



SAFETY DATA SHEET

Duet

According to the REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 No. 1577, as amended.

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

1.1. Product identifier

Product name	Duet
Product number	231-11
UFI	UFI: 1TM0-8046-M00P-VDXQ

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

Identified uses	Detergent.
Uses advised against	For professional use only. This product is not recommended for any industrial, professional or consumer use other than the Identified uses above.

1.3. Details of the supplier of the safety data sheet

Supplier	Autosmart International Ltd Lynn Lane Shenstone, nr Lichfield Staffordshire. WS14 0DH England www.autosmartinternational.com Tel: +44 (0) 1543 481616 (09:00 - 17:00) SHREQ@autosmart.co.uk
Contact person	Mr. Russell Butler
Manufacturer	Autosmart International Ltd Lynn Lane Shenstone, nr Lichfield Staffordshire. WS14 0DH England www.autosmartinternational.com Tel: +44 (0) 1543 481616 (09:00 - 17:00) SHREQ@autosmart.co.uk

1.4. Emergency telephone number

Emergency telephone	NCEC - For Chemical Emergency Support ONLY (spill, leak, fire, exposure or accident), Call NCEC at +44 1865 407333 (24Hrs UK) when calling please quote "AUTOSMART 29003-NCEC"
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If you urgently need medical help or advice but it's not a life-threatening situation, call 111 free from any phone to speak to an NHS adviser. The 24-hour NHS 111 service can give you healthcare advice or direct you to the local service that can help you best.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (SI 2019 No. 720)

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Physical hazards	Not Classified
Health hazards	Eye Irrit. 2 - H319 Skin Sens. 1A - H317
Environmental hazards	Not Classified

2.2. Label elements

Hazard pictograms



Signal word	Warning
Hazard statements	H319 Causes serious eye irritation. H317 May cause an allergic skin reaction.
Precautionary statements	P264 Wash contaminated skin thoroughly after handling. P280 Wear protective gloves. P280 Wear eye protection. P302+P352 IF ON SKIN: Wash with plenty of water. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P332+P313 If skin irritation occurs: Get medical advice/ attention. P362+P364 Take off contaminated clothing and wash it before reuse. P501 Dispose of contents/ container in accordance with national regulations.
UFI	UFI: 1TM0-8046-M00P-VDXQ
Contains	2-methylisothiazol-3(2H)-one
Detergent labelling	5 - < 15% amphoteric surfactants, < 5% cationic surfactants, < 5% non-ionic surfactants, < 5% perfumes, Contains D-LIMONENE, 2-methyl-2H-isothiazol-3-one

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-,N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	3<5%
CAS number: 97862-59-4	EC number: 931-296-8
Classification Eye Dam. 1 - H318 Aquatic Chronic 3 - H412	

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COCONUT DIETHANOLAMIDE		1.5<1.75%
CAS number: 68155-07-7	EC number: 931-329-6	
Classification Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Aquatic Chronic 2 - H411		
Dicocodimethylammonium chloride		0.7<1.0%
CAS number: 61789-77-3	EC number: 263-087-6	
M factor (Acute) = 1		
Classification Acute Tox. 4 - H302 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Aquatic Acute 1 - H400 Aquatic Chronic 2 - H411		
Amines, C12-14 - alkydimethyl, N-oxides.		0.7<1.0%
CAS number: 308062-28-4	EC number: 931-292-6	
M factor (Acute) = 1		
Classification Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Aquatic Acute 1 - H400 Aquatic Chronic 2 - H411		
propan-2-ol		0.2<0.5%
CAS number: 67-63-0	EC number: 200-661-7	
Substance with a Community workplace exposure limit.		
Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336		

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2-methylisothiazol-3(2H)-one		0.001<0.01%
CAS number: 2682-20-4	EC number: 220-239-6	
M factor (Acute) = 10	M factor (Chronic) = 1	
Classification Acute Tox. 3 - H301 Acute Tox. 3 - H311 Acute Tox. 2 - H330 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1A - H317 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410		

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Get medical attention immediately. Show this Safety Data Sheet to the medical personnel.
Inhalation	Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place.
Ingestion	Rinse mouth thoroughly with water. Remove any dentures. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.
Skin contact	Rinse with water.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

4.2. Most important symptoms and effects, both acute and delayed

General information	See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Prolonged inhalation of high concentrations may damage respiratory system.
Ingestion	Gastrointestinal symptoms, including upset stomach. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.
Skin contact	Prolonged contact may cause dryness of the skin.
Eye contact	Irritating to eyes.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Containers can burst violently or explode when heated, due to excessive pressure build-up.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapours. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material.

6.2. Environmental precautions

Environmental precautions Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Approach the spillage from upwind. Small Spillages: If the product is soluble in water, dilute the spillage with water and mop it up. Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. Large Spillages: If leakage cannot be stopped, evacuate area. Flush spilled material into an effluent treatment plant, or proceed as follows. Contain and absorb spillage with sand, earth or other non-combustible material. Place waste in labelled, sealed containers. Clean contaminated objects and areas thoroughly, observing environmental regulations. The contaminated absorbent may pose the same hazard as the spilled material. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Following dilution, discharge to the sewer with plenty of water may be permitted. The requirements of the local water authority must be complied with if contaminated water is flushed directly to the sewer. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

6.4. Reference to other sections

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Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment.

Advice on general occupational hygiene Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store away from incompatible materials (see Section 10). Store in accordance with local regulations. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Bund storage facilities to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent.

