



## PAROIL S

### Atlas Copco (South East Asia) Pte Ltd

Chemwatch: 6596977

Version No: 7.1

Safety Data Sheet

Issue Date: 23/12/2022

Print Date: 25/10/2023

L.GHS.SGP.EN.E

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

##### Product Identifier

Product name	PAROIL S
Synonyms	Product Code: 0017 5300 01
Chemical formula	Not Applicable
Other means of identification	155, 0017 5300 01, 0017520162, 0017520195, 0017530001, 0017802670, 1615594800, 1615594900, 1615595101, 1630016000, 1630016100, 1630016200, 2658259281, 2658261513, 2658261681, 2658320889, 2658323097, 2658344673, 2658344729, 2658561188, 2658561195, 6596977, 9922199566

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

Relevant identified uses	Compressor oil
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##### Details of the manufacturer or supplier of the safety data sheet

Registered company name	Atlas Copco (South East Asia) Pte Ltd	Atlas Copco Airpower NV
Address	25, Tuas Avenue 2 Singapore 639456 Singapore	Boomsesteenweg 957 Wilrijk B2610 Belgium
Telephone	+60 351 238 860	+32 3 870 2111
Fax	+603 5123 8969	+32 3 870 2903
Website	<a href="http://www.atlascopco.com">www.atlascopco.com</a>	<a href="http://www.atlascopco.com/sds">http://www.atlascopco.com/sds</a>
Email	info.lubricants.cts@atlascopco.com	info.lubricants.cts@atlascopco.com

##### Emergency telephone number

Association / Organisation	CHEMWATCH EMERGENCY RESPONSE (24/7)
Emergency telephone numbers	+6531381227
Other emergency telephone numbers	+61 3 9573 3188

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

#### SECTION 2 Hazards identification

##### Classification of the substance or mixture

Classification	Not Applicable
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##### Label elements

Hazard pictogram(s)	Not Applicable
Signal word	Not Applicable

**Hazard statement(s)**

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**

See section below for composition of Mixtures

**Mixtures**

CAS No	%[weight]	Name
63748-98-1	0-90	<u>mineral oil</u>
Not Available		(interchangeable low viscosity base oil)
68411-46-1	1-3	<u>octylated diphenylamines</u>
268567-32-4	NotSpec	<u>3-(diisobutoxythiophosphorylsulfanyl)methylpropionic acid</u>

**SECTION 4 First aid measures****Description of first aid measures**

<b>Eye Contact</b>	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"><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>
<b>Skin Contact</b>	<p>If skin contact occurs:</p> <ul style="list-style-type: none"><li>▶ Immediately remove all contaminated clothing, including footwear.</li><li>▶ Flush skin and hair with running water (and soap if available).</li><li>▶ Seek medical attention in event of irritation.</li></ul>
<b>Inhalation</b>	<ul style="list-style-type: none"><li>▶ If fumes or combustion products are inhaled remove from contaminated area.</li><li>▶ Lay patient down. Keep warm and rested.</li><li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li><li>▶ 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.</li><li>▶ Transport to hospital, or doctor.</li></ul>
<b>Ingestion</b>	<ul style="list-style-type: none"><li>▶ <b>If swallowed do NOT induce vomiting.</b></li><li>▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li><li>▶ Observe the patient carefully.</li><li>▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.</li><li>▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li><li>▶ Seek medical advice.</li></ul>

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

Treat symptomatically.

- ▶ 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.
- Carbon dioxide.
- Water spray or fog - Large fires only.

