

ARTDESHINE ALKCLEAN

ARTDESHINE PTE LTD

Version No: 6.1

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

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S.REACH.DEU.EN

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

1.1. Product Identifier

Product name: ARTDESHINE ALKCLEAN

Synonyms: Not Available

Chemical formula: Not Applicable

Other means of identification: UFI:YC10-E0QU-S000-NXHH

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

Relevant identified uses: AUTOMOTIVE CARE. Use according to manufacturer's directions.

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	ARTDESHINE PTE LTD
Address	7 SOON LEE ST, #01-40 Singapore 627608 Singapore
Telephone	+65 81283734
Fax	Not Available
Website	www.artdeshine.co
Email	hello@artdeshine.co

1.4. Emergency telephone number

Association / Organisation	ARTDESHINE PTE LTD	CHEMWATCH EMERGENCY RESPONSE
Emergency telephone numbers	+65 81283734 (Mon-Fri 1pm-8pm)	+49 32 211121704
Other emergency telephone numbers	Not Available	+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

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 according to regulation (EC) No 1272/2008 [CLP] and amendments [1]	H315 - Skin Corrosion/Irritation Category 2, H317 - Sensitisation (Skin) Category 1, H318 - Serious Eye Damage/Eye Irritation Category 1
Legend:	1. Classification by vendor; 2. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

2.2. Label elements

Hazard pictogram(s)



Signal word: **Danger**

Hazard statement(s)

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H318: Causes serious eye damage.

Supplementary statement(s)

Not Applicable

Precautionary statement(s) Prevention

P280: Wear protective gloves, protective clothing, eye protection and face protection.

P261: Avoid breathing mist/vapours/spray.

P264: Wash all exposed external body areas thoroughly after handling.

Precautionary statement(s) Response

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P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a POISON CENTER/doctor/physician/first aider.

P302+P352: IF ON SKIN: Wash with plenty of water.

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

P501: Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

2.3. Other hazards

diethylene glycol monobutyl ether: Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (Restrictions may apply)

d-limonene: Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (Restrictions may apply)

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
1.112-34-5 2.203-961-6 3.603-096-00-8 4.01-2119475104-44-XXXX	<5	<u>diethylene glycol monobutyl ether</u> *	Serious Eye Damage/Eye Irritation Category 2; H319 [2]	Not Available	Not Available
1.7758-29-4 2.231-838-7 3.Not Available 4.01-2119430450-54-XXXX	<10	<u>sodium tripolyphosphate</u>	Serious Eye Damage/Eye Irritation Category 2, Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3, Hazardous to the Aquatic Environment Long-Term Hazard Category 4; H319, H335, H413 [1]	Not Available	Not Available
1.5989-27-5 2.227-813-5 3.601-029-00-7 601-096-00-2 4.01-2120766421-57-XXXX 01-2119529223-47-XXXX	<5	<u>d-limonene</u>	Flammable Liquids Category 3, Skin Corrosion/Irritation Category 2, Sensitisation (Skin) Category 1B, Aspiration Hazard Category 1, Hazardous to the Aquatic Environment Acute Hazard Category 1, Hazardous to the Aquatic Environment Long-Term Hazard Category 3; H226, H315, H317, H304, H400, H412 [2]	M = 1	Not Available
1.9014-93-1 2.Not Available 3.Not Available 4.Not Available	<10	<u>dinonylphenyl ethoxylate</u>	Acute Toxicity (Oral) Category 4, Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2; H302, H315, H319, EUH066 [1]	Not Available	Not Available
1.7732-18-5 2.231-791-2 3.Not Available 4.Not Available	>70	<u>water</u>	Not Applicable	Not Available	Not Available

Legend: 1. Classification by vendor; 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 the eyes:

- Immediately hold eyelids apart and flush the eye continuously with running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- Transport to hospital or doctor without delay.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Contact

If skin 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.

Inhalation

- If fumes, aerosols or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.

Ingestion

- 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

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for phosphate salts intoxication:

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.
 - Ingestion of large quantities of phosphate salts (over 1.0 grams for an adult) may cause an osmotic catharsis resulting in diarrhoea and probable abdominal cramps. Larger doses such as 4-8 grams will almost certainly cause these effects in everyone. In healthy individuals most of the ingested salt will be excreted in the faeces with the diarrhoea and, thus, not cause any systemic toxicity. Doses greater than 10 grams hypothetically may cause systemic toxicity.
 - Treatment should take into consideration both anionic and cation portion of the molecule.
 - All phosphate salts, except calcium salts, have a hypothetical risk of hypocalcaemia, so calcium levels should be monitored.
- Treat symptomatically.

