.

The predominant fate of the thiazole ring is oxidative ring scission catalysed by cytochrome P450 (CYP) and formation of the corresponding alpha-dicarbonyl metabolites and thioamide derivatives. The well-established toxicity associated with thioamides and thioureas has led to the speculation that thiazole toxicity is attributed to ring scission yielding the corresponding thioamide metabolite. Ring opening has also been observed in benzothiazoles. For instance, benzothiazole itself is converted to S-methylmercaptoaniline.

Acute toxicity data show that 1,2-benzisothiazoline-3-one (BIT) is moderately toxic by the oral and dermal routes but that this chemical is a severe eye irritant. Irritation to the skin from acute data show only mild skin irritation, but repeated dermal application indicated a more significant skin irritation response.

The neurotoxicity observed in the rat acute oral toxicity study (piloerection and upward curvature of the spine at 300 mg/kg and above; decreased activity, prostration, decreased abdominal muscle tone, reduced righting reflex, and decreased rate and depth of breathing at 900 mg/kg) and the acute dermal toxicity study (upward curvature of the spine was observed in increased incidence, but this was absent after day 5 post-dose at a dose of 2000 mg/kg) were felt to be at exposures in excess of those expected from the use pattern of this pesticide and that such effects would not be observed at estimated exposure doses.

Subchronic oral toxicity studies showed systemic effects after repeated oral administration including decreased body weight, increased incidence of forestomach hyperplasia, and non-glandular stomach lesions in rats. In dogs, the effects occurred at lower doses than in rats, and included alterations in blood chemistry (decreased plasma albumin, total protein, and alanine aminotransferase) and increased absolute liver weight.

Developmental toxicity studies were conducted in rats with maternal effects including decreased body weight gain, decreased food consumption, and clinical toxicity signs (audible breathing, haircoat staining of the anogenital region, dry brown material around the nasal area) as well as increased mortality. Developmental effects consisted of increases in skeletal abnormalities (extra sites of ossification of skull bones, unossified sternebrae) but not external or visceral abnormalities.

Reproductive toxicity: In a two- generation reproduction study, parental toxicity was observed at 500 ppm and was characterized by lesions in the stomach. In pups, toxic effects were reported at 1000 ppm and consisted of preputial separation in males and impaired growth and survival in both sexes. The reproduction study did not show evidence of increased susceptibility of offspring.

FND ether amines and FND amines are very similar in structure (length of chain or degree of saturation), function and toxicity. Acute exposure to FND ether amines by oral, dermal and inhalation may produce moderate to slight toxicity but repeated skin contact can be highly irritating. However, exposure did not produce any organ-specific toxicity, genetic, reproductive or developmental defect same as in FND 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 produce respiratory tract irritation, and result in damage to the lung including reduced lung function.

For alkyl polyamines:

The alkyl polyamines cluster consists of two terminal primary and at least one secondary amine groups and are derivatives of low molecular weight ethylenediamine, propylenediamine or hexanediamine. Toxicity depends on route of exposure. Cluster members have been shown to cause skin irritation or sensitisation, eye irritation and genetic defects, but have not been shown to cause cancer.

Overexposure to most of these materials may cause adverse health effects.

Many amine-based compounds can cause release of histamines, which, in turn, can trigger allergic and other physiological effects, including constriction of the bronchi or asthma and inflammation of the cavity of the nose. Whole-body symptoms include headache, nausea, faintness, anxiety, a decrease in blood pressure, rapid heartbeat, itching, reddening of the skin, urticaria (hives) and swelling of the face, which are usually transient.

There are generally four routes of possible or potential exposure: inhalation, skin contact, eye contact, and swallowing.