### Special hazards arising from the substrate or mixture

<b>Fire Incompatibility</b>	▸ 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

<b>Fire Fighting</b>	<ul style="list-style-type: none"><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>▸ Use water delivered as a fine spray to control fire and cool adjacent area.</li></ul>
<b>Fire/Explosion Hazard</b>	<ul style="list-style-type: none"><li>▸ Combustible.</li><li>▸ Slight fire hazard when exposed to heat or flame.</li><li>▸ Heating may cause expansion or decomposition leading to violent rupture of containers.</li><li>▸ On combustion, may emit toxic fumes of carbon monoxide (CO).</li></ul> Combustion products include: carbon dioxide (CO <sub>2</sub> ) other pyrolysis products typical of burning organic material. <b>CARE:</b> 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

<b>Minor Spills</b>	Slippery when spilt. <ul style="list-style-type: none"><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></ul>
<b>Major Spills</b>	Slippery when spilt. Moderate hazard. <ul style="list-style-type: none"><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></ul>

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

## SECTION 7 Handling and storage

### Precautions for safe handling

<b>Safe handling</b>	<ul style="list-style-type: none"><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></ul>
<b>Other information</b>	<ul style="list-style-type: none"><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></ul>

### Conditions for safe storage, including any incompatibilities

<b>Suitable container</b>	<ul style="list-style-type: none"> <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>
<b>Storage incompatibility</b>	<ul style="list-style-type: none"> <li>• <b>CARE:</b> 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/m<sup>3</sup>)</li> <li>• Autoignition temperatures may be significantly lower under particular conditions (slow oxidation on finely divided materials..             <ul style="list-style-type: none"> <li>▶ Avoid reaction with oxidising agents</li> </ul> </li> </ul>

## SECTION 8 Exposure controls / personal protection

### Control parameters

#### Occupational Exposure Limits (OEL)

#### INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Singapore Permissible Exposure Limits of Toxic Substances	mineral oil	Oil Mist, mineral	5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	Not Available	Not Available
Singapore Permissible Exposure Limits of Toxic Substances	octylated diphenylamines	Nuisance particulates	10 mg/m <sup>3</sup>	Not Available	Not Available	Not Available

#### Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
mineral oil	140 mg/m <sup>3</sup>	1,500 mg/m <sup>3</sup>	8,900 mg/m <sup>3</sup>


Ingredient	Original IDLH	Revised IDLH
mineral oil	2,500 mg/m <sup>3</sup>	Not Available
octylated diphenylamines	Not Available	Not Available
3-(diisobutoxythiophosphorylsulfanyl)methylpropionic acid	Not Available	Not Available

#### Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
3-(diisobutoxythiophosphorylsulfanyl)methylpropionic acid	D	> 0.1 to ≤ 1 ppm
<b>Notes:</b>	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.	

#### MATERIAL DATA

### Exposure controls

<b>Appropriate engineering controls</b>	<p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.</p>
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye and face protection</b>	<ul style="list-style-type: none"> <li>▶ Safety glasses with side shields</li> <li>▶ Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent]</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.</li> </ul>

<b>Skin protection</b>	See Hand protection below
<b>Hands/feet protection</b>	<p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <p>Personal hygiene is a key element of effective hand care.</p> <ul style="list-style-type: none"> <li>▸ Wear chemical protective gloves, e.g. PVC.</li> <li>▸ Wear safety footwear or safety gumboots, e.g. Rubber</li> </ul>
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	<ul style="list-style-type: none"> <li>▸ Overalls.</li> <li>▸ P.V.C apron.</li> <li>▸ Barrier cream.</li> <li>▸ Skin cleansing cream.</li> </ul>

## Respiratory protection

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

^ - 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(SO<sub>2</sub>), G = Agricultural chemicals, K = Ammonia(NH<sub>3</sub>), 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

<b>Appearance</b>	Clear light brown liquid, slight hydrocarbon odour		
<b>Physical state</b>	Liquid	<b>Relative density (Water = 1)</b>	0.843
<b>Odour</b>	Not Available	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	>320
<b>pH (as supplied)</b>	Not Applicable	<b>Decomposition temperature (°C)</b>	Not Available
<b>Melting point / freezing point (°C)</b>	-45 (pour pt)	<b>Viscosity (cSt)</b>	Not Available
<b>Initial boiling point and boiling range (°C)</b>	>280	<b>Molecular weight (g/mol)</b>	Not Applicable
<b>Flash point (°C)</b>	230 (COC)	<b>Taste</b>	Not Available
<b>Evaporation rate</b>	Not Available	<b>Explosive properties</b>	Not Available
<b>Flammability</b>	Not Applicable	<b>Oxidising properties</b>	Not Available
<b>Upper Explosive Limit (%)</b>	10.0 (mineral oil)	<b>Surface Tension (dyn/cm or mN/m)</b>	Not Available
<b>Lower Explosive Limit (%)</b>	1.0 (mineral oil)	<b>Volatile Component (%vol)</b>	Not Available
<b>Vapour pressure (kPa)</b>	<0.05 @ 20C	<b>Gas group</b>	Not Available

Continued...

