



Ledermix Hardener 'N'

Aspen Pharmacare Australia

Chemwatch Hazard Alert Code: 2

Chemwatch: 6081-79

Issue Date: 01/05/2019

Version No: 5.1.1.1

Print Date: 30/04/2019

Material Safety Data Sheet according to NOHSC and ADG requirements

S.Local.AUS.EN

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

Product Identifier

Product name	Ledermix Hardener 'N'
Synonyms	Not Available
Other means of identification	Not Available

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

Relevant identified uses	A dental restorative agent for the rapid relief of pain associated with acute pulpal and periodontal inflammations.
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Details of the supplier of the safety data sheet

Registered company name	Aspen Pharmacare Australia
Address	34-36 Chandos Street St. Leonards NSW 2065 Australia
Telephone	+61 2 8436 8300
Fax	+61 2 9901 3540
Website	Not Available
Email	enquiries@arrowpharma.com

Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	Not Available
Other emergency telephone numbers	Not Available

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Poisons Schedule	S6
Risk Phrases ^[1]	R22 Harmful if swallowed.
	R36/38 Irritating to eyes and skin.
	R43 May cause SENSITISATION by skin contact.
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI



Relevant risk statements are found in section 2

Indication(s) of danger	Xn
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SAFETY ADVICE

S02	Keep out of reach of children.
S13	Keep away from food, drink and animal feeding stuffs.
S23	Do not breathe gas/fumes/vapour/spray.
S24	Avoid contact with skin.
S26	In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.
S35	This material and its container must be disposed of in a safe way.
S37	Wear suitable gloves.
S39	Wear eye/face protection.
S40	To clean the floor and all objects contaminated by this material, use water and detergent.
S46	If swallowed, seek medical advice immediately and show this container or label.
S56	Dispose of this material and its container at hazardous or special waste collection point.
S64	If swallowed, rinse mouth with water (only if the person is conscious).

Other hazards

Inhalation and/or skin contact may produce health damage*.

Cumulative effects may result following exposure*.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**Substances**

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
97-53-0	>60	<u>EUGENOL</u>
9005-90-7	Not Spec	<u>TURPENTINE OIL</u>
25322-68-3	Not Spec	<u>Poly(ethylene glycol)</u>

SECTION 4 FIRST AID MEASURES**Description of first aid measures**

Eye Contact	<p>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.</p>
Skin Contact	<p>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.</p>
Inhalation	<p>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.</p>
Ingestion	<p>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.</p>

Indication of any immediate medical attention and special treatment needed

In acute poisonings by essential oils the stomach should be emptied by aspiration and lavage. Give a saline purgative such as sodium sulfate (30 g in 250 ml water) unless catharsis is already present. Demulcent drinks may also be given. Large volumes of fluid should be given provided renal function is adequate. [MARTINDALE: The Extra Pharmacopoeia, 28th Ed.]

SECTION 5 FIREFIGHTING MEASURES**Extinguishing media**

Foam.
Dry chemical powder.
BCF (where regulations permit).
Carbon dioxide.

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	<p>Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves. 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.</p>
Fire/Explosion Hazard	<p>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). Combustion products include: carbon dioxide (CO₂) other pyrolysis products typical of burning organic material.</p>
HAZCHEM	Not Applicable

SECTION 6 ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Minor Spills	<p>Remove all ignition sources. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment.</p>
Major Spills	<p>Moderate hazard. Clear area of personnel and move upwind.</p>

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	<p>DO NOT allow clothing wet with material to stay in contact with skin</p> <p>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.</p>
Other information	<p>Store in original containers. Keep containers securely sealed. No smoking, naked lights or ignition sources. Store in a cool, dry, well-ventilated area. Store below 30 deg. C.</p>

Conditions for safe storage, including any incompatibilities

Suitable container	<p>Glass container is suitable for laboratory quantities Metal can or drum Packaging as recommended by manufacturer. Check all containers are clearly labelled and free from leaks.</p>
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	gum turpentine	Turpentine (wood)	100 ppm / 557 mg/m ³	Not Available	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
TURPENTINE OIL	Turpentine. (Alpha and beta pinene, 80-56-8)	60 ppm	120 ppm	1,500 ppm
Poly(ethylene glycol)	Polyethylene glycol	30 mg/m ³	1,300 mg/m ³	7,700 mg/m ³

