



Roto Synthetic Fluid Xtend Duty

Atlas Copco Airpower NV

Chemwatch: 5260-48

Version No: 16.1

Safety Data Sheet (Conforms to Annex II of REACH (1907/2006) - Regulation 2020/878)

Issue Date: 19/07/2023

Print Date: 08/01/2024

L.REACH.BEL.EN.E

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

1.1. Product Identifier

Product name	Roto Synthetic Fluid Xtend Duty
Synonyms	0017530036; 2901170000; 2901170100; 2901170200; 2901170300
Chemical formula	Not Applicable
Other means of identification	0017530036, 2901170000, 2901170100, 2901170200, 2901170300, 0017 5201 20, 0017520120, 13100336838

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

Relevant identified uses	Compressor oil
Uses advised against	No specific uses advised against are identified.

1.3. Details of the manufacturer or supplier of the safety data sheet

Registered company name	Atlas Copco Airpower NV
Address	Boomssesteenweg 957 Wilrijk B2610 Belgium
Telephone	+32 3 870 2111
Fax	+32 3 870 2903
Website	http://www.atlascopco.com/sds
Email	info.lubricants.cts@atlascopco.com

1.4. Emergency telephone number

Association / Organisation	CHEMWATCH EMERGENCY RESPONSE (24/7)
Emergency telephone numbers	+32 2 700 63 06
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

2.1. Classification of the substance or mixture

Classification according to regulation (EC) No 1272/2008 [CLP] and amendments [1]	Not Applicable
---	----------------

2.2. Label elements

Hazard pictogram(s)	Not Applicable
Signal word	Not Applicable

Hazard statement(s)

Not Applicable

Supplementary statement(s)

EUH208	Contains 3-(diisobutoxythiophosphorylsulfanyl)methylpropionic acid. May produce an allergic reaction.
EUH210	Safety data sheet available on request.

Precautionary statement(s) Prevention

Not Applicable

Precautionary statement(s) Response

Not Applicable

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

2.3. Other hazards

REACH - Art.57-59: The mixture does not contain Substances of Very High Concern (SVHC) at the SDS print date.

SECTION 3 Composition / information on ingredients

3.1.Substances

See 'Composition on ingredients' in Section 3.2

3.2.Mixtures

1. CAS No 2.EC No 3.Index No 4.REACH No	%[weight]	Name	Classification according to regulation (EC) No 1272/2008 [CLP] and amendments	SCL / M-Factor	Nanoform Particle Characteristics
1. 68411-46-1 2.270-128-1 3.Not Available 4.01-2119491299-23-XXXX	1-2.9	octylated diphenylamines	Hazardous to the Aquatic Environment Long-Term Hazard Category 3; H412 ^[1]	Not Available	Not Available
1. 268567-32-4 2.434-070-2 3.Not Available 4.Not Available	0.1-0.9	3-(diisobutoxythiophosphorylsulfanyl)methylpropionic acid	Sensitisation (Skin) Category 1B,Serious Eye Damage/Eye Irritation Category 1; H317, H318 ^[1]	Not Available	Not Available
Legend:		1. Classified by Chemwatch; 2. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 3. Classification drawn from C&L; * EU IOELVs available; [e] Substance identified as having endocrine disrupting properties			

SECTION 4 First aid measures

4.1. Description of first aid measures

Eye Contact	If this product comes in contact with eyes: ▶ Wash out immediately with water. ▶ If irritation continues, seek medical attention. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	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.

Roto Synthetic Fluid Xtend Duty

Inhalation	<ul style="list-style-type: none">▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area.▶ Other measures are usually unnecessary.
Ingestion	<ul style="list-style-type: none">▶ If swallowed do NOT induce vomiting.▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.▶ Observe the patient carefully.▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.▶ Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11

4.3. 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

5.1. Extinguishing media

- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ Carbon dioxide.
- ▶ Water spray or fog - Large fires only.

5.2. Special hazards arising from the substrate or mixture

Fire Incompatibility	<ul style="list-style-type: none">▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result
----------------------	--

5.3. Advice for firefighters

Fire Fighting	<ul style="list-style-type: none">▶ Alert Fire Brigade and tell them location and nature of hazard.▶ Wear full body protective clothing with breathing apparatus.▶ Prevent, by any means available, spillage from entering drains or water course.▶ Use water delivered as a fine spray to control fire and cool adjacent area.
Fire/Explosion Hazard	<ul style="list-style-type: none">▶ 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). <p>Combustion products include: carbon dioxide (CO₂) other pyrolysis products typical of burning organic material. May emit poisonous fumes. May emit corrosive fumes.</p>

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

See section 8

6.2. Environmental precautions

See section 12

6.3. Methods and material for containment and cleaning up

Minor Spills	<p>Slippery when spilt.</p> <ul style="list-style-type: none">▶ 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.
--------------	---

Major Spills	Slippery when spilt. Moderate hazard. <ul style="list-style-type: none">Clear area of personnel and move upwind.Alert Fire Brigade and tell them location and nature of hazard.Wear breathing apparatus plus protective gloves.
--------------	--

6.4. Reference to other sections

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

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Safe handling	<ul style="list-style-type: none">DO NOT allow clothing wet with material to stay in contact with skinAvoid 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.
Fire and explosion protection	See section 5
Other information	<ul style="list-style-type: none">Store in original containers.Keep containers securely sealed.No smoking, naked lights or ignition sources.Store in a cool, dry, well-ventilated area.

