Barnes NZ

Chemwatch: 5679-52

Version Vo. 2.1 Safety Data Sheet according to the Health and Safety at Work (Hazardous Substances) Regulations 2017 Chemwatch Hazard Alert Code: 3

Issue Date: **24/05/2024** Print Date: **17/06/2024** S.GHS.NZL.EN.E

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

Product Identifier		
Product name	OIL RUBBED	
Chemical Name	Not Applicable	
Synonyms	TRADITIONAL PATINA OIL RUBBED	
Proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (contains selenium dioxide and phosphoric acid)	
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	Oxidizing solution for non-ferrous metals.
	Use according to manufacturer's directions.

Details of the manufacturer or supplier of the safety data sheet

Registered company name	Barnes NZ
Address	B/92-94 Railside Ave, Henderson Auckland 0612 New Zealand
Telephone	+64 09 973 1816
Fax	Not Available
Website	www.barnesnz.co.nz
Email	info@barnesnz.co.nz

Emergency telephone number

•••	
Association / Organisation	New Zealand Poison's Information Center
Emergency telephone numbers	0800 764 766
Other emergency telephone numbers	Not Available

SECTION 2 Hazards identification

Classification of the substance or mixture

Classification ^[1]	Classification [1] Corrosive to Metals Category 1, Acute Toxicity (Oral) Category 3, Acute Toxicity (Dermal) Category 2, Skin Corrosion/Irritation Category 1, Serious Eye Damage/Eye Irritation Category 1, Acute Toxicity (Inhalation) Category 4, Sensitisation (Respiratory) Category 1, Gerr Mutagenicity Category 2, Reproductive Toxicity Category 2, Specific Target Organ Toxicity - Repeated Exposure Category 2, Haza the Aquatic Environment Long-Term Hazard Category 2	
Legend:	1. Classified by Chernwatch; 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	8.1A, 6.1B (dermal), 6.1C (oral), 6.1D (inhalation), 8.2B, 8.3A, 6.5A (respiratory), 6.6B, 6.8B, 6.9B, 9.1B	

Label elements

Hazard pictogram(s)	

Danger

Signal word

Hazard statement(s)

H290	May be corrosive to metals.
H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341	Suspected of causing genetic defects.
H361	Suspected of damaging fertility or the unborn child.

H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
P260	Do not breathe mist/vapours/spray.
P262	Do not get in eyes, on skin, or on clothing.
P264	Wash all exposed external body areas thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves, protective clothing, eye protection and face protection.

Precautionary statement(s) Response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/first aider.	
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. If more than 15 mins from Doctor, INDUCE VOMITING (if conscious).	
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].	
P304+P340	I4+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.	
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.		
P308+P313	IF exposed or concerned: Get medical advice/ attention.	
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician/first aider.	

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
3251-23-8	0-1	copper nitrate
1341-49-7	0-1	ammonium bifluoride
7446-08-4	1-3	selenium dioxide
7664-38-2	1-3	phosphoric acid
Not Available	1-15	Proprietary Non Hazardous
7732-18-5	60-100	water
Legend:	 Classified by Chernwatch; 2. Classification VI; 4. Classification drawn from C&L * EU IC 	n drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex DELVs available

SECTION 4 First aid measures

Description of first aid measures		
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 or hair contact occurs: Immediately flush body and clothes with large amounts of water, using safety shower if available. Quickly remove all contaminated clothing, including footwear. Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre. Transport to hospital, or doctor. 	
Inhalation	 If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor, without delay. Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema. Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs). As this reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (yet) manifested. Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered. This must definitely be left to a doctor or person authorised by him/her. (ICSC13719) 	

Ingestion	 For advice, contact a Poisons Information Centre or a doctor at once. Urgent hospital treatment is likely to be needed. 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.
	Transport to hospital or doctor without delay.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

For acute or short term repeated exposures to strong acids:

- Airway problems may arise from laryngeal edema and inhalation exposure. Treat with 100% oxygen initially.
- Respiratory distress may require cricothyroidotomy if endotracheal intubation is contraindicated by excessive swelling
- Intravenous lines should be established immediately in all cases where there is evidence of circulatory compromise.
- Strong acids produce a coagulation necrosis characterised by formation of a coagulum (eschar) as a result of the dessicating action of the acid on proteins in specific tissues.

