

CLEANER FLOOR FINISH POLISH VECTRA 5L

Officemax

Chemwatch: 36-7689

Version No: 4.1.1.1

Safety Data Sheet according to HSNO Regulations

Issue Date: 01/11/2019

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S.GHS.NZL.EN

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

Product name	CLEANER FLOOR FINISH POLISH VECTRA 5L
Synonyms	Part No: 2609606
Other means of identification	Not Available

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

Relevant identified uses	Floor polish.
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Details of the supplier of the safety data sheet

Registered company name	Officemax
Address	30 Sir Woolf Fisher Drive East Tamaki Manukau New Zealand
Telephone	0800 426 473
Fax	0800 226 473
Website	www.officemax.co.nz
Email	enquiries@officemax.co.nz

Emergency telephone number

Association / Organisation	CHEMWATCH EMERGENCY RESPONSE
Emergency telephone numbers	+64 800 700 112
Other emergency telephone numbers	+61 2 9186 1132

Once connected and if the message is not in your preferred language then please dial 01

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation. Not regulated for transport of Dangerous Goods.

CHEMWATCH HAZARD RATINGS

	Min	Max	
Flammability	0		
Toxicity	1		
Body Contact	0		
Reactivity	0		
Chronic	0		

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

Classification [1]	Chronic Aquatic Hazard Category 3
Legend:	1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI
Determined by Chemwatch using GHS/HSNO criteria	9.1C

Label elements

Hazard pictogram(s)	Not Applicable
SIGNAL WORD	NOT APPLICABLE

Hazard statement(s)

H412	Harmful to aquatic life with long lasting effects.
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Precautionary statement(s) Prevention

P273	Avoid release to the environment.
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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.
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SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
78-51-3	1-5	<u>tris(2-butoxyethyl)phosphate</u>
1314-13-2	<1	<u>zinc oxide</u>
26896-20-8	<1	<u>neodecanoic acid</u>
Not Available	>60	Ingredients determined not to be hazardous

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none">▶ 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	<p>If skin or hair contact occurs:</p> <ul style="list-style-type: none">▶ Flush skin and hair with running water (and soap if available).▶ Seek medical attention in event of irritation.
Inhalation	<ul style="list-style-type: none">▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area.▶ Other measures are usually unnecessary.
Ingestion	<ul style="list-style-type: none">▶ 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.▶ Seek medical advice.

Indication of any immediate medical attention and special treatment needed

Atropine sulfate, usually in doses of 600 microgram may be given intravenously, intramuscularly, or subcutaneously to control the muscarinic effects of choline esterase inhibitors. Supportive treatment may be required.

MARTINDALE: The Extra Pharmacopoeia, Twenty-ninth Edition

While other antimuscarinic agents (e.g., scopolamine) can counteract the effects of cholinesterase inhibitors, their inherent toxic effects in patients who do not have cholinesterase inhibitor poisoning have led to their rejection in favor of atropine. Glycopyrrolate in doses of 1-2 mg, I.V., (0.025 mg/kg in children) has been suggested as an alternative to atropine, and is said to have fewer CNS side effects. However, its use has not been extensively evaluated.

Atropine works by competitively occupying muscarinic receptor sites, thus reducing the effects of excessive acetylcholine on these sites brought about by cholinesterase inhibition.

Atropine is not thought to have significant effect on nicotinic receptors, and thus does not counteract fasciculations, weakness, or flaccid paralysis. Thus, even when given sufficient doses of atropine, patients may need artificial ventilation, sometimes for weeks.

A number of authors have recommended the "atropine challenge" as an aid to diagnosis.

When given to a normal person who has not been exposed to cholinesterase inhibitors, a 2 mg dose of atropine (0.025-0.050/kg in pediatric cases) causes:

- ▶ A dry mouth.
- ▶ An increase in heart rate of about 35 beats/minute (which is usually not noticed by the recipient) within 3-5 minutes of an I.V. dose, and a maximal increase in heart rate of about 35-45 beats/minute with I.M. or autoinjector administration, respectively, within about 35-45 minutes (the longer being with I.M. injection).
- ▶ Blurred near-vision.
- ▶ Dry, hot skin.
- ▶ Mydriasis (pupillary dilation).

Most of these effects will dissipate within 4-6 hours, except blurred near-vision which may persist for 24 hours.

It has been suggested that when these physiological changes do not occur with this dose (sometimes referred to as an atropine challenge), this is indicative of

cholinesterase inhibitor toxicity.