7.2. Conditions for safe storage, including any incompatibilities

Suitable container	<ul style="list-style-type: none">Metal can or drumPackaging as recommended by manufacturer.Check all containers are clearly labelled and free from leaks.
Storage incompatibility	<ul style="list-style-type: none">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.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/m3Autoignition temperatures may be significantly lower under particular conditions (slow oxidation on finely divided materials..<ul style="list-style-type: none">Avoid reaction with oxidising agents
Hazard categories in accordance with Regulation (EC) No 1272/2008	Not Available
Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of	Not Available

7.3. Specific end use(s)

See section 1.2

SECTION 8 Exposure controls / personal protection

8.1. Control parameters

Ingredient	DNELs Exposure Pattern Worker	PNECs Compartment
octylated diphenylamines	Dermal 0.44 mg/kg bw/day (Systemic, Chronic) Inhalation 0.31 mg/m³ (Systemic, Chronic) <i>Dermal 0.22 mg/kg bw/day (Systemic, Chronic) *</i> <i>Inhalation 0.08 mg/m³ (Systemic, Chronic) *</i> <i>Oral 0.05 mg/kg bw/day (Systemic, Chronic) *</i>	0.034 mg/L (Water (Fresh)) 0.51 mg/L (Water - Intermittent release) 0.003 mg/L (Water (Marine)) 0.446 mg/kg sediment dw (Sediment (Fresh Water)) 0.045 mg/kg sediment dw (Sediment (Marine)) 17.6 mg/kg soil dw (Soil) 10 mg/L (STP) 0.833 mg/kg food (Oral)
3-(diisobutoxythiophosphorylsulfanyl)methylpropionic acid	Dermal 1.25 mg/kg bw/day (Systemic, Chronic) Inhalation 4.4 mg/m³ (Systemic, Chronic) Inhalation 4.4 mg/m³ (Systemic, Acute)	0.036 mg/L (Water (Fresh)) 0.38 mg/L (Water - Intermittent release) 0.004 mg/L (Water (Marine))

Ingredient	DNELs	PNECs
	Exposure Pattern Worker	Compartment
	Dermal 0.6 mg/kg bw/day (Systemic, Chronic) * Inhalation 1.1 mg/m³ (Systemic, Chronic) * Oral 0.6 mg/kg bw/day (Systemic, Chronic) * Inhalation 1.1 mg/m³ (Systemic, Acute) *	1.42 mg/kg sediment dw (Sediment (Fresh Water)) 0.142 mg/kg sediment dw (Sediment (Marine)) 0.496 mg/kg soil dw (Soil) 10 mg/L (STP)

* Values for General Population

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Belgium Occupational Exposure Limits (French)	octylated diphenylamines	Particules non classifiées autrement (fraction inhalable)	10 mg/m3	Not Available	Not Available	Not Available
Belgium Occupational Exposure Limits (French)	octylated diphenylamines	Particules non classifiées autrement (fraction alvéolaire)	3 mg/m3	Not Available	Not Available	Not Available

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
Roto Synthetic Fluid Xtend Duty	Not Available	Not Available	Not Available


Ingredient	Original IDLH	Revised IDLH
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
Notes:	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.	

MATERIAL DATA

8.2. Exposure controls

8.2.1. Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.
8.2.2. Individual protection measures, such as personal protective equipment	
Eye and face protection	<ul style="list-style-type: none">▸ Safety glasses with side shields.▸ Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent]▸ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.
Skin protection	See Hand protection below
Hands/feet protection	<ul style="list-style-type: none">▸ Wear chemical protective gloves, e.g. PVC.▸ Wear safety footwear or safety gumboots, e.g. Rubber <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>

	Personal hygiene is a key element of effective hand care.
Body protection	See Other protection below
Other protection	<div>▸ Overalls.</div> <div>▸ P.V.C apron.</div> <div>▸ Barrier cream.</div> <div>▸ Skin cleansing cream.</div>

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(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