Ingredient	Original IDLH	Revised IDLH
EUGENOL	Not Available	Not Available
TURPENTINE OIL	800 ppm	Not Available
Poly(ethylene glycol)	Not Available	Not Available

Exposure controls

Appropriate engineering controls	General exhaust is adequate under normal operating conditions.
Personal protection	
Eye and face protection	<p>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.</p>
Skin protection	See Hand protection below
Hands/feet protection	<p>Wear chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber</p> <p>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. Neoprene gloves Polyethylene gloves</p>
Body protection	See Other protection below
Other protection	<p>Overalls. P.V.C. apron. Barrier cream.</p>

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 / Class 1 P2	-	A-PAPR-AUS / Class 1 P2
up to 50 x ES	Air-line*	-	-
up to 100 x ES	-	A-3 P2	-
100+ x ES	-	Air-line**	-

* - Continuous-flow; ** - Continuous-flow or positive pressure demand

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	Clear, colourless to yellow liquid with clove oil odour; does not mix with water.		
Physical state	Liquid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable
pH (as supplied)	Not Applicable	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	Immiscible	pH as a solution (1%)	Not Applicable
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.
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	Inhalation hazard is increased at higher temperatures. Inhalation of essential oil volatiles may cause dizziness, rapid, shallow breathing, increased heart rate, respiratory irritation, loss of consciousness or convulsions. Urination may stop, and there may be swelling and inflammation of the lungs.
Ingestion	Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual. Ingestion of eugenol and eugenol-containing oils may produce watery diarrhoea with vomiting with increased stomach secretion. The side effects are less than that of phenol, perhaps because of its relative insolubility. There may be numbness with paralysis of limbs and jaw with severe weakness, coma, and blood in the urine. Death may result from shock.
Skin Contact	This material can cause inflammation of the skin on contact in some persons. Eugenol produces local anaesthesia and is a local antiseptic. Skin inflammation has been produced in dental surgeons during exposure in an occupational setting.
Eye	This material can cause eye irritation and damage in some persons.
Chronic	Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Some phenol-based naturally occurring substances (eg phenol, guaiacol, tannic acid and eugenol) undergo conversion to produce derivatives which sensitise the skin and possibly the respiratory tract. Each of these compounds has phenolic hydroxyl groups which are readily oxidized to produce reactive quinone-like compounds.
Ledermix Hardener 'N'	TOXICITY IRRITATION

