

**Chemtools Pty Ltd** 

## Chemwatch: 5589-97

Version No: 3.1

Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements Safety Data Sheet according to the Health and Safety at Work (Hazardous Substances) Regulations 2017

Chemwatch Hazard Alert Code: 1

Issue Date: **28/03/2023** Print Date: **04/04/2023** S.GHS.AUS/NZ.EN.E

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

#### **Product Identifier**

Product name	DEOX R17 Food Safe Machine Oil
Chemical Name	Not Applicable
Synonyms	Not Available
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	Use according to manufacturer's directions.
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## Details of the manufacturer or supplier of the safety data sheet

Registered company name	Chemtools Pty Ltd	Chemtools Pty Ltd
Address	Unit 2, 14 - 16 Lee Holm Road St Marys NSW 2760 Australia	15/62 Factory Road Belfast Christchurch 8051 New Zealand
Telephone	1300 738 250, +61 2 9833 9766	+64 9 940 2745
Fax	+61 2 9623 3670	+61 2 9623 3670
Website	www.chemtools.com.au	www.chemtools.co.nz
Email	sales@chemtools.com.au	sales@chemtools.com.au

## **Emergency telephone number**

Association / Organisation	Poisons Information Centre	National Poisons Centre
Emergency telephone numbers	13 11 26	0800 764 766
Other emergency telephone numbers	Not Available	Not Available

## **SECTION 2 Hazards identification**

## Classification of the substance or mixture

## HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

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

Hazard pictogram(s)	Not Applicable
Signal word	Warning

#### Hazard statement(s)

#### Precautionary statement(s) Prevention

P264	Wash all exposed external body areas thoroughly after handling.

#### Precautionary statement(s) Response

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

## Precautionary statement(s) Storage

Not Applicable

## Precautionary statement(s) Disposal

Not Applicable

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

## NFPA 704 diamond



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

Classification [1]	Not Applicable
Determined by Chemwatch using GHS/HSNO criteria	Not Available

#### Label elements

 Hazard pictogram(s)
 Not Applicable

 Signal word
 Not Applicable

Hazard statement(s)

Not Applicable

#### **Supplementary Phrases**

Not Applicable

## Precautionary statement(s) Prevention

Not Applicable

## Precautionary statement(s) Response

Not Applicable

#### Precautionary statement(s) Storage

Not Applicable

## Precautionary statement(s) Disposal

Not Applicable

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

#### Substances

## **Mixtures**

CAS No	%[weight]	Name
8012-95-1.	>60	paraffin oils
Legend:	1. Classified by Chemwatch; 2. Classification drawn from CCIE 1272/2008 - Annex VI; 4. Classification drawn from C&L * EU	D EPA NZ; 3. Classification drawn from Regulation (EU) No IOELVs available

## **SECTION 4 First aid measures**

#### Description of first aid measures

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

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

- Heavy and persistent skin contamination over many years may lead to dysplastic changes. Pre-existing skin disorders may be aggravated by exposure to this product.
- In general, emesis induction is unnecessary with high viscosity, low volatility products, i.e. most oils and greases.
- + High pressure accidental injection through the skin should be assessed for possible incision, irrigation and/or debridement.

**NOTE:** Injuries may not seem serious at first, but within a few hours tissue may become swollen, discoloured and extremely painful with extensive subcutaneous necrosis. Product may be forced through considerable distances along tissue planes.

#### **SECTION 5 Firefighting measures**

#### Extinguishing media

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

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

Fire Incompatibility	Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result
Advice for firefighters	
Fire Fighting	<ul> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Wear full body protective clothing with breathing apparatus.</li> <li>Prevent, by any means available, spillage from entering drains or water course.</li> <li>Use water delivered as a fine spray to control fire and cool adjacent area.</li> <li>Avoid spraying water onto liquid pools.</li> <li>PO NOT approach containers suspected to be bot.</li> </ul>

- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- 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).
- Fire/Explosion Hazard May emit acrid smoke.
  - Mists containing combustible materials may be explosive.
     Combustion products include:
     carbon dioxide (CO2)
    - other pyrolysis products typical of burning organic material.