8.2.3. Environmental exposure controls

See section 12

SECTION 9 Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Clear light brown; Slightly hydrocarbon odour.		
Physical state	Liquid	Relative density (Water = 1)	0.843
Odour	Not Available	Partition coefficient n-octanol / water	>6
Odour threshold	Not Available	Auto-ignition temperature (°C)	>320
pH (as supplied)	Not Available	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	-45 (pour pt)	Viscosity (cSt)	46 @ 40C
Initial boiling point and boiling range (°C)	>280	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	230	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	10	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	1	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	<0.0005 @ 20C	Gas group	Not Available
Solubility in water	Immiscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	>1	VOC g/L	0 (%)
Nanoform Solubility	Not Available	Nanoform Particle Characteristics	Not Available

Particle Size	Not Available	
---------------	---------------	--

9.2. Other information

Not Available

SECTION 10 Stability and reactivity

10.1.Reactivity	See section 7.2
10.2. Chemical stability	<div>▶ Unstable in the presence of incompatible materials.</div> <div>▶ Product is considered stable.</div> <div>▶ Hazardous polymerisation will not occur.</div>
10.3. Possibility of hazardous reactions	See section 7.2
10.4. Conditions to avoid	See section 7.2
10.5. Incompatible materials	See section 7.2
10.6. Hazardous decomposition products	See section 5.3

SECTION 11 Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Inhaled	<div>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.</div> <div>Inhalation hazard is increased at higher temperatures.</div> <div>Inhalation of oil droplets/ aerosols may cause discomfort and may produce chemical pneumonitis.</div>
Ingestion	<div>The material has NOT 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).</div>
Skin Contact	<div>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 .</div> <div>Open cuts, abraded or irritated skin should not be exposed to this material</div> <div>The material may accentuate any pre-existing dermatitis condition</div> <div>Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds 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.</div>
Eye	<div>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).</div>
Chronic	<div>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.</div> <div>Exposure to oil mists frequently elicits respiratory conditions, such as asthma; the provoking agent is probably an additive. Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.</div>

Roto Synthetic Fluid Xtend Duty	Toxicity	Irritation
	Dermal (rabbit) LD50: >5000 mg/kg ^[2]	Eye:Mild ^[1]
	Oral (Rat) LD50: >5000mg/kg ^[2]	Skin:Mild ^[1]
octylated diphenylamines	Toxicity	Irritation
	Dermal (rabbit) LD50: >2000 mg/kg ^[1]	Eye:Mild ^[1]
	Oral (Rat) LD50: >2000mg/kg ^[2]	Skin:Mild ^[1]
3-(diisobutoxythiophosphorylsulfanyl)methylpropionic acid	Toxicity	Irritation
	Dermal (rabbit) LD50: >2000 mg/kg ^[2]	Eye:Severe ^[1]
	Oral (Rat) LD50: >2000mg/kg ^[2]	Skin:Not irritating ^[1]

Roto Synthetic Fluid Xtend Duty

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

OCTYLATED DIPHENYLAMINES

Potential sensitiser producing contact allergies.

For substituted diphenylamines:

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.

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): 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

Acute toxicity: 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 >5000 to > 34,000 mg/kg.

3-(DIISOBUTOXYTHIOPHOSPHORYLSULFANYL)METHYLPROPIONIC ACID

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 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

11.2 Information on other hazards

11.2.1. Endocrine disrupting properties

No evidence of endocrine disrupting properties were found in the current literature.

11.2.2. Other information

See Section 11.1

SECTION 12 Ecological information

12.1. Toxicity

Roto Synthetic Fluid Xtend Duty	Endpoint	Test Duration (hr)	Species	Value	Source
	LL/EL/IL50		Fish	100mg/L	8
	LL/EL/IL50		Algae or other aquatic plants	100mg/L	8
	LL/EL/IL50		Crustacea	100mg/L	8
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.

12.2. Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
octylated diphenylamines	HIGH	HIGH

12.3. Bioaccumulative potential

Ingredient	Bioaccumulation
octylated diphenylamines	LOW (BCF = 5.5)

12.4. Mobility in soil

Ingredient	Mobility
------------	----------

Ingredient	Mobility
octylated diphenylamines	LOW (KOC = 28640000)

12.5. Results of PBT and vPvB assessment

	P	B	T
Relevant available data	Not Available	Not Available	Not Available
PBT	✗	✗	✗
vPvB	✗	✗	✗
PBT Criteria fulfilled?			No
vPvB			No

12.6. Endocrine disrupting properties

No evidence of endocrine disrupting properties were found in the current literature.

12.7. Other adverse effects

No evidence of ozone depleting properties were found in the current literature.