INGESTION:

- Immediate dilution (milk or water) within 30 minutes post ingestion is recommended.
- DO NOT attempt to neutralise the acid since exothermic reaction may extend the corrosive injury.
- Be careful to avoid further vomit since re-exposure of the mucosa to the acid is harmful. Limit fluids to one or two glasses in an adult.
- Charcoal has no place in acid management.

Some authors suggest the use of lavage within 1 hour of ingestion.

SKIN:

Skin lesions require copious saline irrigation. Treat chemical burns as thermal burns with non-adherent gauze and wrapping.

- Deep second-degree burns may benefit from topical silver sulfadiazine.
- EYE:
- Eye injuries require retraction of the eyelids to ensure thorough irrigation of the conjuctival cul-de-sacs. Irrigation should last at least 20-30 minutes. DO NOT use neutralising agents or any other additives. Several litres of saline are required.
- Cycloplegic drops, (1% cyclopentolate for short-term use or 5% homatropine for longer term use) antibiotic drops, vasoconstrictive agents or artificial tears may be indicated dependent on the severity of the injury.
- Steroid eye drops should only be administered with the approval of a consulting ophthalmologist).

[Ellenhorn and Barceloux: Medical Toxicology]

SECTION 5 Firefighting measures

Extinguishing media

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

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

- foam.
- dry chemical powder
- carbon dioxide.

Special hazards arising from the substrate or mixture

Fire Incompatibility None known.

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 fire fighting procedures suitable for surrounding area. 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	 Non combustible. Not considered to be a significant fire risk. Acids may react with metals to produce hydrogen, a highly flammable and explosive gas. Heating may cause expansion or decomposition leading to violent rupture of containers. May emit corrosive, poisonous fumes. May emit acrid smoke. carbon dioxide (CO2) nitrogen oxides (NOX) metal oxides other pyrolysis products typical of burning organic material.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills Environmental hazard - contain spillage.

- Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material.
- Check regularly for spills and leaks.
- 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.

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	 Wipe up. Place in a suitable, labelled container for waste disposal.
Major Spills	 Environmental hazard - contain spillage. Clear area of personnel and move upwind. 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. Consider evacuation (or protect in place). Stop leak if safe to do so. Contain spill with sand, earth or vermiculite.

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

SECTION 7 Handling and storage

Precautions for safe handling	
Safe handling	 DO NOT allow clothing wet with material to stay in contact with skin Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Avoid contact with moisture. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers securely sealed when not in use.
Other information	 Store in original containers. Keep containers securely sealed. 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	 DO NOT use aluminium or galvanised containers Check regularly for spills and leaks Lined metal can, lined metal pail/ can. Plastic pail. Polyliner drum. Packing as recommended by manufacturer. Check all containers are clearly labelled and free from leaks. For low viscosity materials Drums and jerricans must be of the non-removable head type. Where a can is to be used as an inner package, the can must have a screwed enclosure. For materials with a viscosity of at least 2680 cSt. (23 deg. C) and solids (between 15 C deg. and 40 deg C.): Removable head packaging; Cans with friction closures and low pressure tubes and cartridges may be used. Where combination packages are used, and the inner packages are of glass, porcelain or stoneware, there must be sufficient inert cushioning material in contact with inner and outer packages unless the outer packaging is a close fitting moulded plastic box and the substances are not incompatible with the plastic.
Storage incompatibility	 Metal nitrites: are incompatible with chlorates, hypophosphites, iodides, mercury salts, permanganates, sulfites, primary amines and amides, secondary amines and amides, ammonium salts, activated carbon, cyanogen compounds, thiocyanates, thiosulfates, cyanides, sodium amide, boron, acetanilide, antipyrine, tannic acid and cellulose react explosively with hydrazine and liquid ammonia . react explosively following fusion with metal cyanides react (often) with salts of nitrogenous bases to produce an unstable corresponding nitrite salt. Reacts with mild steel, galvanised steel / zinc producing hydrogen gas which may form an explosive mixture with air. Avoid strong bases. Segregate from alkalies, oxidising agents and chemicals readily decomposed by acids, i.e. cyanides, sulfides, carbonates.