May emit poisonous fumes. May emit corrosive fumes. CARE: Water in contact with hot liquid may cause foaming and a steam explosion with wide scattering of hot oil and possible severe burns. Foaming may cause overflow of containers and may result in possible fire.

## **SECTION 6 Accidental release measures**

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

See section 8

#### **Environmental precautions**

See section 12

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

Minor Spills	<ul> <li>Slippery when spilt.</li> <li>Remove all ignition sources.</li> <li>Clean up all spills immediately.</li> <li>Avoid breathing vapours and contact with skin and eyes.</li> <li>Control personal contact with the substance, by using protective equipment.</li> <li>Contain and absorb spill with sand, earth, inert material or vermiculite.</li> <li>Wipe up.</li> <li>Place in a suitable, labelled container for waste disposal.</li> </ul>
Major Spills	<ul> <li>Slippery when spilt.</li> <li>Moderate hazard.</li> <li>Clear area of personnel and move upwind.</li> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Wear breathing apparatus plus protective gloves.</li> <li>Prevent, by any means available, spillage from entering drains or water course.</li> <li>No smoking, naked lights or ignition sources.</li> <li>Increase ventilation.</li> <li>Stop leak if safe to do so.</li> <li>Contain spill with sand, earth or vermiculite.</li> <li>Collect recoverable product into labelled containers for recycling.</li> <li>Absorb remaining product with sand, earth or vermiculite.</li> <li>Collect solid residues and seal in labelled drums for disposal.</li> <li>Wash area and prevent runoff into drains.</li> <li>If contamination of drains or waterways occurs, advise emergency services.</li> </ul>

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

## **SECTION 7 Handling and storage**

## Precautions for safe handling

	•
Safe handling	<ul> <li>Avoid all personal contact, including inhalation.</li> <li>Wear protective clothing when risk of exposure occurs.</li> <li>Use in a well-ventilated area.</li> <li>Prevent concentration in hollows and sumps.</li> <li>DO NOT enter confined spaces until atmosphere has been checked.</li> <li>Avoid smoking, naked lights or ignition sources.</li> <li>Avoid contact with incompatible materials.</li> <li>When handling, DO NOT eat, drink or smoke.</li> <li>Keep containers securely sealed when not in use.</li> <li>Avoid physical damage to containers.</li> <li>Always wash hands with soap and water after handling.</li> <li>Work clothes should be laundered separately.</li> <li>Use good occupational work practice.</li> <li>Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.</li> </ul>
Other information	<ul> <li>Store in original containers.</li> <li>Keep containers securely sealed.</li> <li>No smoking, naked lights or ignition sources.</li> <li>Store in a cool, dry, well-ventilated area.</li> <li>Store away from incompatible materials and foodstuff containers.</li> <li>Protect containers against physical damage and check regularly for leaks.</li> <li>Observe manufacturer's storage and handling recommendations contained within this SDS.</li> </ul>

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

Suitable container	<ul> <li>Metal can or drum</li> <li>Packaging as recommended by manufacturer.</li> <li>Check all containers are clearly labelled and free from leaks.</li> </ul>
Storage incompatibility	<ul> <li>CARE: Water in contact with heated material may cause foaming or a steam explosion with possible severe burns from wide scattering of hot material. Resultant overflow of containers may result in fire.</li> <li>Oil leaks in a pressurized circuit may result in a fine flammable spray (the lower flammability limit for oil mist is reached for a concentration of about 45 g/m3</li> <li>Autoignition temperatures may be significantly lower under particular conditions (slow oxidation on finely divided materials</li> <li>Avoid reaction with oxidising agents</li> </ul>



X — Must not be stored together

0 — May be stored together with specific preventions

+ — May be stored together

Note: Depending on other risk factors, compatibility assessment based on the table above may not be relevant to storage situations, particularly where large volumes of dangerous goods are stored and handled. Reference should be made to the Safety Data Sheets for each substance or article and risks assessed accordingly.