SECTION 5 Firefighting measures

5.1. Extinguishing media

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

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

5.2. Special hazards arising from the substrate or mixture

Fire Incompatibility

None known.

5.3. Advice for firefighters

Fire Fighting

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.

Fire/Explosion Hazard

The emulsion is not combustible under normal conditions. However, it will break down under fire conditions and the hydrocarbon component will burn.

- Combustible.
- Slight fire hazard when exposed to heat or flame.
- Heating may cause expansion or decomposition leading to violent rupture of containers.

Combustion products include:

carbon dioxide (CO₂)

other pyrolysis products typical of burning organic material.

May emit poisonous fumes.

May emit corrosive fumes.

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

Environmental hazard - contain spillage.

- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.

Major Spills

Environmental hazard - contain spillage.

Moderate hazard.

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.

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

- **DO NOT allow clothing wet with material to stay in contact with skin**
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.

Fire and explosion protection

See section 5

Other information

- Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.

7.2. Conditions for safe storage, including any incompatibilities

Suitable container

200mL/ 500mL, PET BTL / 5L HDPE JUG.

- Polyethylene or polypropylene container.
- Packing as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

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Storage incompatibility

d-Limonene:

- forms unstable peroxides in storage, unless inhibited; may polymerise
- reacts with strong oxidisers and may explode or combust
- is incompatible with strong acids, including acidic clays, peroxides, halogens, vinyl chloride and iodine pentafluoride
- flow or agitation may generate electrostatic charges due to low conductivity

Terpenoids and terpenes, are generally unsaturated, are thermolabile, are often volatile and may be easily oxidised or hydrolysed depending on their respective structure.

Terpenoids are subject to autoxidation. Autoxidation is any oxidation that occurs in open air or in presence of oxygen (and sometimes UV radiation) and forms peroxides and hydroperoxides.

- Avoid reaction with oxidising agents, bases and strong reducing agents.
- Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.

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
diethylene glycol monobutyl ether	Dermal 83 mg/kg bw/day (Systemic, Chronic) Inhalation 67.5 mg/m ³ (Systemic, Chronic) Inhalation 67.5 mg/m ³ (Local, Chronic) Inhalation 101.2 mg/m ³ (Local, Acute) <i>Dermal 50 mg/kg bw/day (Systemic, Chronic) *</i> <i>Inhalation 40.5 mg/m³ (Systemic, Chronic) *</i> <i>Oral 5 mg/kg bw/day (Systemic, Chronic) *</i> <i>Inhalation 40.5 mg/m³ (Local, Chronic) *</i> <i>Inhalation 60.7 mg/m³ (Local, Acute) *</i>	1.1 mg/L (Water (Fresh)) 0.11 mg/L (Water - Intermittent release) 11 mg/L (Water (Marine)) 4.4 mg/kg sediment dw (Sediment (Fresh Water)) 0.44 mg/kg sediment dw (Sediment (Marine)) 0.32 mg/kg soil dw (Soil) 200 mg/L (STP) 56 mg/kg food (Oral)
sodium tripolyphosphate	Dermal 0.375 mg/kg bw/day (Systemic, Chronic) Inhalation 0.661 mg/m ³ (Systemic, Chronic) Dermal 0.375 mg/kg bw/day (Systemic, Acute) Inhalation 0.661 mg/m ³ (Systemic, Acute) <i>Dermal 0.375 mg/kg bw/day (Systemic, Chronic) *</i> <i>Inhalation 0.661 mg/m³ (Systemic, Chronic) *</i> <i>Oral 0.75 mg/kg bw/day (Systemic, Chronic) *</i> <i>Dermal 0.375 mg/kg bw/day (Systemic, Acute) *</i> <i>Inhalation 0.66 mg/m³ (Systemic, Acute) *</i> <i>Oral 0.75 mg/kg bw/day (Systemic, Acute) *</i>	0.005 mg/L (Water (Fresh)) 0.005 mg/L (Water - Intermittent release) 0.05 mg/L (Water (Marine)) 0.19 mg/kg sediment dw (Sediment (Fresh Water)) 0.14 mg/kg soil dw (Soil)
d-limonene	Dermal 9.5 mg/kg bw/day (Systemic, Chronic) Inhalation 66.7 mg/m ³ (Systemic, Chronic) <i>Dermal 4.8 mg/kg bw/day (Systemic, Chronic) *</i> <i>Inhalation 16.6 mg/m³ (Systemic, Chronic) *</i> <i>Oral 4.8 mg/kg bw/day (Systemic, Chronic) *</i>	14 µg/L (Water (Fresh)) 1.4 µg/L (Water - Intermittent release) 3.85 mg/kg sediment dw (Sediment (Fresh Water)) 0.385 mg/kg sediment dw (Sediment (Marine)) 0.763 mg/kg soil dw (Soil) 1.8 mg/L (STP) 133 mg/kg food (Oral)
water	Dermal 0.4 mg/kg bw/day (Systemic, Chronic) Inhalation 0.544 mg/m ³ (Systemic, Chronic) Dermal 5 mg/kg bw/day (Systemic, Acute) Inhalation 8.8 mg/m ³ (Systemic, Acute) <i>Dermal 0.2 mg/kg bw/day (Systemic, Chronic) *</i> <i>Inhalation 0.083 mg/m³ (Systemic, Chronic) *</i> <i>Oral 0.056 mg/kg bw/day (Systemic, Chronic) *</i> <i>Dermal 2.5 mg/kg bw/day (Systemic, Acute) *</i> <i>Inhalation 2.2 mg/m³ (Systemic, Acute) *</i> <i>Oral 2.5 mg/kg bw/day (Systemic, Acute) *</i>	Not Available