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)	copper nitrate	Copper and its inorganic compounds, as Cu respirable dust	0.01 mg/m3	Not Available	Not Available	(dsen) - Dermal sensitiser
New Zealand Workplace Exposure Standards (WES)	ammonium bifluoride	Fluorides, as F	2.5 mg/m3	Not Available	Not Available	(bio) - Exposure can also be estimated by biological monitoring
New Zealand Workplace Exposure Standards (WES)	selenium dioxide	Selenium and compounds, as Se	0.02 mg/m3	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	phosphoric acid	Phosphoric acid	1 mg/m3	Not Available	Not Available	Not Available

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
copper nitrate	42 mg/m3	150 mg/m3	240 mg/m3
copper nitrate	8.9 mg/m3	31 mg/m3	190 mg/m3

Ingredient	TEEL-1	TEEL-2		TEEL-3
ammonium bifluoride	11 mg/m3	130 mg/m3		750 mg/m3
selenium dioxide	0.84 mg/m3	1.6 mg/m3		9.5 mg/m3
phosphoric acid	Not Available	Not Available		Not Available
Ingredient	Original IDLH		Revised IDLH	
copper nitrate	Not Available		Not Available	
ammonium bifluoride	Not Available		Not Available	
selenium dioxide	1 mg/m3		Not Available	
phosphoric acid	1,000 mg/m3		Not Available	
water	Not Available		Not Available	

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. 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.
Individual protection measures, such as personal protective equipment	
Eye and face protection	 Safety glasses with unperforated side shields may be used where continuous eye protection is desirable, as in laboratories; spectacles are not sufficient where complete eye protection is needed such as when handling bulk-quantities, where there is a danger of splashing, or if the material may be under pressure. Chemical goggles. Whenever there is a danger of the material coming in contact with the eyes; goggles must be properly fitted. [AS/NZS 1337.1, EN166 or national equivalent] Full face shield (20 cm, 8 in minimum) may be required for supplementary but never for primary protection of eyes; these afford face protection. Alternatively a gas mask may replace splash goggles and face shields. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.
Skin protection	See Hand protection below
Hands/feet protection	 When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots. Elbow length PVC gloves The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Personal hygiene is a key element of effective hand care. 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.
Body protection	See Other protection below
Other protection	 Overalls. PVC Apron. PVC protective suit may be required if exposure severe. Eyewash unit. Ensure there is ready access to a safety shower.

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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OIL	RUBBED	

Material	CPI
NEOPRENE	A
BUTYL	С
NAT+NEOPR+NITRILE	С
NATURAL RUBBER	С
NATURAL+NEOPRENE	С
NEOPRENE/NATURAL	С
NITRILE	С
NITRILE+PVC	С
PE	С
PVA	С
PVC	С
SARANEX-23	С
VITON	С

Respiratory protection

Type AB-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	AB-AUS P2	-	AB-PAPR-AUS / Class 1 P2
up to 50 x ES	-	AB-AUS / Class 1 P2	-
up to 100 x ES	-	AB-2 P2	AB-PAPR-2 P2 ^

^ - Full-face

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

- 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

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* 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 -

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.

Ansell Glove Selection

Glove — In order of recommendation
AlphaTec® Solvex® 37-675
DermaShield™ 73-711
MICROFLEX® 63-864
MICROFLEX® 73-847
MICROFLEX® 93-244
MICROFLEX® 93-252
MICROFLEX® 93-260
MICROFLEX® 93-853
MICROFLEX® 93-833
MICROFLEX® 93-843

The suggested gloves for use should be confirmed with the glove supplier.