Cautions

- If miosis (pupillary constriction) is due to direct conjunctival vapor exposure, it is relatively unresponsive to parenteral atropine. Although, it does respond to topical administration).
- In 2-13% of cases of cholinesterase inhibitor toxicity, mydriasis (pupillary dilation) --- rather than miosis (pupillary constriction), and tachycardia --- rather than bradycardia (3-77% of cases), may be a presenting signs.
- One author points out that this strategy has never been empirically tested and may not be very sensitive or specific (Parenteral atropine is not generally recommended for those whose sole manifestation of toxicity is miosis (pupillary constriction)).
- Some cases of mild to moderate poisonings may improve with these doses of atropine. Thus, signs of atropinization do not always exclude the presence of cholinesterase inhibitor toxicity.

In approximate order of preference, the following routes of administration can be used for the administration of atropine

1. Intravenous: bolus, followed by I.V. drip. .
1. Intraosseous: (American Heart Association 2005) bolus, followed by continuous infusion.
1. Military MARK I atropine autoinjector: Although intravenous injection is the preferred route of administration, use of the autoinjector may be more practical in the field, where it can be rapidly administered even through clothing.) Blood levels are achieved more rapidly than by other forms of IM injection. Note that each MARK I kit contains an atropine autoinjector, containing 2 mg of atropine plus another autoinjector containing 600 mg of 2-PAM. Paediatric atropine autoinjector syringes are available in 0.5 mg and 1 mg sizes.
1. Intramuscular: Research for this Case Study did not turn up any comparisons of intramuscular with inhalation routes of atropine administration.
1. Inhalation: by nebulised inhalation or via the intratracheal route. The intratracheal route can be used, but absorption is notably less complete and less reliable than the intravenous or intraosseous routes, which are preferred. The optimal intratracheal dose is unknown, but is typically administered in an amount 2-2½ times the intravenous dose. The American Heart Association recommends that the dose be diluted in 5-10 ml water or normal saline. American Heart Association 2005; American Heart Association 2005)
1. Oral: use has been reported after I.V. administration became unnecessary.
1. Ophthalmic: Anticholinergic eye drops (e.g., atropine or homatropine) have been recommended for severe eye pain caused by miosis (pupillary constriction), and secondary reflex nausea and vomiting, but may result in blurred vision. However, one author questions whether there is enough evidence to recommend this practice.

Tachycardia should not be used as an end-point, because it sometimes is a nicotinic manifestation of toxicity.

Resolution of miosis [Miosis has been defined as pupillary diameter of <3 mm in the dark, along with sluggish or absent response to light] should not be used as an end-point, because:

- Miosis (pupillary constriction) from systemic exposure may be a late finding.
- When miosis (pupillary constriction) is present, it may be resistant to systemic atropine therapy.
- Miosis (pupillary constriction) may reflect only localized ophthalmic exposure to vapor without systemic effects.
- Pupils are of normal size in a significant minority of poisoned patients (20% in one series).
- Toxic patients may present with mydriasis (pupillary dilation) due to occasional dominance of nicotinic effects from cholinesterase inhibitors.

Case Studies in Environmental Medicine (CSEM) Cholinesterase Inhibitors Including Insecticides and Chemical Warfare Nerve Agents Part 4: The Cholinergic Toxidrome; Section 11: Management of the Cholinergic Toxidrome Management Strategy 3: Medications Atropine Agency for Toxic Substance and Disease Registry ATSDR (USA)

Treat symptomatically.

SECTION 5 FIREFIGHTING 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.
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Advice for firefighters

Fire Fighting	<ul style="list-style-type: none">▸ 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	<ul style="list-style-type: none">▸ Non combustible.▸ 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

Methods and material for containment and cleaning up

Minor Spills	<ul style="list-style-type: none">▸ 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.
Major Spills	Moderate hazard. <ul style="list-style-type: none">▸ 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 style="list-style-type: none">▶ 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 style="list-style-type: none">▶ Store in original containers.▶ Keep containers securely sealed.▶ Store in a cool, dry, well-ventilated area.▶ Store away from incompatible materials and foodstuff containers.

Conditions for safe storage, including any incompatibilities

Suitable container	<ul style="list-style-type: none">▶ 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

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
New Zealand Workplace Exposure Standards (WES)	zinc oxide	Zinc oxide fume	3 mg/m ³	10 mg/m ³	Not Available	(r) - The value for respirable dust.
New Zealand Workplace Exposure Standards (WES)	zinc oxide	Zinc oxide Dust	10 mg/m ³	Not Available	Not Available	(r) - The value for respirable dust.