* Values for General Population

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Germany TRGS 900 - Limit Values for the Workplace Atmosphere	diethylene glycol monobutyl ether	2-(2-Butoxyethoxy)ethanol	10 ppm / 67 mg/m ³	Not Available	Not Available	Not Available
EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)	diethylene glycol monobutyl ether	2-(2-Butoxyethoxy) ethanol	10 ppm / 67.5 mg/m ³	101.2 mg/m ³ / 15 ppm	Not Available	Not Available
Germany Recommended Exposure Limits - MAK Values	diethylene glycol monobutyl ether	Diethylene glycol monobutyl ether	10 ppm / 67 mg/m ³	100.5 mg/m ³ / 15 ppm	Not Available	The substance can occur simultaneously as vapour and aerosol.; MAK value applies for the sum of the concentrations of diethylene glycol monobutyl ether and its acetate in the air.; Preg gr: C; Classification in Pregnancy Risk Group C was re-evaluated in 2011 and confirmed.

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Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Germany TRGS 900 - Limit Values for the Workplace Atmosphere	d-limonene	(R)-p-Mentha-1,8-dien (D-Limonen)	5 ppm / 28 mg/m3	Not Available	Not Available	Not Available
Germany Recommended Exposure Limits - MAK Values	d-limonene	D-Limonene	5 ppm / 28 mg/m3	112 mg/m3 / 20 ppm	Not Available	Preg gr: C; Perc abs: H; Sens: Sh

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
sodium tripolyphosphate	E	≤ 0.01 mg/m³
dinonylphenyl ethoxylate	E	≤ 0.1 ppm
Notes:	<i>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.</i>	

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.

8.2.2. Personal protection



Eye and face protection

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants.

Skin protection

See Hand protection below

Hands/feet protection

- Wear chemical protective gloves, e.g. PVC.
- Wear safety footwear or safety gumboots, e.g. Rubber

NOTE:

- The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.
- Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.

The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

Body protection

See Other protection below

Other protection

- Overalls.
- P.V.C apron.
- Barrier cream.

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: Blue gel with a citrus odour; mixes with water. Blue

Physical state	Liquid	Relative density (Water = 1)	1.1
Odour	Characteristic	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	12	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)	>200	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available

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

- Unstable in the presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

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 toxicological effects

Inhaled

The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and 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

Ingestion

Accidental ingestion of the material may be damaging to the health of the individual. Inorganic polyphosphates are used extensively in domestic and industrial products. Experiments on rats showed kidney damage, growth retardation, and tetany due to low calcium.

Skin Contact

This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition. Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions. Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. Open cuts, abraded or irritated skin should not be exposed to this material. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

Eye

If applied to the eyes, this material causes severe eye damage.

Chronic

Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems. Inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.

Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects. There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment. In long-term animal studies, inorganic polyphosphates produced growth inhibition, increased kidney weights, bone decalcification, enlargement of the parathyroid gland, inorganic phosphate in the urine, focal necrosis of the kidney and alterations of muscle fibre size. Inorganic phosphates have not been shown to cause cancer, genetic damage or reproductive or developmental damage in animal tests. Prolonged or repeated skin contact may cause degreasing, followed by drying, cracking and skin inflammation. A number of common flavor and fragrance chemicals can form peroxides surprisingly fast in air. Antioxidants can in most cases minimize the oxidation. Fragrance terpenes are easily oxidized in air. d-Limonene may cause damage to and growths in the kidney. These growths can progress to cancer. Peroxidisable terpenes and terpenoids should only be used when the level of peroxides is kept to the lowest practicable level, for instance by adding antioxidants at the time of production. This should be less than 10 millimoles of peroxide per litre. This is because peroxides may have sensitizing properties.

ARTDESHINE ALKCLEAN	TOXICITY	IRRITATION
	Not Available	Not Available
diethylene glycol monobutyl ether	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 4120 mg/kg ^[2]	Eye (rabbit): 20 mg/24h moderate
	Oral (Rat) LD50: 5660 mg/kg ^[2]	Eye (rabbit): 5 mg - SEVERE
sodium tripolyphosphate	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >3160 mg/kg ^[2]	Not Available
	Inhalation(Rat) LC50: >0.39 mg/l4h ^[1]	
	Oral (Rat) LD50: >2000 mg/kg ^[1]	
d-limonene	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >5000 mg/kg ^[2]	Eye: no adverse effect observed (not irritating) ^[1]

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	Oral (Rat) LD50: >2000 mg/kg ^[1]	Skin (rabbit): 500mg/24h moderate
		Skin: no adverse effect observed (not irritating) ^[1]
dinonylphenyl ethoxylate	TOXICITY Not Available	IRRITATION Not Available
water	TOXICITY Oral (Rat) LD50: >90000 mg/kg ^[2]	IRRITATION Not Available

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

DIETHYLENE GLYCOL MONOBUTYL ETHER

The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. This category includes diethylene glycol ethyl ether (DGEE), diethylene glycol propyl ether (DGPE) diethylene glycol butyl ether (DGBE) and diethylene glycol hexyl ether (DGHE) and their acetates. Studies show that they can cause kidney and liver damage, skin and eye irritation as well as blood changes but do not cause damage to the reproductive, genetic and developmental abnormalities, sensitisation or respiratory systems. However, DGEE is reported to cause sperm insufficiency.

SODIUM TRIPOLYPHOSPHATE

Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant.

D-LIMONENE

Tumorigenic by RTECS criteria
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.
d-Limonene is readily absorbed by inhalation and swallowing. Absorption through the skin is reported to be lower than by inhalation. It is rapidly distributed to different tissues in the body, readily metabolized and eliminated, primarily through the urine.
Limonene shows low acute toxicity by all three routes in animals.
Adverse reactions to fragrances in perfumes and fragranced cosmetic products include allergic contact dermatitis, irritant contact dermatitis, sensitivity to light, immediate contact reactions, and pigmented contact dermatitis. Airborne and conjugal contact dermatitis occurs. Contact allergy is a lifelong condition, so symptoms may occur on re-exposure. Fragrance allergens act as haptens, which are small molecules that cause an immune reaction only when attached to a carrier protein. However, not all sensitizing fragrance chemicals are directly reactive, but some require previous activation. A prehapten is a chemical that itself causes little or no sensitization, but it is transformed into a hapten outside the skin by a chemical reaction (oxidation in air or reaction with light) without the requirement of an enzyme.
For prehapten, it is possible to prevent activation outside the body to a certain extent by different measures, for example, prevention of air exposure during handling and storage of the ingredients and the final product, and by the addition of suitable antioxidants.
The substance is classified by IARC as Group 3:
NOT classifiable as to its carcinogenicity to humans.
Evidence of carcinogenicity may be inadequate or limited in animal testing.
Monomethyltin chloride, thioglycolate esters, and tall oil ester reaction product:
Monomethyltin trichloride (MMTC, CAS RN: 993-16-8), monomethyltin tris[2-ethylhexylmercaptoacetate (MMT (EHTG; MMT (2-EHMA), CAS RN: 57583-34-3), monomethyltin tris[isooctylmercaptoacetate (MMT(IOTG), CAS RN: 54849-38-6) and methyltin reverse ester tallate reaction product (TERP, CAS RNs: 201687-58-3, 201687-57-2, 68442-12-6, 151436-98-5) are considered one category of compounds for mammalian studies via the oral route. The justification for this category is based on structural similarities and the demonstrated rapid conversion of all of the esters to the MMTC when placed in simulated mammalian gastric contents [0.07M HCl] under physiological conditions. For the MMT(EHTG) >90% conversion to MMTC occurred within 0.5 hours.