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Blue translucent liquid.		
Physical state	Liquid	Relative density (Water = 1)	1.055
Odour	Slight	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	2.3	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	>109	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	<1.0	Explosive properties	Not Available
Flammability	Not Applicable	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)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	Contact with alkaline material liberates heat
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
 There is strong evidence to suggest that this material can cause, if inhaled once, very serious, irreversible damage of organs. Inhaled

 Inhaled
 There is strong evidence to suggest that this material can cause, if inhaled once, very serious, irreversible damage of organs. Inhaled

 Inhaled
 Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may produce severe damage to the health of the individual. Relatively small amounts absorbed through the lungs may prove fatal. Corrosive acids can cause irritation of the respiratory tract, with coughing, choking and mucous membrane damage. There may be dizziness, headache, nausea and weakness.

 Ingestion
 Toxic effects may result from the accidental ingestion of the material; animal experiments indicate that ingestion of less than 40 gram may be fatal or may produce serious damage to the health of the individual.

 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

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	The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion. There is strong evidence to suggest that this material can cause, if swallowed once, very serious, irreversible damage of organs. Ingestion of acidic corrosives may produce burns around and in the mouth, the throat and oesophagus. Immediate pain and difficulties in swallowing and speaking may also be evident. The lethal oral dose of nitrite has been variously reported as between 0.7 and 6 grams (approximately 10-100 milligrams/kilogram body weight). This may be lower for children (especially newborns), the elderly, and people with certain enzyme deficiencies. Symptoms develop within 15-45 minutes. Inorganic nitrites produce smooth muscle relaxation, methaemoglobin in the blood, and cyanosis (a bluing of the extremities). Other toxic effects of nitrites include abdominal pain, diarrhea, withering of the villi of the gut and cell death (apoptosis) in the crypts of the gut. Nitrite may also cause a sudden fall in blood pressure, due to its ability to dilate blood vessels. This is probably because it can transform into nitric oxide (NO), or a NO-containing molecule.
Skin Contact	The material can produce chemical burns following direct contact with the skin. There is strong evidence to suggest that this material, on a single contact with skin, can cause very serious, irreversible damage of organs. 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. Skin contact with acidic corrosives may result in pain and burns; these may be deep with distinct edges and may heal slowly with the formation of scar tissue.
Eye	The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating. If applied to the eyes, this material causes severe eye damage. Irritation of the eyes may produce a heavy secretion of tears (lachrymation). Direct eye contact with acid corrosives may produce pain, tears, sensitivity to light and burns. Mild burns of the epithelia generally recover rapidly and completely.
Chronic	Strong evidence exists that this substance may cause irreversible mutations (though not lethal) even following a single exposure. Inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population. Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects. Ample evidence from experiments exists that there is a suspicion this material directly reduces fertility. Based on experience with animal studies, exposure to the material may result in toxic effects to the development of the foetus, at levels which do not cause significant toxic effects to the mother. There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Repeated or prolonged exposure to acids may result in the erosion of teeth, swelling and/or ulceration of mouth lining. Irritation of airways to lung, with cough, and inflammation of lung tissue often occurs. Animal testing to see whether nitrites caused cancer proved inconclusive.