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
tris(2-butoxyethyl)phosphate	Butoxyethanol phosphate, 2-	9 mg/m ³	99 mg/m ³	590 mg/m ³
zinc oxide	Zinc oxide	10 mg/m ³	15 mg/m ³	2,500 mg/m ³
neodecanoic acid	Neodecanoic acid	6 mg/m ³	66 mg/m ³	400 mg/m ³

Ingredient	Original IDLH	Revised IDLH
tris(2-butoxyethyl)phosphate	Not Available	Not Available
zinc oxide	500 mg/m ³	Not Available
neodecanoic acid	Not Available	Not Available

OCCUPATIONAL EXPOSURE BANDING

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
tris(2-butoxyethyl)phosphate	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	<p>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.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>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.</p>
Personal protection	

Eye and face protection	<ul style="list-style-type: none"> ▶ 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	<p>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.</p> <p>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.</p> <p>Personal hygiene is a key element of effective hand care.</p> <ul style="list-style-type: none"> ▶ Wear chemical protective gloves, e.g. PVC. ▶ Wear safety footwear or safety gumboots, e.g. Rubber
Body protection	See Other protection below
Other protection	<ul style="list-style-type: none"> ▶ Overalls. ▶ P.V.C. apron. ▶ Barrier cream.

Respiratory protection

Type A-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.

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

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Opaque white liquid with an ammonia odour; dispersible in water.		
Physical state	Liquid	Relative density (Water = 1)	~1.03
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	8.3-8.8	Decomposition temperature	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	Partly miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
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Chemical stability	<ul style="list-style-type: none"> ▶ Unstable in the presence of incompatible materials. ▶ Product is considered stable. ▶ 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 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. Adverse effects of choline esters include nausea, vomiting, abdominal pain, flushing, sweating, salivation, watery eyes, runny nose, belching, loss of bowel and kidney control, reduced heart rate, heart block, constriction of airways, low blood pressure and tightening of the chest.
Skin Contact	The liquid may be able to be mixed with fats or oils and may degrease the skin, producing a skin reaction described as non-allergic contact dermatitis. The material is unlikely to produce an irritant dermatitis as described in EC Directives. Open cuts, abraded or irritated skin should not be exposed to this material
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.

	TOXICITY	IRRITATION
CLEANER FLOOR FINISH POLISH VECTRA 5L	Not Available	Not Available
tris(2-butoxyethyl)phosphate	Dermal (rabbit) LD50: >2040 mg/kg ^[1]	Eye: adverse effect observed (irritating) ^[1]
	Inhalation (rat) LC50: 5-6.4 mg/l4hrs ^[2]	Skin (rabbit): 500 mg/24h mild
	Oral (rat) LD50: ~500-5000 mg/kg ^[1]	Skin: adverse effect observed (irritating) ^[1]
		Skin: no adverse effect observed (not irritating) ^[1]
zinc oxide	dermal (rat) LD50: >2000 mg/kg ^[1]	Eye (rabbit) : 500 mg/24 h - mild
	Inhalation (rat) LC50: >1.79 mg/l4 h ^[1]	Eye: no adverse effect observed (not irritating) ^[1]
	Oral (rat) LD50: >5000 mg/kg ^[2]	Skin (rabbit) : 500 mg/24 h- mild
		Skin: no adverse effect observed (not irritating) ^[1]
neodecanoic acid	Dermal (rabbit) LD50: >3160 mg/kg ^[2]	Not Available
	Inhalation (guinea pig) LC50: >0.7665 mg/l/6H ^[2]	
	Oral (rat) LD50: 2000 mg/kg ^[2]	
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	

TRIS(2-BUTOXYETHYL)PHOSPHATE	<p>Oral (rat) LD50: 3000-9490 mg/kg Eye (rabbit): 500 mg/24h mild Inhalation (rat) LC50: 5->6.4 mg/l 4 hrs</p> <p>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.</p> <p>The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.</p> <p>TBEP [tris(2-butoxyethyl)phosphate] has been associated with particles in the air of offices. It has low systemic and irritation potential, but one animal study suggested it might cause inflammation of the heart muscle and, repeated doses may slow nerve conduction, reduce weight gain and cause changes to liver cells. Animal studies also showed reduction in activity and</p>
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	tremors, hairs standing up, excessive tear secretion and increased urination. Tests to date reveal that TBEP does not cause birth defects or mutations, but it is not known whether TBEP causes cancer or genetic damage.
NEODECANOIC ACID	<p>No significant acute toxicological data identified in literature search.</p> <p>The production of neoacid products involves the reaction between a branched olefin with carbon monoxide and water at elevated temperatures and pressures in the presence of an acid catalyst.</p> <p>The neoacids C5-28 are structurally similar and create a predictable pattern of physiochemical properties, environmental fate and effects and human health effects. Neoacids are trialkylacetic acids in which each hydrogen on the non carboxyl carbon of acetic acid has been replaced by an alkyl group. The structural features of members of the category are as follows:</p> <ul style="list-style-type: none"> ▶ A common structure - a quaternary carbon with the general structure R3CCOOH, ▶ An incremental and constant change across the category where R can be a branched alkyl group ranging from CH3 to C6H13 as the main constituent, ▶ A likelihood of common precursors and breakdown products that can result in structurally similar metabolites (e.g carboxylic acids).
TRIS(2-BUTOXYETHYL)PHOSPHATE & ZINC OXIDE	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.