DINONYLPHENYL ETHOXYLATE

Both laboratory and animal testing has shown that there is no evidence for alcohol ethoxylates (AEs) causing genetic damage, mutations or cancer. No adverse reproductive or developmental effects were observed.

DINONYLPHENYL ETHOXYLATE & WATER

No significant acute toxicological data identified in literature search.

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 Disruption 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

ARTDESHINE ALKCLEAN	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
diethylene glycol monobutyl ether	Endpoint	Test Duration (hr)	Species	Value	Source
	LC50	96h	Fish	1300mg/l	2

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	EC50	72h	Algae or other aquatic plants	1101mg/l	2
	EC50	48h	Crustacea	>100mg/l	1
	NOEC(ECx)	96h	Algae or other aquatic plants	>=100mg/l	1
	EC50	96h	Algae or other aquatic plants	>100mg/l	1
sodium tripolyphosphate	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50(ECx)	Not Reported	Algae or other aquatic plants	25-60mg/l	4
	EC50	96h	Algae or other aquatic plants	69.2mg/l	2
	EC50	48h	Crustacea	>70.7<101.3mg/l	2
d-limonene	Endpoint	Test Duration (hr)	Species	Value	Source
	NOEC(ECx)	0h	Algae or other aquatic plants	<0.05-1.5mg/l	4
	EC50	72h	Algae or other aquatic plants	0.214mg/l	2
	LC50	96h	Fish	0.46mg/l	2
	EC50	48h	Crustacea	0.307mg/l	2
dinonylphenyl ethoxylate	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
water	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available

Legend: 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

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

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

For Terpenes such as Limonene and Isoprene:

Atmospheric Fate: Contribute to aerosol and photochemical smog formation. When terpenes are introduced to the atmosphere, may either decrease ozone concentrations when oxides of nitrogen are low or, if emissions take place in polluted air (i.e. containing high concentrations of nitrogen oxides), leads to an increase in ozone concentrations. Lower terpenoids can react with unstable reactive gases and may act as precursors of photochemical smog therefore indirectly influencing community and ecosystem properties.

Substances containing unsaturated carbons are ubiquitous in indoor environments. They result from many sources (see below). Most are reactive with environmental ozone and many produce stable products which are thought to adversely affect human health. The potential for surfaces in an enclosed space to facilitate reactions should be considered.

For Surfactants: Kow cannot be easily determined due to hydrophilic/hydrophobic properties of the molecules in surfactants. BCF value: 1-350.

Aquatic Fate: Surfactants tend to accumulate at the interface of the air with water and are not extracted into one or the other liquid phases.

For Alkylphenols and their Ethoxylates, or Propoxylates (APE):

Environmental fate: Alkylphenols are found everywhere in the environmental, when released. Releases are generally as wastes; they are extensively used throughout industry and in the home. Alkylphenol ethoxylates are widely used surfactants in domestic and industrial products, which are commonly found in wastewater discharges and in sewage treatment plant effluents.

For Limonenes:

Atmospheric Fate: Due to the high volatility of limonene, the atmosphere is expected to be the major environmental sink for this chemical. The oxidation of limonene may contribute to aerosol and photochemical smog formation. The daytime atmospheric lifetime of d-limonene is estimated to range from 12 to 48 minutes depending upon local hydroxyl rate and ozone concentrations.

DO NOT discharge into sewer or waterways.

12.2. Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
diethylene glycol monobutyl ether	LOW	LOW
d-limonene	HIGH	HIGH
water	LOW	LOW

12.3. Bioaccumulative potential

Ingredient	Bioaccumulation
diethylene glycol monobutyl ether	LOW (BCF = 0.46)
d-limonene	HIGH (LogKOW = 4.8275)

12.4. Mobility in soil

Ingredient	Mobility
diethylene glycol monobutyl ether	LOW (KOC = 10)
d-limonene	LOW (KOC = 1324)

12.5. Results of PBT and vPvB assessment

	P	B	T
Relevant available data	Not Available	Not Available	Not Available
PBT	✗	✗	✗
vPvB	✗	✗	✗

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PBT Criteria fulfilled?	No
vPvB	No

12.6. Endocrine Disruption Properties

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

12.7. Other adverse effects

One or more ingredients within this SDS has the potential of causing ozone depletion and/or photochemical ozone creation.