## **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	paraffin oils	Oil mist, refined mineral	5 mg/m3	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	paraffin oils	Oil mist, mineral	5 mg/m3	10 mg/m3	Not Available	(om) - Sampled by a method that does not collect vapour

#### Emergency Limits

Ingredient	TEEL-1	TEEL-2		TEEL-3
paraffin oils	140 mg/m3	1,500 mg/m3		8,900 mg/m3
Ingredient	Original IDLH		Revised IDLH	
paraffin oils	2,500 mg/m3		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. A engineering controls can be highly effective in protecting workers and will typically be independent of work 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 w that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air designed properly. The design of a ventilation system must match the particular process and chemical or of Employers may need to use multiple types of controls to prevent employee overexposure. Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct obtain adequate protection. An approved self contained breathing apparatus (SCBA) may be required in some situations. Provide adequate ventilation in warehouse or closed storage area. Air contaminants generated in the work	Vell-designed er interactions to rorker and ventilation contaminant if contaminant in use. t fit is essential to fit is essential to cyplace possess varying
	contaminant.	Air Speed
	solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25-0.5 m/s (50-100 f/min.)
		(50-100 f/min.)

	aerosols, fumes from pouring operations, intermittent conta welding, spray drift, plating acid fumes, pickling (released a generation)	ainer filling, low speed conveyer transfers, at low velocity into zone of active	0.5-1 m/s (100-200 f/min.)
	direct spray, spray painting in shallow booths, drum filling, discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)	
	grinding, abrasive blasting, tumbling, high speed wheel ge velocity into zone of very high rapid air motion).	nerated dusts (released at high initial	2.5-10 m/s (500-2000 f/min.)
	Within each range the appropriate value depends on:		
	Lower end of the range	Upper end of the range	
	1: Room air currents minimal or favourable to capture	1: Disturbing room air currents	
	2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity	
	3: Intermittent, low production.	3: High production, heavy use	
	4: Large hood or large air mass in motion	4: Small hood-local control only	
	Simple theory shows that air velocity falls rapidly with distance generally decreases with the square of distance from the ext extraction point should be adjusted, accordingly, after referent extraction fan, for example, should be a minimum of 1-2 m/s meters distant from the extraction point. Other mechanical or apparatus, make it essential that theoretical air velocities are installed or used.	ce away from the opening of a simple extracti raction point (in simple cases). Therefore the nee to distance from the contaminating source (200-400 f/min) for extraction of solvents ger onsiderations, producing performance deficits e multiplied by factors of 10 or more when ext	on pipe. Velocity air speed at the e. The air velocity at the nerated in a tank 2 s within the extraction raction systems are
Individual protection measures, such as personal protective equipment			
Eye and face protection	<ul> <li>Safety glasses with side shields.</li> <li>Chemical goggles.</li> <li>Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59]. [AS/NZS 1336 or national equivalent]</li> </ul>		
Skin protection	See Hand protection below		
Hands/feet protection	The selection of suitable gloves does not only depend on the manufacturer to manufacturer. Where the chemical is a prep can not be calculated in advance and has therefore to be ch. The exact break through time for substances has to be obtait observed when making a final choice. Personal hygiene is a key element of effective hand care. Gl should be washed and dried thoroughly. Application of a non Suitability and durability of glove type is dependent on usage frequency and duration of contact, • chemical resistance of glove material, • glove thickness and • dexterity Select gloves tested to a relevant standard (e.g. Europe EN • When prolonged or frequently repeated contact may occur, greater than 240 minutes according to EN 374, AS/NZS 2161. • When only brief contact is expected, a glove with a protecti according to EN 374, AS/NZS 2161.10.1 or national equivale. • Some glove polymer types are less affected by movement long-term use. • Contaminated gloves should be replaced. As defined in ASTM F-739-96 in any application, gloves are • Excellent when breakthrough time > 20 min • Fair when breakthrough time < 20 min • Fair when breakthrough time < 20 min • Fair when glove material degrades For general applications, gloves with a thickness typically grupt is should be emphasised that glove thickness is not necessar permeation efficiency of the glove will be dependent on the eshould also be based on consideration of the task requirement glove thickness may also vary depending on the glove manufacturers technical data should always be taken into according to the store of the glove manufacture technical data should always be taken into according the store of the glove manufacturers technical data should always be taken into according the store of the glove manufacturers technical data should always be taken into according the store of the store of the glove manufacturers technical data should always be taken into according the store of the st	e material, but also on further marks of quality aration of several substances, the resistance ecked prior to the application. ned from the manufacturer of the protective g oves must only be worn on clean hands. Afte -perfumed moisturiser is recommended. a. Important factors in the selection of gloves i 374, US F739, AS/NZS 2161.1 or national eq a glove with a protection class of 5 or higher 1.10.1 or national equivalent) is recommended on class of 3 or higher (breakthrough time greant and this should be taken into account when c rated as:	which vary from of the glove material loves and has to be r using gloves, hands include: uivalent). (breakthrough time d. eater than 60 minutes onsidering gloves for specific chemical, as the efore, glove selection Therefore, the riate glove for the task.