	Not Available	Not Available
EUGENOL	TOXICITY	IRRITATION
	Oral (rat) LD50: 1930 mg/kg ^[2]	Eye: adverse effect observed (irritating) ^[1]
		Skin (human) 40 mg/24h - mild
		Skin (man): 16 mg/48h - moderate
		Skin (rabbit): 100 mg/24h-SEVERE
		Skin: no adverse effect observed (not irritating) ^[1]
TURPENTINE OIL	TOXICITY	IRRITATION
	Oral (rat) LD50: 5760 mg/kg ^[2]	Eye (human): 175 ppm
		Eye: adverse effect observed (irritating) ^[1]
		Skin: adverse effect observed (irritating) ^[1]
Poly(ethylene glycol)	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg ^[1]	Eye (rabbit): 500mg/24h - mild.
	Oral (rat) LD50: 600 mg/kg ^[2]	Eye: no adverse effect observed (not irritating) ^[1]
		Skin (rabbit): 500mg/24h - mild.
		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	
EUGENOL	<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>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.</p> <p>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 lymphocytes) may be involved. Such allergy is of the delayed type with onset up to four hours following exposure. Fragrance allergens act as haptens, low molecular weight chemicals that cause an immune response only when attached to a carrier protein. However, not all sensitizing fragrance chemicals are directly reactive, but require previous activation. A prohaptens is a chemical that itself causes little or no sensitization, but is transformed into a hapten in the skin (bioactivation), usually via enzyme catalysis. It is not always possible to know whether a particular allergen that is not directly reactive acts as a prohaptens or a prohaptens , or both.</p> <p>For eugenol:</p> <p>The acute toxicity of eugenol is low. High doses may cause damage to the stomach lining, bleeding, inflammation of the stomach, liver discoloration and congestion in animals. Eugenol is readily absorbed through the skin; products containing eugenol or clove oil may irritate the skin and eyes. Inhalation may be a substantial route of exposure.</p> <p>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.</p> <p>The substance is classified by IARC as Group 3:</p> <p>NOT classifiable as to its carcinogenicity to humans.</p> <p>Evidence of carcinogenicity may be inadequate or limited in animal testing.</p> <p>Equivocal tumorigen by RTECS criteria</p>	
TURPENTINE OIL	<p>Epoxidation of double bonds is a common bioactivation pathway for alkenes. The allylic epoxides formed were found to be sensitizing. Research has shown that conjugated dienes in or in conjunction with a six-membered ring are prohaptens, while related dienes containing isolated double bonds or an acrylic conjugated diene were weak or non-sensitizing.</p> <p>Fragrance allergens act as haptens, which are small molecules that cause an immune reaction only when attached to a carrier protein. However, not all sensitizing fragrance chemicals are directly reactive, but some require previous activation. A prohaptens is a chemical that itself causes little or no sensitization, but it is transformed into a hapten outside the skin by a chemical reaction (oxidation in air or reaction with light) without the requirement of an enzyme.</p> <p>For prohaptens, it is possible to prevent activation outside the body to a certain extent by different measures, for example, prevention of air exposure during handling and storage of the ingredients and the final product, and by the addition of suitable antioxidants.</p> <p>Bicyclic terpenes are very low in acute toxicity. However, repeated dosing may have deleterious effects on the liver and kidney. Members of this category show no significant reproductive or developmental toxicity and may have a little, if any, potential to alter genetic material.</p> <p>d-Limonene is readily absorbed by inhalation and swallowing. Absorption through the skin is reported to the lower than by inhalation. It is rapidly distributed to different tissues in the body, readily metabolized and eliminated, primarily through the urine. Limonene shows low acute toxicity by all three routes in animals.</p>	
POLY(ETHYLENE GLYCOL)	<p>For polyethylene glycols:</p> <p>Pure polyethylene glycols have essentially similar toxicity, with the lighter species being more toxic. Absorption from the digestive tract decreases with increasing molecular weight.</p> <p>Polyethylene glycols do not have sensitizing and irritating properties on skin, however, allergic reactions (which can present as hives), sometimes delayed, may occur with some lighter species.</p> <p>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.</p> <p>Animal testing reveals that whole the pure, non-oxidised surfactant is non-sensitizing, many of the oxidation products are sensitizers. The oxidation products also cause irritation.</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>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.</p> <p>for molecular weights (200-8000) * Oral (rat) LD50: 31000->50000 mg/kg Oral (mice) LD50: 38000->50000 mg/kg Oral (g.pig) LD50: 17000->50000 mg/kg Oral (rabbit) LD50: 14000->50000 mg/kg * AIHA WEEL Guides Intraperitoneal (mice) LD50: 3100-12900 mg/kg</p>	
	The following information refers to contact allergens as a group and may not be specific to this product.	

EUGENOL & TURPENTINE OIL	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. Adverse reactions to fragrances in perfumes and fragranced cosmetic products include allergic contact dermatitis, irritant contact dermatitis, sensitivity to light, immediate contact reactions, and pigmented contact dermatitis. Airborne and conjugal contact dermatitis occurs. Contact allergy is a lifelong condition, so symptoms may occur on re-exposure. Allergic contact dermatitis can be severe and widespread, with significant impairment of quality of life and potential consequences for fitness for work.
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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

	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
Ledermix Hardener 'N'	Not Available	Not Available	Not Available	Not Available	Not Available
EUGENOL	LC50	96	Fish	8.565mg/L	3
	EC50	48	Crustacea	1.05mg/L	2
	EC50	96	Algae or other aquatic plants	18.422mg/L	3
	NOEC	24	Fish	10mg/L	2
TURPENTINE OIL	LC50	96	Fish	=0.01mg/L	1
	EC50	48	Crustacea	0.475mg/L	2
	EC50	72	Algae or other aquatic plants	8.5mg/L	2
	NOEC	48	Algae or other aquatic plants	0.247mg/L	2
Poly(ethylene glycol)	LC50	96	Fish	20-mg/L	2
	EC50	72	Algae or other aquatic plants	15.915mg/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				