	ΤΟΧΙΟΙΤΥ	IRRITATION	
	Not Available	Not Available	
	τοχιςιτγ	IRRITATION	
conner nitrate	Oral (Mouse) LD50; 430 mg/kg ^[2]	Eye (rabbit): 100 mg - SEVERE	
copper initiate		Eye (rabbit): 100 mg/4s - SEVERE	
		Skin (rabbit): 500 mg - SEVERE	
	τοχιςιτγ	IRRITATION	
	Inhalation(Mouse) LC50; 0.2 mg/L4h ^[2]	Eye (-): corrosive*	
ammonium bifluoride	Oral (Rat) LD50: ~130 mg/kg ^[2]	Eye: adverse effect observed (irritating) ^[1]	
		Skin (-): corrosive* *[Bayer]	
		Skin: adverse effect observed (corrosive) $^{\left[1\right] }$	
	ΤΟΧΙΟΙΤΥ	IRRITATION	
selenium dioxide	Inhalation (Rat) LC50: >0.052<=0.51 mg/l4h ^[1]	Not Available	
	Oral (Rat) LD50: >=50<=500 mg/kg ^[1]		
	τοχιςιτγ	IRRITATION	
	Dermal (rabbit) LD50: >1260 mg/kg ^[2]	Eye (rabbit): 119 mg - SEVERE [Monsanto]*	
phosphoric acid	Inhalation (Rat) LC50: 0.026 mg/L4h ^[2]	Eye: adverse effect observed (irritating) ^[1]	
	Oral (Rat) LD50: 1530 mg/kg ^[2]	Skin (rabbit):595 mg/24h - SEVERE	
		Skin: adverse effect observed (corrosive) ^[1]	
	τοχιςιτγ	IRRITATION	
water	Oral (Rat) LD50: >90000 mg/kg ^[2]	Not Available	
l erend:	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		
	1. Value obtained from Europe ECHA Registered Substance: specified data extracted from RTECS - Register of Toxic Effe	- Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise ct of chemical Substances	
OIL RUBBED	 Value obtained from Europe ECHA Registered Substances specified data extracted from RTECS - Register of Toxic Effet Laboratory (in vitro) and animal studies show, exposure to the of producing mutation. 	- Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise ct of chemical Substances	

	formation of scar and reddish changes were observed on application sites in all treated animals. Skin inflammation and injury were also noted. In addition, a reddish or black urine was observed in females at 2,000, 1,500 and 1,000 mg/kg bw.			
AMMONIUM BIFLUORIDE	as fluoride anion The material may produce moderate eye irritation leading to 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. 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.			
SELENIUM DIOXIDE	IARC Group 3 [MDL OHS] Bacterial cell mutagen Re	eproductive effector in rats.		
PHOSPHORIC ACID	phosphoric acid (85%)			
OIL RUBBED & COPPER NITRATE	Allergic reactions involving the respiratory tract are u Allergic potential of the allergen and period of expos prone than others, and exposure to other irritants ma Attention should be paid to atopic diathesis, characte Exogenous allergic alveolitis is induced essentially b lymphocytes) may be involved. Such allergy is of the	Allergic reactions involving the respiratory tract are usually due to interactions between IgE antibodies and allergens and occur rapidly. Allergic potential of the allergen and period of exposure often determine the severity of symptoms. Some people may be genetically more prone than others, and exposure to other irritants may aggravate symptoms. Allergy causing activity is due to interactions with proteins. Attention should be paid to atopic diathesis, characterised by increased susceptibility to nasal inflammation, asthma and eczema. Exogenous allergic alveolitis is induced essentially by allergen specific immune-complexes of the IgG type; cell-mediated reactions (T hymphocytes) may be involved. Such allergy is of the delayed type with onset up to four hours following exposure		
OIL RUBBED & PHOSPHORIC ACID & WATER	No significant acute toxicological data identified in lit	erature search.		
OIL RUBBED & AMMONIUM BIFLUORIDE & PHOSPHORIC ACID	For acid mists, aerosols, vapours Test results suggest that eukaryotic cells are susceptible to genetic damage when the pH falls to about 6.5. Cells from the respiratory tract have not been examined in this respect. Mucous secretion may protect the cells of the airway from direct exposure to inhaled acidic mists (which also protects the stomach lining from the hydrochloric acid secreted there).			
OIL RUBBED & COPPER NITRATE & AMMONIUM BIFLUORIDE & PHOSPHORIC ACID	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 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. 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.			
COPPER NITRATE & PHOSPHORIC ACID	The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause severe 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. Repeated exposures may produce severe ulceration.			
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 no ✓ – Data available	t available or does not fill the criteria for classification to make classification	