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	<ul> <li>Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.</li> <li>Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential</li> <li>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.</li> <li>Wear chemical protective gloves, e.g. PVC.</li> <li>Wear safety footwear or safety gumboots, e.g. Rubber</li> </ul>
Body protect	on See Other protection below
Other protect	<ul> <li>Poveralls.</li> <li>P.V.C apron.</li> <li>Barrier cream.</li> <li>Skin cleansing cream.</li> <li>Eye wash unit.</li> </ul>

## **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)

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

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

#### Information on basic physical and chemical properties

Appearance	Liquid with a characteristic odour; does not mix with water. Clear		
Physical state	Liquid	Relative density (Water = 1)	Not Available
Odour	Characteristic	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Applicable	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	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	<ul> <li>Unstable in the presence of incompatible materials.</li> <li>Product is considered stable.</li> <li>Hazardous polymerisation will not occur.</li> </ul>
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

## **SECTION 11 Toxicological information**

## Information on toxicological effects

Inhaled	The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. Not normally a hazard due to non-volatile nature of product Inhalation of oil droplets or aerosols may cause discomfort and may produce chemical inflammation of the lungs.
Ingestion	The material has <b>NOT</b> been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.
Skin Contact	The 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 The material may accentuate any pre-existing dermatitis condition Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
Eye	There is some evidence to suggest that this material can cause eye irritation and damage in some persons.
Chronic	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment. Oil may contact the skin or be inhaled. Extended exposure can lead to eczema, inflammation of hair follicles, pigmentation of the face and warts on the soles of the feet. Repeated application of mildly-treated solvent refined oils (naphthenic and paraffinic) can cause skin tumours, but after severe solvent-refining they do not. Oil may contact the skin or be inhaled. Extended exposure can lead to eczema, inflammation of hair follicles, pigmentation of the face and warts on the soles of the feet.

DEOX R17 Food Safe	ΤΟΧΙΟΙΤΥ	IRRITATION
Machine Oil	Not Available	Not Available
	ΤΟΧΙΟΙΤΥ	IRRITATION
paraffin oils	Inhalation(Rat) LC50: 2062 ppm4h <sup>[2]</sup>	Eye (rabbit): 500 mg moderate
	Oral (Mouse) LD50; 22000 mg/kg <sup>[2]</sup>	Skin (rabbit): 100 mg/24h mild
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 - Regist	er of Toxic Effect of chemical Substances