N-(3-AMINOPROPYL)-N-DODECYL-1,3-PROPANEDIAMINE

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Inhalation: Inhaling vapours may result in moderate to severe irritation of the tissues of the nose and throat and can irritate the lungs. Higher concentrations of certain amines can produce severe respiratory irritation, characterized by discharge from the nose, coughing, difficulty in breathing and chest pain. Chronic exposure via inhalation may cause headache, nausea, vomiting, drowsiness, sore throat, inflammation of the bronchi and lungs, and possible lung damage. Repeated and/or prolonged exposure to some amines may result in liver disorders, jaundice and liver enlargement. Some amines have been shown to cause kidney, blood and central nervous system disorders in animal studies.

While most polyurethane amine catalysts are not sensitisers, some certain individuals may also become sensitized to amines and my experience distress while breathing, including asthma-like attacks, whenever they are subsequently exposed to even very small amounts of vapours. Once sensitized, these individuals must avoid any further exposure to amines. Chronic overexposure may lead to permanent lung injury, including reduction in lung function, breathlessness, chronic inflammation of the bronchi, and immunologic lung disease. Products with higher vapour pressures may reach higher concentrations in the air, and this increases the likelihood of worker exposure.

Inhalation hazards are increased when exposure to amine catalysts occurs in situations that produce aerosols, mists or heated vapours. Such situations include leaks in fitting or transfer lines. Medical conditions generally aggravated by inhalation exposure include asthma, bronchitis and emphysema.

Skin contact: Skin contact with amine catalysts poses a number of concerns. Direct skin contact can cause moderate to severe irritation and injury, from simple redness and swelling to painful blistering, ulceration, and chemical burns. Repeated or prolonged exposure may also result in severe cumulative skin inflammation. Skin contact with some amines may result in allergic sensitization. Sensitised persons should avoid all contact with amine catalysts. Whole-body effects resulting from the absorption of the amines though skin exposure may include headaches, nausea, faintness, anxiety, decrease in blood pressure, reddening of the skin, hives, and facial swelling. These symptoms may be related to the pharmacological action of the amines, and they are usually temporary.

Eye contact: Amine catalysts are alkaline and their vapours are irritating to the eyes, even at low concentrations. Direct contact with liquid amine may cause severe irritation and tissue injury, and the "burning" may lead to blindness. Contact with solid products may result in mechanical irritation, pain and corneal injury.

Exposed persons may experience excessive tearing, burning, inflammation of the conjunctiva, and swelling of the cornea, which manifests as a blurred or foggy vision with a blue tint, and sometimes a halo phenomenon around lights. These symptoms are temporary and usually disappear when exposure ends. Some people may experience this effect even when exposed to concentrations that do not cause respiratory irritation.

Ingestion: Amine catalysts have moderate to severe toxicity if swallowed. Some amines can cause severe irritation, ulcers and burns of the mouth, throat, gullet and gastrointestinal tract. Material aspirated due to vomiting can damage the bronchial tubes and the lungs. Affected people may also experience pain in the chest or abdomen, nausea, bleeding of the throat and gastrointestinal tract, diarrhea, dizziness, drowsiness, thirst, collapse of circulation, coma and even death.

The acute oral LD50 in the rat was estimated to be \sim 260 mg/kg. Dermal LD50 was determined to be greater than 600 mg/kg pure substance. The substance (in 30% concentration) is severely irritating/ corrosive to the skin but was not a sensitiser when tested in low concentrations. A 90-day oral toxicity study showed at higher doses (30 and 90 mg/kg/day), a dose related increase in some liver enzymes but, no treatment related effects at doses of 5 or 10 mg/kg/day. It was not found to produce mutations in S. typhimurium, or the Chinese hamster V-79 cell line and there were no clastogenic effects in the Chinese hamster V-79 cell line. NICNAS Public Report 1995

SODIUM BORATE, DECAHYDRATE

Oral (rat) LD50: 4500-5000 mg/kg Eyes (rabbit) (-) Mild [Orica BORAX-Europe] Reproductive effector in rats Mutagenic towards bacteria

SODIUM LAURYL ETHER SULFATE & COCONUT OIL, SODIUM SALT & 1,2-BENZISOTHIAZOLINE-3-ONE & N-(3-AMINOPROPYL)-N-DODECYL-1,3-PROPANEDIAMINE

No significant acute toxicological data identified in literature search.