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
EUGENOL	HIGH	HIGH
Poly(ethylene glycol)	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
EUGENOL	LOW (LogKOW = 2.27)
Poly(ethylene glycol)	LOW (LogKOW = -1.1996)

Mobility in soil

Ingredient	Mobility
EUGENOL	LOW (KOC = 1124)
Poly(ethylene glycol)	HIGH (KOC = 1)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal	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.
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SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant	NO
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	Not Applicable
HAZCHEM	Not Applicable

Land transport (ADG): 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

EUGENOL(97-53-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)	Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)	Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)	International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Index	

TURPENTINE OIL(9005-90-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Dangerous Goods Code (ADG Code) - Dangerous Goods List	Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
Australia Dangerous Goods Code (ADG Code) - List of Emergency Action Codes	GESAMP/EHS Composite List - GESAMP Hazard Profiles
Australia Exposure Standards	IMO IBC Code Chapter 17: Summary of minimum requirements
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals	IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk
Australia Inventory of Chemical Substances (AICS)	International Air Transport Association (IATA) Dangerous Goods Regulations
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)	International Maritime Dangerous Goods Requirements (IMDG Code)
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Index	United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (English)

POLY(ETHYLENE GLYCOL)(25322-68-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)	GESAMP/EHS Composite List - GESAMP Hazard Profiles
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Index	IMO IBC Code Chapter 17: Summary of minimum requirements
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 2	IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 3	IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances

National Inventory Status

National Inventory	Status
Australia - AICS	Yes
Canada - DSL	Yes
Canada - NDSL	No (Poly(ethylene glycol); TURPENTINE OIL; EUGENOL)
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	No (Poly(ethylene glycol))
Vietnam - NCI	Yes
Russia - ARIPS	Yes
Thailand - TECl	No (TURPENTINE OIL)
Legend:	Yes = All declared ingredients are on the inventory No = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION

Revision Date	01/05/2019
Initial Date	03/11/2008

SDS Version Summary

Version	Issue Date	Sections Updated
4.1.1.1	30/04/2019	Acute Health (eye), Acute Health (inhaled), Acute Health (skin), Acute Health (swallowed), Chronic Health, Classification, Disposal, Engineering Control, Environmental, Exposure Standard, Fire Fighter (fire/explosion hazard), Fire Fighter (fire fighting), Ingredients, Spills (major), Storage (storage incompatibility), Supplier Information, Synonyms, Toxicity and Irritation (Other), Name

5.1.1.1 | 01/05/2019 | Acute Health (skin), Storage (storage requirement), Synonyms

Other information**Ingredients with multiple cas numbers**

Name	CAS No
TURPENTINE OIL	9005-90-7, 8006-64-2, 8052-14-0
Poly(ethylene glycol)	25322-68-3, 8038-37-7, 9081-95-2, 9085-02-3, 9085-03-4, 12676-74-3, 12770-93-3, 25104-58-9, 25609-81-8, 34802-42-1, 37361-15-2, 50809-04-6, 50809-59-1, 54510-95-1, 54847-64-2, 59763-40-5, 60894-12-4, 61840-14-0, 64441-68-5, 64640-28-4, 67411-64-7, 70926-57-7, 75285-02-8, 75285-03-9, 77986-38-0, 79964-26-4, 80341-53-3, 85399-22-0, 85945-29-5, 88077-80-9, 88747-22-2, 90597-70-9, 99264-61-6, 99333-89-8, 101677-86-5, 106186-24-7, 107502-63-6, 107529-96-4, 109550-27-8, 112384-37-9, 112895-21-3, 114323-93-2, 116549-90-7, 119219-06-6, 125223-68-9, 133573-31-6, 134919-43-0, 150872-82-5, 154394-38-4, 156948-19-5, 169046-53-1, 174460-08-3, 174460-09-4, 188364-77-4, 188924-03-0, 189154-62-9, 191743-71-2, 196696-84-1, 201163-43-1, 206357-86-0

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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TEL (+61 3) 9572 4700.