	Equivocal tumorigen by RTECS criteria
	Paraffin oil (boiling in the kerosene boiling range) can pose certain health hazards, especially if it is inhaled or ingested and also
	due to repeated or prolonged skin exposure. Inhalation of paraffin oil can irritate the respiratory tract, and cause cough, shortness
	of breath, and occasionally, lead to hydrocarbon pneumonitis. On the other hand, prolonged skin exposure to this oil can cause
	skin irritation, which can lead to contact dermatitis, especially in individuals who already have skin disorders or diseases.
PARAFFIN UILS	Ingestion of paraffin oil can cause upset of the intestinal tract.
	Paraffin oil, which has not been highly refined, is often considered as a carcinogen or cancer causing agent. Therefore, adequate
	precaution is required, while using paraffin oil. Ideally, liquid paraffin oil should be stored in a cool and well-ventilated place n a
	tightly closed container. As some paraffin oil is highly inflammable, be sure to keep it away from any source of heat or ignition
	and also out of direct sunlight

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	The materials included in the Lubricating Base Oils category are related from both process and ph The potential toxicity of a specific distillate base oil is inversely related to the severity or extent of p undergone, since:	ysical-chemical perspectives; processing the oil has
	• The adverse effects of these materials are associated with undesirable components, and	
	• The levels of the undesirable components are inversely related to the degree of processing;	
	• Distillate base oils receiving the same degree or extent of processing will have similar toxicities;	
	Ine potential toxicity of residual base oils is independent of the degree of processing the oil received and the degree of processing the degree of proc	ves.
	• The reproductive and developmental toxicity of the distillate base oils is inversely related to the di	egree of processing.
	Orienned & mildy reined distingle base ons contain the highest levels of undeshable components	, nave the largest variation of
	nydrocarbon molecules and have snown the highest potential cancer-causing and mutation-causin	ig activities. Highly and
	severely relined distillate base ons are produced from unrelined and mildly relined ons by removing	g of transforming undesirable
	components. In comparison to unreinfed and milding ferring base ons, the highly and severely ferring	ting of regidual ails for
	sinaller range of hydrocarbon molecules and have demonstrated very low manimalian toxicity. Tes	hat those materials lack
	hiologically active components or the components are largely non-hioavailable due to their molecul	ilar sizo
	Toxicity testing has consistently shown that lubricating has a oils have low acute toxicities. Numero	us tosts have shown that a
	lubricating hase oil s mutagenic and carcinogenic potential correlates with its 3.7 ring polycyclic ar	omatic compound (PAC)
	content, and the level of DMSO extractables (e.g. IP346 assay), both characteristics that are direct	tly related to the
	degree/conditions of processing	
	For highly and severely refined distillate base oils:	
	In animal studies, the acute, oral, semilethal dose is $>5\alpha/k\alpha$ body weight and the semilethal dose to	ov skin contact is >2α/kα body
	weight The semilethal concentration for inhalation is 2.18 to >4 mg/L. The materials have varied fr	om "non-irritating" to
	"moderately irritating" when tested for skin and eve irritation. Testing for sensitisation has been neg	ative. The effects of repeated
	exposure vary by species; in animals, effects to the testes and lung have been observed, as well a	as the formation of granulomas.
	In animals, these substances have not been found to cause reproductive toxicity or significant incr	eases in birth defects. They
	are also not considered to cause cancer, mutations or chromosome aberrations.	

Acute Toxicity	×	Carcinogenicity	×
Skin Irritation/Corrosion	×	Reproductivity	×
Serious Eye Damage/Irritation	×	STOT - Single Exposure	×
Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	×
Mutagenicity	×	Aspiration Hazard	×
	1		1

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

## **SECTION 12 Ecological information**

	Endpoint	Test Duration (hr)	Species		Value	Source
DEOX R17 Food Safe Machine Oil	Not Available	Not Available	Not Available		Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Valu	e	Source
	EC50(ECx)	48h	Crustacea	0.01	6-0.027mg/L	4
paraffin oils	LC50	96h	Fish	>100	)mg/L	4
	EC50	48h	Crustacea	0.01	6-0.027mg/L	4

Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

When spilled this product may act as a typical oil, causing a film, sheen, emulsion or sludge at or beneath the surface of the body of water. The oil film on water surface may physically affect the aquatic organisms, due to the interruption of the

oxygen transfer between the air and the water

Oils of any kind can cause:

- + drowning of water-fowl due to lack of buoyancy, loss of insulating capacity of feathers, starvation and vulnerability to predators due to lack of mobility
- Iethal effects on fish by coating gill surfaces, preventing respiration
- + asphyxiation of benthic life forms when floating masses become engaged with surface debris and settle on the bottom and
- adverse aesthetic effects of fouled shoreline and beaches

In case of accidental releases on the soil, a fine film is formed on the soil, which prevents the plant respiration process and the soil particle saturation. It may cause deep water infestation.

#### for lubricating oil base stocks:

Vapor Pressure Vapor pressures of lubricating base oils are reported to be negligible. In one study, the experimentally measured vapour pressure of a solvent-

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dewaxed heavy paraffinic distillate base oil was 1.7 x 10exp-4 Pa . Since base oils are mixtures of C15 to C50 paraffinic, naphthenic, and aromatic hydrocarbon isomers, representative components of those structures were selected to calculate a range of vapor pressures. The estimated vapor pressure values for these selected components of base oils ranged from 4.5 x 10exp-1 Pa to 2 x 10exp-13Pa. Based on Dalton's Law the expected total vapour pressure for base oils would fall well below minimum levels (10exp-5 Pa) of recommended experimental procedures.

Partition Coefficient (log Kow): In mixtures such as the base oils, the percent distribution of the hydrocarbon groups (i.e., paraffins, naphthenes, and aromatics) and the carbon chain lengths determines in-part the partitioning characteristics of the mixture. Generally, hydrocarbon chains with fewer carbon atoms tend to have lower partition coefficients than those with higher carbon numbers .However, due to their complex composition, unequivocal determination of the log Kow of these hydrocarbon mixtures cannot be made. Rather, partition coefficients of selected C15 chain-length hydrocarbon structures representing paraffinic, naphthenic, and aromatic constituents in base oil lubricants were modelled . Results showed typical log Kow values from 4.9 to 7.7, which were consistent with values of >4 for lubricating oil basestocks

Water Solubility: When released to water, base oils will float and spread at a rate that is viscosity dependent. While water solubility of base oils is typically very low, individual hydrocarbons exhibit a wide range of solubility depending on molecular weight and degree of unsaturation. Decreasing molecular weight (i.e., carbon number) and increasing levels of unsaturation increases the water solubility of these materials. As noted for partition coefficient, the water solubility of lubricating base oils cannot be determined due to their complex mixture characteristics. Therefore, the water solubility of individual C15 hydrocarbons representing the different groups making up base oils (i.e., linear and branched paraffins, naphthenes, and aromatics) was modelled. Based on water solubility modelling of those groups, aqueous solubilities are typically much less than 1 ppm. (0.003-0.63 mg/l)

#### Environmental Fate:

Photodegradation: Chemicals having potential to photolyse have UV/visible absorption maxima in the range of 290 to 800 nm. Some chemicals have absorption maxima significantly below 290 nm and consequently cannot undergo direct photolysis in sunlight (e.g. chemicals such as alkanes, alkenes, alkynes, saturated alcohols, and saturated acids). Most hydrocarbon constituents of the materials in this category are not expected to photolyse since they do not show absorbance within the 290-800 nm range. However, photodegradation of polyaromatic hydrocarbons (PAHs) can occur and may be a significant degradation pathway for these constituents of lubricating base oils. The degree and rate at which PAHs may photodegrade depend upon whether conditions allow penetration of light with sufficient energy to effect a change. For example, polycyclic aromatic compounds (PAC) compounds bound to sediments may persist due to a lack of sufficient light penetration