SECTION 12 Ecological information

Toxicity					
	Endpoint	Test Duration (hr)	Species	Value	Source
OIL RUBBED	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	0.017mg/L	2
	LC50	96h	Fish	0.003mg/L	2
copper nitrate	EC50	96h	Algae or other aquatic plants	0.047mg/l	2
	EC50(ECx)	48h	Crustacea	0.001mg/L	2
	EC50	48h	Crustacea	0.001mg/L	2
	Endpoint	Test Duration (hr)	Species	Value	Source
ammonium bifluoride	LC50	96h	Fish	0.068mg/l	2
	EC50	48h	Crustacea	97mg/l	2
	NOEC(ECx)	744h	Fish	<0.048mg/L	2
	EC50	96h	Algae or other aquatic plants	43mg/l	2
	Endpoint	Test Duration (hr)	Species	Value	Source
	NOEC(ECx)	4320h	Fish	<0.005mg/l	2
selenium dioxide	EC50	72h	Algae or other aquatic plants	0.032- 0.1mg/L	4
	EC50	96h	Algae or other aquatic plants	0.032mg/L	2
	EC50	48h	Crustacea	1.12mg/L	2
	LC50	96h	Fish	0.03mg/l	4

	Endpoint	Test Duration (hr)	Species	Value	Source
	NOEC(ECx)	72h	Algae or other aquatic plants	<7.5mg/l	2
phosphoric acid	EC50	72h	Algae or other aquatic plants	77.9mg/l	2
p	EC50	48h	Crustacea	>100mg/l	2
	LC50	96h	Fish	67.94- 113.76mg/L	4
	Endpoint	Test Duration (hr)	Species	Value	Source
water	Not Available	Not Available	Not Available	Not Available	Not Available
Legend:	Extracted from Ecotox databas	1. IUCLID Toxicity Data 2. Europe ECHA Registe e - Aquatic Toxicity Data 5. ECETOC Aquatic Ha	ered Substances - Ecotoxicological Information zard Assessment Data 6. NITE (Japan) - Biocon	Aquatic Toxicity centration Data	4. US EPA, 7. METI

(Japan) - Bioconcentration Data 8. Vendor Data

On the basis of available evidence concerning either toxicity, persistence, potential to accumulate and or observed environmental fate and behaviour, the material may present a danger, immediate or long-term and /or delayed, to the structure and/ or functioning of natural ecosystems.

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.

Ecotoxicity:

The tolerance of water organisms towards pH margin and variation is diverse. Recommended pH values for test species listed in OECD guidelines are between 6.0 and almost 9. Acute testing with fish showed 96h-LC50 at about pH 3.5

For Fluorides: Small amounts of fluoride have beneficial effects however; excessive intake over long periods may cause dental and/or skeletal fluorosis. Fluorides are absorbed by humans following inhalation of workplace and ambient air that has been contaminated, ingestion of drinking water and foods and dermal contact. Populations living in areas with high fluoride levels in groundwater may be exposed to higher levels of fluorides in their drinking water or in beverages prepared with the water. Among these populations, outdoor labourers, people living in hot climates, and people with excessive thirst will generally have the greatest daily intake of fluorides because they consume greater amounts of water.

Atmospheric Fate: Both hydrogen fluoride and particulate fluorides will be transported in the atmosphere and deposited on land or water by wet and dry deposition. Non-volatile inorganic fluoride particulates are removed from the atmosphere via condensation or nucleation processes. Fluorides adsorbed on particulate matter in the atmosphere are generally stable and are not readily hydrolyzed, although they may be degraded by radiation if they persist in the atmosphere. For Nitrate/Nitrite

Environmental Fate: Nitrates form from nitrate or ammonium ions by micro-organisms in soil, water, sewage and the digestive tract. The concern with nitrate in the environment is related to its conversion to nitrite. Primary sources of organic nitrates include human sewage and livestock manure, especially from feedlots.