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

CLEANER FLOOR FINISH POLISH VECTRA 5L	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	Not Available	Not Available	Not Available	Not Available	Not Available

tris(2-butoxyethyl)phosphate	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	9.495mg/L	3
	EC50	48	Crustacea	53mg/L	2
	EC50	96	Algae or other aquatic plants	1.453mg/L	3
	NOEC	48	Crustacea	4.6mg/L	2

zinc oxide	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	0.001-0.58mg/L	2
	EC50	48	Crustacea	0.001-0.014mg/L	2
	EC50	72	Algae or other aquatic plants	0.037mg/L	2
	BCF	336	Fish	4376.673mg/L	4
NOEC	72	Algae or other aquatic plants	0.00008138mg/L	2	

neodecanoic acid	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	13.499mg/L	3
	EC50	48	Crustacea	>1-mg/L	2
	EC50	96	Algae or other aquatic plants	20.543mg/L	3
NOEC	384	Crustacea	1.063mg/L	2	

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*

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

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
tris(2-butoxyethyl)phosphate	HIGH	HIGH
neodecanoic acid	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
tris(2-butoxyethyl)phosphate	LOW (BCF = 5.8)
zinc oxide	LOW (BCF = 217)
neodecanoic acid	MEDIUM (LogKOW = 3.9045)

Mobility in soil

Ingredient	Mobility
tris(2-butoxyethyl)phosphate	LOW (KOC = 466200)
neodecanoic acid	LOW (KOC = 53.72)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal	<p>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.</p> <p>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none">▶ Reduction▶ Reuse▶ Recycling▶ Disposal (if all else fails) <p>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.</p> <ul style="list-style-type: none">▶ 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.▶ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.▶ Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or incineration in a licensed apparatus (after admixture with suitable combustible material).▶ Decontaminate empty containers.
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Ensure that the hazardous substance is disposed in accordance with the Hazardous Substances (Disposal) Notice 2017

Disposal Requirements

Packages that have been in direct contact with the hazardous substance must be only disposed if the hazardous substance was appropriately removed and cleaned out from the package. The package must be disposed according to the manufacturer's directions taking into account the material it is made of. Packages which hazardous content have been appropriately treated and removed may be recycled.

The hazardous substance must only be disposed if it has been treated by a method that changed the characteristics or composition of the substance and it is no longer hazardous.

SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (UN): 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

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

Not Applicable

SECTION 15 REGULATORY INFORMATION

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

This substance is to be managed using the conditions specified in an applicable Group Standard

HSR Number	Group Standard
HSR002530	Cleaning Products (Subsidiary Hazard) Group Standard 2017

TRIS(2-BUTOXYETHYL)PHOSPHATE IS FOUND ON THE FOLLOWING REGULATORY LISTS

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data

ZINC OXIDE IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Air Transport Association (IATA) Dangerous Goods Regulations

New Zealand Inventory of Chemicals (NZIoC)

International Maritime Dangerous Goods Requirements (IMDG Code)

New Zealand Land Transport Rule: Dangerous Goods 2005 - Schedule 1 Quantity limits

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals

New Zealand Workplace Exposure Standards (WES)

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data

United Nations Recommendations on the Transport of Dangerous Goods Model Regulations

NEODECANOIC ACID IS FOUND ON THE FOLLOWING REGULATORY LISTS

GESAMP/EHS Composite List - GESAMP Hazard Profiles

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals

IMO IBC Code Chapter 17: Summary of minimum requirements

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data

IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk

New Zealand Inventory of Chemicals (NZIoC)

Hazardous Substance Location

Subject to the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Hazard Class	Quantity beyond which controls apply for closed containers	Quantity beyond which controls apply when use occurring in open containers
Not Applicable	Not Applicable	Not Applicable

Certified Handler

Subject to Part 4 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Class of substance	Quantities
Not Applicable	Not Applicable

Refer Group Standards for further information

Tracking Requirements

Not Applicable

National Inventory Status

National Inventory	Status
Australia - AICS	Yes
Canada - DSL	Yes
Canada - NDSL	No (neodecanoic acid; tris(2-butoxyethyl)phosphate)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - ARIPS	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 in brackets)

SECTION 16 OTHER INFORMATION

Revision Date	01/11/2019
Initial Date	05/09/2013

SDS Version Summary

Version	Issue Date	Sections Updated
4.1.1.1	01/11/2019	One-off system update. NOTE: This may or may not change the GHS classification

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
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

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