Solubility in water	Immiscible	pH as a solution (1%)	Not Applicable
Vapour density (Air = 1)	>1	VOC g/L	Not Available

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	<ul style="list-style-type: none"><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	Inhalation hazard is increased at higher temperatures. Not normally a hazard due to non-volatile nature of product Inhalation of oil droplets/ aerosols may cause discomfort and may produce chemical pneumonitis.
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. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health).
Skin Contact	The liquid may be miscible 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
Eye	Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).
Chronic	Principal route of exposure is by skin contact; lesser exposures include inhalation of fumes from hot oils, oil mists or droplets. Prolonged contact with mineral oils carries with it the risk of skin conditions such as oil folliculitis, eczematous dermatitis, pigmentation of the face (melanosis) and warts on the sole of the foot (plantar warts). With highly refined mineral oils no appreciable systemic effects appear to result through skin absorption. Exposure to oil mists frequently elicits respiratory conditions, such as asthma; the provoking agent is probably an additive.

PAROIL S	TOXICITY	IRRITATION
	Not Available	Not Available
mineral oil	TOXICITY	IRRITATION
	Not Available	Not Available
octylated diphenylamines	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>	Eye (rabbit): Non Irritant
	Oral (Rat) LD50: >2000 mg/kg <sup>[2]</sup>	Eye: adverse effect observed (irritating) <sup>[1]</sup>
		Skin (rabbit): Non Irritant [Bay]
		Skin: adverse effect observed (irritating) <sup>[1]</sup>
3-(diisobutoxythiophosphorylsulfanyl)methylpropionic acid	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>	Eye (rabbit): slight *
	Oral (Rat) LD50: >2000 mg/kg <sup>[1]</sup>	Skin (rabbit): non-irritating *
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	