SECTION 13 Disposal considerations

13.1. Waste treatment methods

Product / Packaging disposal

- Containers may still present a chemical hazard/ danger when empty.
- Return to supplier for reuse/ recycling if possible.

Otherwise:

- If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.

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.

- **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.
- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Authority for disposal.
- Bury or incinerate residue at an approved site.

Waste treatment options

Not Available

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: **Not Applicable**
- 14.2. UN proper shipping name: **Not Applicable**
- 14.3. Transport hazard class(es):
Class: **Not Applicable**
Subrisk: **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 Subrisk : **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**

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- 14.2. UN proper shipping name: **Not Applicable**
- 14.3. Transport hazard class(es):
IMDG Class : **Not Applicable**
IMDG Subrisk : **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. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

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

Product name	Group
diethylene glycol monobutyl ether	Not Available
sodium tripolyphosphate	Not Available
d-limonene	Not Available
dinonylphenyl ethoxylate	Not Available
water	Not Available

14.9. Transport in bulk in accordance with the ICG Code

Product name	Ship Type
diethylene glycol monobutyl ether	Not Available
sodium tripolyphosphate	Not Available
d-limonene	Not Available
dinonylphenyl ethoxylate	Not Available
water	Not Available

SECTION 15 Regulatory information

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

diethylene glycol monobutyl ether is found on the following regulatory lists

- EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)
- EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles
- Europe EC Inventory
- European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)
- European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

- Germany Classification of Substances Hazardous to Waters (WGK)
- Germany Recommended Exposure Limits - MAK Values
- Germany Recommended Exposure Limits - MAK Values - Pregnancy Risk Group Classifications & Germ Cell Mutagens
- Germany TRGS 900 - Limit Values for the Workplace Atmosphere

sodium tripolyphosphate is found on the following regulatory lists

- Europe EC Inventory
- European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

- Germany Classification of Substances Hazardous to Waters (WGK)

d-limonene is found on the following regulatory lists

- EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles
- Europe EC Inventory
- European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)
- European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI
- Germany Classification of Substances Hazardous to Waters (WGK)

- Germany Recommended Exposure Limits - MAK Values
- Germany Recommended Exposure Limits - MAK Values - Pregnancy Risk Group Classifications & Germ Cell Mutagens
- Germany TRGS 900 - Limit Values for the Workplace Atmosphere
- International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic

dinonylphenyl ethoxylate is found on the following regulatory lists

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– Not Applicable

water is found on the following regulatory lists

– Europe EC Inventory

– European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

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.

15.3. Classification of Substances and Mixtures into Water Hazard Classes

Preparation is WGK 2

Name	WGK	Score	Source
DIETHYLENE GLYCOL MONOBUTYL ETHER	1		From Regulation
SODIUM TRIPOLYPHOSPHATE	1		From Regulation
D-LIMONENE	2		From Regulation
DINONYLPHENYL ETHOXYLATE	1	1	Calculated
WATER	non-hazardous to waters	0	Calculated

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (diethylene glycol monobutyl ether; sodium tripolyphosphate; d-limonene; dinonylphenyl ethoxylate; water)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (dinonylphenyl ethoxylate)
Japan - ENCS	No (dinonylphenyl ethoxylate)
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	No (dinonylphenyl ethoxylate)
Vietnam - NCI	Yes
Russia - FBEPH	No (dinonylphenyl ethoxylate)
Legend:	<i>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.</i>

SECTION 16 Other information

Revision Date: 19/12/2022

Initial Date: 01/11/2021

Full text Risk and Hazard codes

H226: Flammable liquid and vapour.

H301: Toxic if swallowed.

H302: Harmful if swallowed.

H304: May be fatal if swallowed and enters airways.

H312: Harmful in contact with skin.

H314: Causes severe skin burns and eye damage.

H319: Causes serious eye irritation.

H332: Harmful if inhaled.

H335: May cause respiratory irritation.

H336: May cause drowsiness or dizziness.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

H411: Toxic to aquatic life with long lasting effects.

H412: Harmful to aquatic life with long lasting effects.

H413: May cause long lasting harmful effects to aquatic life.

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources 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.

Continued...

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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