SECTION 13 Disposal considerations

13.1. Waste treatment methods

Product / Packaging disposal	<div>▶ Recycle wherever possible or consult manufacturer for recycling options.</div> <div>▶ Consult State Land Waste Authority for disposal.</div> <div>▶ Bury or incinerate residue at an approved site.</div> <div>▶ Recycle containers if possible, or dispose of in an authorised landfill.</div>
Waste treatment options	EU Waste Disposal Code: 13 02 05
Sewage disposal options	Not Available

SECTION 14 Transport information

Labels Required

Marine Pollutant	NO

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

14.1. UN number or ID number	Not Applicable	
14.2. UN proper shipping name	Not Applicable	
14.3. Transport hazard class(es)	Class	Not Applicable
	Subsidiary Hazard	Not Applicable
14.4. Packing group	Not Applicable	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	Hazard identification (Kemler)	Not Applicable
	Classification code	Not Applicable
	Hazard Label	Not Applicable
	Special provisions	Not Applicable
	Limited quantity	Not Applicable
	Tunnel Restriction Code	Not Applicable

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. UN number	Not Applicable
-----------------	----------------

14.2. UN proper shipping name	Not Applicable	
14.3. Transport hazard class(es)	ICAO/IATA Class	Not Applicable
	ICAO / IATA Subsidiary Hazard	Not Applicable
	ERG Code	Not Applicable
14.4. Packing group	Not Applicable	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	Special provisions	Not Applicable
	Cargo Only Packing Instructions	Not Applicable
	Cargo Only Maximum Qty / Pack	Not Applicable
	Passenger and Cargo Packing Instructions	Not Applicable
	Passenger and Cargo Maximum Qty / Pack	Not Applicable
	Passenger and Cargo Limited Quantity Packing Instructions	Not Applicable
	Passenger and Cargo Limited Maximum Qty / Pack	Not Applicable

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. UN number	Not Applicable	
14.2. UN proper shipping name	Not Applicable	
14.3. Transport hazard class(es)	IMDG Class	Not Applicable
	IMDG Subsidiary Hazard	Not Applicable
14.4. Packing group	Not Applicable	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	EMS Number	Not Applicable
	Special provisions	Not Applicable
	Limited Quantities	Not Applicable

Inland waterways transport (ADN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. UN number	Not Applicable	
14.2. UN proper shipping name	Not Applicable	
14.3. Transport hazard class(es)	Not Applicable	Not Applicable
14.4. Packing group	Not Applicable	
14.5. Environmental hazard	Not Applicable	
14.6. Special precautions for user	Classification code	Not Applicable
	Special provisions	Not Applicable
	Limited quantity	Not Applicable
	Equipment required	Not Applicable
	Fire cones number	Not Applicable

14.7. Maritime transport in bulk according to IMO instruments

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
octylated diphenylamines	Not Available

Product name	Group
3-(diisobutoxythiophosphorylsulfanyl)methylpropionic acid	Not Available

14.7.3. Transport in bulk in accordance with the IGC Code

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

SECTION 15 Regulatory information

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

octylated diphenylamines is found on the following regulatory lists
Belgium Occupational Exposure Limits (French)
EU European Chemicals Agency (ECHA) Community Rolling Action Plan (CoRAP) List of Substances
Europe EC Inventory
European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)
International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)
3-(diisobutoxythiophosphorylsulfanyl)methylpropionic acid is found on the following regulatory lists
Europe EC Inventory

Additional Regulatory Information

Not Applicable
This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : Directives 98/24/EC, - 92/85/EEC, - 94/33/EC, - 2008/98/EC, - 2010/75/EU; Commission Regulation (EU) 2020/878; Regulation (EC) No 1272/2008 as updated through ATPs.

Information according to 2012/18/EU (Seveso III):

Seveso Category	Not Available
-----------------	---------------

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.
--

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (octylated diphenylamines; 3-(diisobutoxythiophosphorylsulfanyl)methylpropionic acid)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (3-(diisobutoxythiophosphorylsulfanyl)methylpropionic acid)
Japan - ENCS	No (3-(diisobutoxythiophosphorylsulfanyl)methylpropionic acid)
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	No (3-(diisobutoxythiophosphorylsulfanyl)methylpropionic acid)
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	19/07/2023
Initial Date	18/07/2017

Full text Risk and Hazard codes

H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H412	Harmful to aquatic life with long lasting effects.

SDS Version Summary

Version	Date of Update	Sections Updated
15.1	23/12/2021	Composition / information on ingredients - Ingredients
16.1	19/07/2023	Composition / information on ingredients - Ingredients

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.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:

- EN 166 Personal eye-protection
- EN 340 Protective clothing
- EN 374 Protective gloves against chemicals and micro-organisms
- EN 13832 Footwear protecting against chemicals
- EN 133 Respiratory protective devices

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

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

Classification according to regulation (EC) No 1272/2008 [CLP] and amendments	Classification Procedure
, EUH208	Calculation method
, EUH210	Expert judgement

This document is copyright.
Apart from any fair dealing for the purposes of private study, research, review or criticism, as permitted under the Copyright Act, no part may be reproduced by any process without written permission from CHEMWATCH.
TEL (+61 3) 9572 4700.