## PAROIL S

	<p>process and physical-chemical perspectives;</p> <p>The potential toxicity of a specific distillate base oil is inversely related to the severity or extent of processing the oil has undergone, since:</p> <ul style="list-style-type: none"> <li>· The adverse effects of these materials are associated with undesirable components, and</li> <li>· The levels of the undesirable components are inversely related to the degree of processing;</li> <li>· Distillate base oils receiving the same degree or extent of processing will have similar toxicities;</li> <li>· The potential toxicity of <i>residual base oils</i> is independent of the degree of processing the oil receives.</li> <li>· The reproductive and developmental toxicity of the distillate base oils is inversely related to the degree of processing.</li> </ul> <p>The degree of refining influences the carcinogenic potential of the oils. Whereas mild acid / earth refining processes are inadequate to substantially reduce the carcinogenic potential of lubricant base oils, hydrotreatment and / or solvent extraction methods can yield oils with no carcinogenic potential.</p> <p>Unrefined and mildly refined distillate base oils contain the highest levels of undesirable components, have the largest variation of hydrocarbon molecules and have shown the highest potential carcinogenic and mutagenic activities. Highly and severely refined distillate base oils are produced from unrefined and mildly refined oils by removing or transforming undesirable components. In comparison to unrefined and mildly refined base oils, the highly and severely refined distillate base oils have a smaller range of hydrocarbon molecules and have demonstrated very low mammalian toxicity.</p>
OCTYLATED DIPHENYLAMINES	<p>Potential sensitiser producing contact allergies.</p> <p>For substituted diphenylamines:</p> <p>Based upon reviewed data the physicochemical and toxicological properties of the substituted diphenylamines are similar and follow a regular pattern as a result of that structural similarity.</p> <p>Because of their powerful antioxidant properties, Substituted Diphenylamines, along with their common starting material, Diphenylamine, are regulated for use in several food-contact applications by the Food and Drug Administration as Indirect Food Additives under the following sections of the Code of Federal Regulations (CFR):</p> <p>Heating may generate vapors which can irritate the eyes and respiratory passages. Drying of skin and mucous membranes leading to irritation may be possible from prolonged or repeated contact. Overexposure to vapors from heating the product may cause and/or skin irritation and respiratory tract irritation with symptoms such as, but not limited to, dizziness and flu-like symptoms</p> <p><b>Acute toxicity:</b> As a group these materials do not produce significant acute toxicity in mammals. All show a slight to very low order of toxicity following oral administration, with LD50 values ranging from &gt;5000 to &gt; 34,000 mg/kg.</p>
3-(DIISOBUTOXYTHIOPHOSPHORYLSULFANYL)METHYLPROPIONIC ACID	<p>Evidence of sensitisation in guinea pig skin assay * Oral repeat dose toxicity (28 days): NOEL 20 mg/kg/day bw * Non-mutagenic in bacterial reverse mutation assay * Non-genotoxic in in vivo micronucleus test * The chemical was of low acute oral and dermal toxicity in rats, was not a skin irritant but was a slight eye irritant in rabbits, and was neither mutagenic in bacteria nor clastogenic in mouse bone marrow cells. It was a skin sensitiser in guinea pigs and exhibited systemic effects at a dose of 500 mg/kg/day bw in a 28-day oral repeated dose study in rats although some of these effects may have been adaptive in nature Clinical Chemistry Elevated triglyceride and phospholipid levels were noted in high dose animals of both sexes and elevated cholesterol levels in high dose females. These changes were considered to be an adaptive response and were reversed during the recovery period. All changes were within the 95% confidence limits of the historical control data. Higher albumin levels and albumin/globulin ratios were found in high dose animals of both sexes, higher total protein in high dose females. After recovery the elevated albumin levels persisted in males. All changes were within the 95% confidence limits of the historical control data. High dose males exhibited higher urea and lower creatinine levels which were within the 95% confidence limits of the historical control data. Haematology Plasma haemoglobin concentration and haematocrit were lower in high dose animals and red blood cell count was lower in high dose females. The toxicological significance of these findings is uncertain. High dose animals exhibited a prolonged activated partial thromboplastin time, females had a shorter thromboplastin time and males had a higher platelet count. All changes were within the 95% confidence limits of the historical control data. Prolonged activated PTT and platelet counts reached statistical significance in high dose recovery group males. Urinalysis Ketone was present in mid dose females and high dose animals of both sexes and was considered to be related to the adaptive changes in lipid metabolism. High dose females exhibited higher specific gravity and high dose animals of both sexes had slightly lower urine production. These were within the 95% confidence limits of historical control data and may indicate a possible change in the ability to concentrate urine. Effects in Organs High dose</p>

	animals exhibited higher absolute and relative liver weights. These effects persisted in males at the end of the recovery period and were considered to be treatment related yet adaptive. High dose animals exhibited higher kidney/body weight ratios, higher absolute kidney weights and kidney to brain weight ratio. Mid dose males also exhibited an elevated kidney/body weight ratio. CONCLUSION The No Observed Effect Level (NOEL) was established as 20 mg/kg bw/day in this study, based on elevated kidney/body weight ratio in males NICNAS Full Public Report 11 September 2002
OCTYLATED DIPHENYLAMINES & 3-(DIISOBUTOXYTHIOPHOSPHORYLSULFANYL)METHYLPROPIONIC ACID	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions.