Atmospheric Fate: Nitrate/nitrites do not evaporate into the air; however, any nitrites released into the air slowly oxidize to nitrates.

Terrestrial Fate: Due to its high solubility and weak retention by soil, nitrates/nitrites are very mobile in soil, moving at approximately the same rate as water, and have a high potential to migrate to ground water. The substances can contaminate groundwater to unacceptable levels.

Aquatic Fate: Nitrate/nitrites do not evaporate from water surfaces.

Prevent, by any means available, spillage from entering drains or water courses.

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
selenium dioxide	HIGH	HIGH
phosphoric acid	HIGH	HIGH
water	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
selenium dioxide	LOW (LogKOW = -0.771)
phosphoric acid	LOW (LogKOW = -0.7699)

Mobility in soil

Ingredient	Mobility
selenium dioxide	LOW (Log KOC = 23.74)
phosphoric acid	HIGH (Log KOC = 1)

SECTION 13 Disposal considerations

	reatment methods	
 Product / Packaging disposal 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 to 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 their area. In some areas, certain wastes must be tracked. A Hierarchy of Controls seems to be common - the user should investigate: 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 be contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always appropriate. 	ct / Packaging disposal Ot Le the A A Th Co ap ap	 trazard/ danger when empty. trazard/ danger when empty. trazard/ danger when empty. trazsible. well to ensure that residuals do not remain or if the container cannot be used to store the o prevent re-use, and bury at an authorised landfill. SDS and observe all notices pertaining to the product. ments may differ by country, state and/ or territory. Each user must refer to laws operating in t be tracked. the user should investigate: t has not been contaminated so as to make it unsuitable for its intended use. If it has been e product by filtration, distillation or some other means. Shelf life considerations should also be that properties of a material may change in use, and recycling or reuse may not always be proposed and the product of

It may be necessary to collect all wash water for treatment before disposal.

burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or Incineration in a licensed apparatus (after	 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. Treat and neutralise at an approved treatment plant. Treatment should involve: Neutralisation with soda-ash or soda-lime followed by:
 admixture with suitable combustible material). Decontaminate empty containers with 5% aqueous sodium hydroxide or soda ash, followed by water. Observe all label safeguards until containers are cleaned and destroyed. 	 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 with 5% aqueous sodium hydroxide or soda ash, followed by water. Observe all label safeguards until containers are cleaned and destroyed.

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.

Only dispose to the environment if a tolerable exposure limit has been set for the substance.

Only deposit the hazardous substance into or onto a landfill or sewage facility or incinerator, where the hazardous substance can be handled and treated appropriately.

SECTION 14 Transport information

Labels Required



Land transport (UN)

• • •				
14.1. UN number or ID number	3264			
14.2. UN proper shipping name	CORROSIVE LIQUID,	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (contains selenium dioxide and phosphoric acid)		
14.3. Transport hazard class(es)	Class Subsidiary Hazard	8 Not Applicable		
14.4. Packing group	III			
14.5. Environmental hazard	Environmentally hazardous			
14.6. Special precautions for user	Special provisions Limited quantity	223; 274 5 L		

Air transport (ICAO-IATA / DGR)

14.1. UN number	3264			
14.2. UN proper shipping name	Corrosive liquid, acidic, inorganic, r	Corrosive liquid, acidic, inorganic, n.o.s. * (contains selenium dioxide and phosphoric acid)		
	ICAO/IATA Class	8		
14.3. Iransport nazard class(es)	ICAO / IATA Subsidiary Hazard	Not Applicable		
01000(00)	ERG Code	8L		
14.4. Packing group	III			
14.5. Environmental hazard	Environmentally hazardous			
14.6. Special precautions for user	Special provisions		A3 A803	
	Cargo Only Packing Instructions		856	
	Cargo Only Maximum Qty / Pack		60 L	
	Passenger and Cargo Packing Instructions		852	
	Passenger and Cargo Maximum Qty / Pack		5 L	
	Passenger and Cargo Limited Quantity Packing Instructions		Y841	
	Passenger and Cargo Limited Maximum Qty / Pack		1 L	