SODIUM LAURYL ETHER SULFATE & ALCOHOLS C12-15 ETHOXYLATED

Polyethers (such as ethoxylated surfactants and polyethylene glycols) are highly susceptible to being oxidized in the air. They then form complex mixtures of oxidation products. Animal testing reveals that whole the pure, non-oxidised surfactant is non-sensitizing, many of the oxidation products are sensitisers. The oxidization products also cause irritation.

PROPYLENE GLYCOL &
DIETHYLENETRIAMINEPENTA(METHYLENEPHOSPHONIC
ACID) SODIUM & N-(3-AMINOPROPYL)-N-DODECYL1,3-PROPANEDIAMINE

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 DODECYLBENZENESULFONATE & N-(3-AMINOPROPYL)-N-DODECYL-1,3-PROPANEDIAMINE & SODIUM BORATE, DECAHYDRATE

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

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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. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production.

1,2-BENZISOTHIAZOLINE-3-ONE & N-(3-AMINOPROPYL)-N-DODECYL-1,3-PROPANEDIAMINE 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. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.

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: 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
Aldi ALMAT Laundry Liquid Concentrate 2L & 4L	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
sodium lauryl ether sulfate	NOEC(ECx)	48h	Fish	0.26mg/L	5
	EC50	48h	Crustacea	2.43-4.01mg/l	4
	Endpoint	Test Duration (hr)	Species	Value	Source
	NOEC(ECx)	48h	Crustacea	0.056mg/l	2
	EC50	72h	Algae or other aquatic p	Algae or other aquatic plants 0.3mg/l	
alcohols C12-15 ethoxylated	LC50	96h	Fish	Fish 0.59mg/l	
	EC50	48h	Crustacea	Crustacea 0.13mg/l	
	EC50	96h	Algae or other aquatic p	olants 0.7mg/l	4
	Endpoint	Test Duration (hr)	Species	Value	Source
	NOEC(ECx)	336h	Algae or other aquatic plants	<5300mg/l	1
propylene glycol	EC50	72h	Algae or other aquatic plants	19300mg/l	2
	LC50	96h	Fish	>10000mg/l	2
	EC50	48h Crustacea		>114.4mg/L	4
	EC50	96h	Algae or other aquatic plants	19000mg/l	2
	Endpoint	Test Duration (hr)	Species	Value	Source
sodium dodecylbenzenesulfonate	EC50	72h	Algae or other aquatic plants 21mg/l		2

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	LC50	96h	Fish	0.59mg/L	4
	EC50	48h	Crustacea	0.065-0.085mg/L	4
	EC50(ECx)	48h	Crustacea	0.065-0.085mg/L	4
	EC50	96h	Algae or other aquatic plants	0.9mg/L	5
	Endpoint	Test Duration (hr)	Species	Value	Source
diethylenetriaminepenta(methylenephosphonic	NOEC(ECx)	336h	Algae or other aquation	plants 5mg/l	1
acid) sodium	EC50	48h	Crustacea	242.2mg/l	1
	Endpoint	Test Duration (hr)	Species	Value	Source
coconut oil, sodium salt	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
1,2-benzisothiazoline-3-one	LC50	96h	Fish	0.067-0.29mg/L	4
	EC50	48h	Crustacea	0.097mg/L	4
	EC50(ECx)	48h	Crustacea	0.097mg/L	4
	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	48h	Crustacea	0.051-0.113mg/L	4
N (2 aminanyanyi) N dadaayi	LC50	96h	Fish	0.261-0.539mg/L	4
N-(3-aminopropyl)-N-dodecyl- 1,3-propanediamine	NOEC(ECx)	72h	Algae or other aquatic plants	0.007mg/l	2
	EC50	96h	Algae or other aquatic plants	0.054mg/l	2
	Endpoint	Test Duration (hr)	Species	Value	Source
sodium borate, decahydrate	EC50	48h	Crustacea	1332-2135mg/l	4
	EC50(ECx)	48h	Crustacea	1332-2135mg/l	4