Atmospheric gas-phase reactions can occur between organic chemicals and reactive molecules such as photochemically produced hydroxyl radicals, ozone and nitrogen oxides. Atmospheric oxidation as a result of radical attack is not direct photochemical degradation, but indirect degradation. In general, lubricating base oils have low vapour pressures and volatilisation is not expected to be a significant removal mechanism for the majority of the hydrocarbon components. However, some components (e.g., C15 branched paraffins and naphthenes) appear to have the potential to volatilise Atmospheric half-lives of 0.10 to 0.66 days have been calculated for representative C15 hydrocarbon components of lubricating base oils

Stability in Water: Chemicals that have a potential to hydrolyze include alkyl halides, amides, carbamates, carboxylic acid esters and lactones, epoxides, phosphate esters, and sulfonic acid esters. Because lubricating base oils do not contain significant levels of these functional groups, materials in the lubricating base oils category are not subject to hydrolysis

Chemical Transport and Distribution in the Environment : Based on the physical-chemical characteristics of component hydrocarbons in lubricating base oils, the lower molecular weight components are expected to have the highest vapour pressures and water solubilities, and the lowest partition coefficients. These factors enhance the potential for widespread distribution in the environment. To gain an understanding of the potential transport and distribution of lubricating base oil components, the EQC (Equilibrium Criterion) model was used to characterize the environmental distribution of different C15 compounds representing different structures found in lube oils (e.g., paraffins, naphthenes, and aromatics). The modelling found partitioning to soil or air is the ultimate fate of these C15 compounds. Aromatic compounds partition principally to soil. Linear paraffins partition mostly to soil, while branching appears to allow greater distribution to air. Naphthenes distribute to both soil and air, with increasing proportions in soil for components with the greater number of ring structures. Because the modelling does not take into account degradation factors, levels modelled in the atmosphere are likely overstated in light of the tendency for indirect photodegradation to occur

Biodegradation: The extent of biodegradation measured for a particular lubricating oil basestock is dependent not only on the procedure used but also on how the sample is presented in the biodegradation test. Lubricant base oils typically are not readily biodegradable in standard 28-day tests. However, since the oils consist primarily of hydrocarbons that are ultimately assimilated by microorganisms, and therefore inherently biodegradable. Twenty-eight biodegradability studies have been reported for a variety of lubricating base oils. Based on the results of ultimate biodegradability tests using modified Sturm and manometric respirometry testing the base oils are expected to be, for the most part, inherently biodegradable. Biodegradation rates found using the modified Sturm procedure ranged from 1.5 to 29%. Results from the manometric respirometry tests on similar materials showed biodegradation rates from 31 to 50%. Biodegradation rates measured in 21-day CEC tests for similar materials ranged from 13 to 79%.

#### Ecotoxicity:

Numerous acute studies covering fish, invertebrates, and algae have been conducted to assess the ecotoxicity of various lubricating base oils. None of these studies have shown evidence of acute toxicity to aquatic organisms. Eight, 7-day exposure studies using rainbow trout failed to demonstrate toxicity when tested up to the maximum concentration of 1000 mg/L applied as dispersions. Three, 96-hour tests with rainbow trout also failed to show any toxic effects when tested up to 1000 mg/L applied as dispersions. Similarly, three 96-hour tests with fathead minnows at a maximum test concentration of 100 mg/L water accommodated fractions (WAF) showed no adverse effects. Two species of aquatic invertebrates (Daphnia magna and Gammarus sp.) were exposed to WAF solutions up to 10,000 mg/L for 48 and 96-hours, respectively, with no adverse effects being observed. Four-day exposures of the freshwater green alga (Scenedesmus subspicatus) to 500 mg/L WAF solutions failed to show adverse effects on growth rate and algal cell densities in four studies

Multiple chronic ecotoxicity studies have shown no adverse effects to daphnid survival or reproduction. In 10 of 11 chronic studies, daphnids were exposed for 21 days to WAF preparations of lubricating base oils with no ill effects on survival or reproduction at the maximum concentration of 1000 mg/L. One test detected a reduction in reproduction at 1000 mg/L. Additional data support findings of no chronic toxicity to aquatic invertebrates and fish. No observed effect levels ranged from 550 to 5,000 mg/L when tested as either dispersions or WAFs.