Sea transport (IMDG-Code / GGVSee)

14.1. UN number	3264
	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (contains selenium dioxide and phosphoric acid)

14.2. UN proper shipping name		
14.3. Transport hazard class(es)	IMDG Class IMDG Subsidiary Hazard	8 d Not Applicable
14.4. Packing group	Ш	
14.5 Environmental hazard	Marine Pollutant	
14.6. Special precautions for user	EMS NumberF-Special provisions22Limited Quantities5	-A , S-B 23 274 L

14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code Not Applicable

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

Product name	Group
copper nitrate	Not Available
ammonium bifluoride	Not Available
selenium dioxide	Not Available
phosphoric acid	Not Available
water	Not Available

14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
copper nitrate	Not Available
ammonium bifluoride	Not Available
selenium dioxide	Not Available
phosphoric acid	Not Available
water	Not Available

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
HSR100425	Pharmaceutical Active Ingredients Group Standard 2020
HSR100757	Veterinary Medicines Limited Pack Size Finished Dose Group Standard 2020
HSR100756	Active Ingredients for Use in the Manufacture of Agricultural Compounds Group Standard 2020

Please refer to Section 8 of the SDS for any applicable tolerable exposure limit or Section 12 for environmental exposure limit.

copper nitrate is found on the following regulatory lists

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2A: Probably carcinogenic to humans

New Zealand Approved Hazardous Substances with controls

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

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

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

ammonium bifluoride is found on the following regulatory lists

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

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

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

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

selenium dioxide is found on the following regulatory lists

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

New Zealand Approved Hazardous Substances with controls

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

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

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

phosphoric acid is found on the following regulatory lists

New Zealand Approved Hazardous Substances with controls

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

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

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

water is found on the following regulatory lists

New Zealand Inventory of Chemicals (NZIoC)

Additional Regulatory Information

Not Applicable

Hazardous Substance Location

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

Hazard Class	Quantity (Compliance Certificate)	Quantity (Compliance Certificate - Farms >4 ha)
6.1B	250 kg or 250 L	500 kg or 500 L
6.1C	1000 kg or 1000 L	3500 kg or 3500 L
8.2B	250 kg or 250 L	3500 kg or 3500 L

Certified Handler

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

Class of substance Quanti	tities
6.1B Any qu	uantity

Refer Group Standards for further information

Maximum quantities of certain hazardous substances permitted on passenger service vehicles Subject to Regulation 13.14 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Hazard Class	Gas (aggregate water capacity in mL)	Liquid (L)	Solid (kg)	Maximum quantity per package for each classification
6.1B	120	0,1	0,5	
6.1C	120	1	3	
6.5A or 6.5B	120	1	3	
8.2B	120	1	3	

Tracking Requirements

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

- Refer to the regulation for more information

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non- Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (copper nitrate; ammonium bifluoride; selenium dioxide; phosphoric acid; water)
China - IECSC	No (selenium dioxide)
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 - FBEPH	Yes
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

SECTION 16 Other information

Revision Date	24/05/2024
Initial Date	24/05/2024

Other information

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

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

Definitions and abbreviations

- ▶ PC TWA: Permissible Concentration-Time Weighted Average
- ▶ PC STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit

- TEEL: Temporary Emergency Exposure Limit。
 IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level
 LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- BCF: BioConcentration Factors
- BEI: Biological Exposure Index DNEL: Derived No-Effect Level
- PNEC: Predicted no-effect concentration
- AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
- NDSL: Non-Domestic Substances List
- IECSC: Inventory of Existing Chemical Substance in China
 EINECS: European INventory of Existing Commercial chemical Substances
- ELINCS: European List of Notified Chemical Substances
- NLP: No-Longer Polymers
- ENCS: Existing and New Chemical Substances Inventory
 KECI: Korea Existing Chemicals Inventory
 NZIoC: New Zealand Inventory of Chemicals

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

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end of SDS