Legend:

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 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

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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
propylene glycol	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
propylene glycol	LOW (BCF = 1)

Mobility in soil

Ingredient	Mobility
propylene glycol	HIGH (KOC = 1)

SECTION 13 Disposal considerations

Aldi ALMAT Laundry Liquid Concentrate 2L & 4L

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- Containers may still present a chemical hazard/ danger when empty.
- ▶ Return to supplier for reuse/ recycling if possible.

Otherwise:

- If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.
- ▶ Where possible retain label warnings and SDS and observe all notices pertaining to the product.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction
- ► Reuse
- ► Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.

- DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- Where in doubt contact the responsible authority.
- ▶ Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Authority for disposal.
- ▶ Bury or incinerate residue at an approved site.
- ▶ Recycle containers if possible, or dispose of in an authorised landfill.

SECTION 14 Transport information

Product / Packaging

disposal

Labels Required



Marine Pollutant



HAZCHEM

•3Z

Land transport (ADG)

UN number	3082	3082		
UN proper shipping name		ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains diethylenetriaminepenta(methylenephosphonic acid) sodium and sodium dodecylbenzenesulfonate)		
Transport hazard class(es)	Class 9 Subrisk Not	Applicable		
Packing group	Ш			
Environmental hazard	Environmentally	Environmentally hazardous		
Special precautions for user	Special provision			

Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to this Code when transported by road or rail in;

- (a) packagings;
- (b) IBCs; or
- (c) any other receptacle not exceeding 500 kg(L).
- Australian Special Provisions (SP AU01) ADG Code 7th Ed.

Air transport (ICAO-IATA / DGR)

UN number	3082
IIN proper chipping name	Environmentally hazardous substance, liquid, n.o.s. * (contains diethylenetriaminepenta(methylenephosphonic acid) sodium and
UN proper shipping name	sodium dodecylbenzenesulfonate)

Transport hazard class(es)	ICAO/IATA Class	9		
	ICAO / IATA Subrisk	Not Applicable		
	ERG Code	9L		
Packing group	III			
Environmental hazard	Environmentally hazard	nvironmentally hazardous		
Special precautions for user	Special provisions		A97 A158 A197 A215	
	Cargo Only Packing Instructions		964	
	Cargo Only Maximum Qty / Pack		450 L	
	Passenger and Cargo Packing Instructions		964	
	Passenger and Cargo	450 L		
	Passenger and Cargo	Y964		
	Passenger and Cargo Limited Maximum Qty / Pack		30 kg G	

Sea transport (IMDG-Code / GGVSee)

UN number	3082			
UN proper shipping name		ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains diethylenetriaminepenta(methylenephosphonic acid) sodium and sodium dodecylbenzenesulfonate)		
Transport hazard class(es)	IMDG Class 9 IMDG Subrisk No	ot Applicable		
Packing group	III			
Environmental hazard	Marine Pollutant			
Special precautions for user	EMS Number Special provisions Limited Quantities	F-A , S-F 274 335 969 5 L		

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

Not Applicable

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

Product name	Group
sodium lauryl ether sulfate	Not Available
alcohols C12-15 ethoxylated	Not Available
propylene glycol	Not Available
sodium dodecylbenzenesulfonate	Not Available
diethylenetriaminepenta(methylenephosphonic acid) sodium	Not Available
coconut oil, sodium salt	Not Available
1,2-benzisothiazoline-3-one	Not Available
N-(3-aminopropyl)-N-dodecyl- 1,3-propanediamine	Not Available
sodium borate, decahydrate	Not Available