The data described above are supported by studies on a homologous series of alkanes. The author concluded that the water solubility of carbon chains .C10 is too limited to elicit acute toxicity. This also was shown for alkylbenzene compounds having carbon numbers .C15. Since base oils consist of carbon compounds of C15 to C50, component hydrocarbons that are of acute toxicological concern are, for the most part, absent in these materials. Similarly, due to their low solubility. the alkylated two to three ring polyaromatic components in base oils are not expected to cause acute or chronic toxicity. This lack of toxicity is borne out in the results of the reported studies.

The effects of crude and refined oils on organisms found in fresh and sea water ha been extensively reviewed.

sea water. Where spillages occur the non-mobile species suffer the greatest mortality, whereas fish species can often escape from the affected region. The extent of the initial mortality depends on the chemical nature of the oil, the location, and the physical conditions, particularly the temperature and wind velocity. Most affected freshwater and marine communities recover from the effects of an oil spill within a year. The occurrence of biogenic hydrocarbons in the world's oceans is

well recorded. They have the characteristic isoprenoid structure, and measurements made in water columns indicate a background concentration of 1.0 to 10 ul/l. The higher molecular weight materials are dispersed as particles, with the highest concentrations of about 20 ul/l occurring in the top 3 mm layer of water. A wide variation in the response of organisms to oil exposures has been noted. The larvae of fish and crustaceans appear to be most susceptible to the watersoluble fraction of crude oil. Exposures of plankton and algae have indicated that certain species of diatoms and green algae are inhibited, whereas microflagellates are not.

For the most part, molluscs and most intertidal worm species appear to be tolerant of oil contamination. **DO NOT** discharge into sewer or waterways.

#### Persistence and degradability

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

#### **Bioaccumulative potential**

Ingredient	Bioaccumulation
	No Data available for all ingredients
Mobility in soil	

Ingredient	Mobility
	No Data available for all ingredients

## **SECTION 13 Disposal considerations**

#### Waste treatment methods

Product / Packaging disposal	Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. A Hierarchy of Controls seems to be common - the user should investigate: Reduction Reuse Recycling Disposal (if all else fails) This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate. DO NOT allow wash water from cleaning or process equipment to enter drains. It may be necessary to collect all wash water for treatment before disposal. In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. Where in doubt contact the responsible authority. Recycle wherever possible or consult manufacturer for recycling options. Consult State Land Waste Authority for disposal. Bury or incinerate residue at an approved site. Recycle containers if possible, or dispose of in an authorised landfill.

Ensure that the hazardous substance is disposed in accordance with the Hazardous Substances (Disposal) Notice 2017

## **Disposal Requirements**

Not applicable as substance/ material is non hazardous.

## **SECTION 14 Transport information**

#### Labels Required

Marine Pollutant	NO
HAZCHEM	Not Applicable

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

#### 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

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

Product name	Group
paraffin oils	Not Available

## Transport in bulk in accordance with the IGC Code

Product name	Ship Type
paraffin oils	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
Not Applicable	Not Applicable

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

#### paraffin oils is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)	New Zealand Hazardous Substances and New Organisms (HSNO) Act -
International Agency for Research on Cancer (IARC) - Agents Classified by	Classification of Chemicals
the IARC Monographs - Not Classified as Carcinogenic	New Zealand Inventory of Chemicals (NZIoC)
New Zealand Approved Hazardous Substances with controls	New Zealand Workplace Exposure Standards (WES)

## **Hazardous Substance Location**

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

Hazard Class	Quantities
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

#### 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
Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

## **Tracking Requirements**

Not Applicable

#### **National Inventory Status**

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (paraffin oils)

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National Inventory	Status
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 - 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	28/03/2023
Initial Date	23/03/2023

## 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.