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

PAROIL S	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
mineral oil	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
octylated diphenylamines	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	>100mg/l	2
	EC50	48h	Crustacea	51mg/l	2
	EC50	96h	Algae or other aquatic plants	870mg/l	2
	LC50	96h	Fish	5.1mg/l	Not Available
	EC50(ECx)	24h	Crustacea	4.2mg/l	Not Available
3-(diisobutoxythiophosphorylsulfanyl)methylpropionic acid	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	79mg/l	Not Available
	EC50	48h	Crustacea	53mg/l	2
	LC50	96h	Fish	38mg/l	Not Available
	NOEC(ECx)	48h	Crustacea	24mg/l	Not Available

Legend: Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 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
octylated diphenylamines	HIGH	HIGH

**Bioaccumulative potential**

Ingredient	Bioaccumulation
octylated diphenylamines	LOW (BCF = 5.5)

**Mobility in soil**

Ingredient	Mobility
octylated diphenylamines	LOW (KOC = 28640000)

**SECTION 13 Disposal considerations****Waste treatment methods**

<b>Product / Packaging disposal</b>	<p>Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.</p> <p>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none"><li>▸ Reduction</li><li>▸ Reuse</li><li>▸ Recycling</li><li>▸ Disposal (if all else fails)</li></ul> <p>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.</p> <ul style="list-style-type: none"><li>▸ <b>DO NOT allow wash water from cleaning or process equipment to enter drains.</b></li><li>▸ It may be necessary to collect all wash water for treatment before disposal.</li><li>▸ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li><li>▸ Where in doubt contact the responsible authority.</li><li>▸ Recycle wherever possible or consult manufacturer for recycling options.</li><li>▸ Consult State Land Waste Authority for disposal.</li><li>▸ Bury or incinerate residue at an approved site.</li><li>▸ Recycle containers if possible, or dispose of in an authorised landfill.</li></ul>
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**SECTION 14 Transport information****Labels Required**

<b>Marine Pollutant</b>	NO
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**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****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
mineral oil	Not Available
octylated diphenylamines	Not Available
3-(diisobutoxythiophosphorylsulfanyl)methylpropionic acid	Not Available

**14.7.3. Transport in bulk in accordance with the IGC Code**

Product name	Ship Type
mineral oil	Not Available
octylated diphenylamines	Not Available

Product name	Ship Type
3-(diisobutoxythiophosphorylsulfanyl)methylpropionic acid	Not Available

SECTION 15 Regulatory information

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

mineral oil is found on the following regulatory lists	
Chemical Footprint Project - Chemicals of High Concern List	International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs	Singapore Permissible Exposure Limits of Toxic Substances
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 1: Carcinogenic to humans	
octylated diphenylamines is found on the following regulatory lists	
International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)	Singapore Permissible Exposure Limits of Toxic Substances
3-(diisobutoxythiophosphorylsulfanyl)methylpropionic acid is found on the following regulatory lists	
Not Applicable	

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	No (mineral oil)
Canada - DSL	No (mineral oil)
Canada - NDSL	No (mineral oil; octylated diphenylamines; 3-(diisobutoxythiophosphorylsulfanyl)methylpropionic acid)
China - IECSC	No (mineral oil)
Europe - EINEC / ELINCS / NLP	No (mineral oil; 3-(diisobutoxythiophosphorylsulfanyl)methylpropionic acid)
Japan - ENCS	No (3-(diisobutoxythiophosphorylsulfanyl)methylpropionic acid)
Korea - KECI	No (mineral oil)
New Zealand - NZIoC	No (mineral oil)
Philippines - PICCS	No (mineral oil)
USA - TSCA	No (mineral oil)
Taiwan - TCSI	No (mineral oil)
Mexico - INSQ	No (mineral oil; 3-(diisobutoxythiophosphorylsulfanyl)methylpropionic acid)
Vietnam - NCI	No (mineral oil)
Russia - FBEPH	No (mineral oil)
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	23/12/2022
Initial Date	12/06/2015

SDS Version Summary

Version	Date of Update	Sections Updated
6.1	08/07/2019	Physical and chemical properties - Appearance, Firefighting measures - Fire Fighter (extinguishing media), Identification of the substance / mixture and of the company / undertaking - Use
7.1	23/12/2022	Classification review due to GHS Revision change.

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch

Classification committee using available literature references.

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

## Definitions and abbreviations

- 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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