Transport in bulk in accordance with the ICG Code

Product name	Ship Type
sodium lauryl ether sulfate	Not Available
alcohols C12-15 ethoxylated	Not Available
propylene glycol	Not Available
sodium dodecylbenzenesulfonate	Not Available
diethylenetriaminepenta(methylenephosphonic acid) sodium	Not Available
coconut oil, sodium salt	Not Available

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Product name	Ship Type
1,2-benzisothiazoline-3-one	Not Available
N-(3-aminopropyl)-N-dodecyl- 1,3-propanediamine	Not Available
sodium borate, decahydrate	Not Available

SECTION 15 Regulatory information

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

sodium lauryl ether sulfate is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australian Inventory of Industrial Chemicals (AIIC)

alcohols C12-15 ethoxylated is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australian Inventory of Industrial Chemicals (AIIC)

propylene glycol is found on the following regulatory lists

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

Australian Inventory of Industrial Chemicals (AIIC)

sodium dodecylbenzenesulfonate is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australian Inventory of Industrial Chemicals (AIIC)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

diethylenetriaminepenta(methylenephosphonic acid) sodium is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

coconut oil, sodium salt is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

1,2-benzisothiazoline-3-one is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australian Inventory of Industrial Chemicals (AIIC)

N-(3-aminopropyl)-N-dodecyl-1,3-propanediamine is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

sodium borate, decahydrate is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australian Inventory of Industrial Chemicals (AIIC)
Chemical Footprint Project - Chemicals of High Concern List

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 4

National Inventory Status

tational mironion, otalia		
National Inventory	Status	
Australia - AIIC / Australia Non-Industrial Use	Yes	
Canada - DSL	Yes	
Canada - NDSL	No (sodium lauryl ether sulfate; alcohols C12-15 ethoxylated; propylene glycol; sodium dodecylbenzenesulfonate; diethylenetriaminepenta(methylenephosphonic acid) sodium; 1,2-benzisothiazoline-3-one; N-(3-aminopropyl)-N-dodecyl-1,3-propanediamine; sodium borate, decahydrate)	
China - IECSC	Yes	
Europe - EINEC / ELINCS / NLP	Yes	
Japan - ENCS	Yes	
Korea - KECI	No (N-(3-aminopropyl)-N-dodecyl-1,3-propanediamine)	
New Zealand - NZIoC	Yes	
Philippines - PICCS	Yes	

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National Inventory	Status	
USA - TSCA	Yes	
Taiwan - TCSI	Yes	
Mexico - INSQ	No (sodium lauryl ether sulfate; diethylenetriaminepenta(methylenephosphonic acid) sodium; coconut oil, sodium salt; N-(3-aminopropyl)-N-dodecyl-1,3-propanediamine)	
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 and are not exempt from listing(see specific ingredients)	

SECTION 16 Other information

Revision Date	19/08/2020
Initial Date	19/08/2020

SDS Version Summary

Version	Date of Update	Sections Updated
0.0.2.1	27/04/2021	Regulation Change
0.0.3.1	04/05/2021	Regulation Change
0.0.4.1	07/05/2021	Regulation Change
0.0.5.1	11/05/2021	Regulation Change
0.0.5.2	30/05/2021	Template Change
0.0.5.3	04/06/2021	Template Change
0.0.5.4	05/06/2021	Template Change
0.0.6.4	08/06/2021	Regulation Change
0.0.6.5	09/06/2021	Template Change
0.0.6.6	11/06/2021	Template Change
0.0.6.7	15/06/2021	Template Change
0.0.7.7	18/06/2021	Regulation Change
0.0.8.7	22/06/2021	Regulation Change

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

 ${\sf PC-TWA: Permissible \ Concentration-Time \ Weighted \ Average}$

 ${\sf PC-STEL} : Permissible\ Concentration-Short\ Term\ Exposure\ Limit$

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

AIIC: Australian Inventory of Industrial Chemicals

DSL: Domestic Substances List

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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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