Storage class Chemical storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

propan-2-ol

Long-term exposure limit (8-hour TWA): WEL 400 ppm 999 mg/m³

Short-term exposure limit (15-minute): WEL 500 ppm 1250 mg/m³

WEL = Workplace Exposure Limit.

1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-,N-C8-18(even numbered) acyl derivs., hydroxides, inner salts (CAS: 97862-59-4)

Ingredient comments No exposure limits known for ingredient(s).

DNEL Professional - Dermal; systemic effects: 12.5 mg/kg/day
Professional - Inhalation; systemic effects: 44 mg/m³
Consumer - Dermal; systemic effects: 7.5 mg/kg/day
Consumer - Oral; systemic effects: 7.5 mg/kg/day

PNEC - Fresh water; 0.0135 mg/l
- marine water; 0.00135 mg/l
- Sediment (Freshwater); 1 mg/kg
- Sediment (Marinewater); 0.1 mg/kg
- Soil; 0.8 mg/kg
- STP; 3000 mg/l

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COCONUT DIETHANOLAMIDE (CAS: 68155-07-7)

Ingredient comments No exposure limits known for ingredient(s).

Dicocodimethylammonium chloride (CAS: 61789-77-3)

Ingredient comments No exposure limits known for ingredient(s).

DNEL Professional - Dermal; Long term systemic effects: 12.75 mg/kg/day
 Industry - Inhalation; Long term systemic effects: 27 mg/m³
 Consumer - Dermal; Long term systemic effects: 7.65 mg/kg/day
 Consumer - Inhalation; Long term systemic effects: 8 mg/m³
 Consumer - Oral; Long term systemic effects: 2.3 mg/kg/day

PNEC - Fresh water; 0.013 mg/l
 - marine water; 0.0013 mg/l
 - STP; 1.2
 - Sediment (Freshwater); 8.8 mg/kg
 - Sediment (Marinewater); 0.88 mg/kg
 - Soil; 7 mg/kg

Amines, C12-14 - alkydimethyl, N-oxides. (CAS: 308062-28-4)

Ingredient comments No exposure limits known for ingredient(s).

DNEL Workers - Dermal; Long term systemic effects: 11 mg/kg/day
 Workers - Inhalation; Long term systemic effects: 15.5 mg/m³
 Workers - Dermal; Long term local effects: 0.27 %
 General population - Dermal; Long term systemic effects: 5.5 mg/kg/day
 General population - Inhalation; Long term systemic effects: 3.8 mg/m³
 General population - Oral; Long term systemic effects: 0.44 mg/kg/day

PNEC - Fresh water; 0.0335 mg/l
 - marine water; 0.00335 mg/l
 - Intermittent release; 0.0335 mg/l
 - Sediment (Freshwater); 5.24 mg/kg
 - Sediment (Marinewater); 0.524 mg/kg
 - Soil; 1.02 mg/kg
 - STP; 24 mg/kg

propan-2-ol (CAS: 67-63-0)

DNEL Industry - Inhalation; Long term systemic effects: 500 mg/m³
 Consumer - Dermal; Long term systemic effects: 319 mg/kg/day
 Consumer - Oral; Long term systemic effects: 26 mg/kg/day
 Consumer - Inhalation; Long term systemic effects: 89 mg/m³
 Industry - Dermal; Long term systemic effects: 888 mg/kg/day

PNEC - Fresh water; 140.9 mg/l
 - marine water; 140.9 mg/l
 - Intermittent release; 140.9 mg/l
 - Sediment (Freshwater); 552 mg/kg
 - Sediment (Marinewater); 552 mg/kg
 - STP; 2251 mg/l
 - Soil; 28 mg/kg

8.2. Exposure controls

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Protective equipment



Appropriate engineering controls

Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimise exposure.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment that provides appropriate eye and face protection should be worn. Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacture, who can provide information about the breakthrough time of the glove material. The breakthrough time for any glove material may be different for different glove manufacturers. To protect hands from chemicals, wear gloves that are proven to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended. The choice of protective gloves depends upon the chemicals being handled, and the conditions of work and use. When used with mixtures, the protection time of gloves cannot be accurately estimated. Gloves made from the following material may provide suitable chemical protection: Nitrile rubber. Thickness: > 0.2 mm The selected gloves should have a breakthrough time of at least 0.5 hours. Glove thickness is not necessarily a good measure of glove resistance as the permeation rate will depend on the exact glove composition. Repeated exposure to chemicals will degrade the ability of the glove to provide resistance to chemicals. Specific work environments and material handling practices may vary, therefore safety procedures should be developed for each intended application. Use thin cotton gloves inside natural rubber gloves if there is an allergy risk to natural rubber.

Other skin and body protection

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

Hygiene measures

Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.

Respiratory protection

Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'UKCA'-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges suitable for intended use should be used. Full face mask respirators with replaceable filter cartridges suitable for intended use should be used. Half mask and quarter mask respirators with replaceable filter cartridges suitable for intended use should be used.

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Environmental exposure controls Keep container tightly sealed when not in use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Yellow.
Odour	Mild.
Odour threshold	Not available. Not available.
pH	pH (concentrated solution): ~ 7.0 pH (diluted solution): ~ 7.0 @ 1%
Melting point	~ 0°C
Initial boiling point and range	~ 100 @°C @ 760 mm Hg
Flash point	Not applicable.
Evaporation rate	Not available.
Upper/lower flammability or explosive limits	Not applicable.
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Relative density	~ 1.000 @ (20°C)°C
Solubility(ies)	Soluble in water.
Partition coefficient	Not available.
Auto-ignition temperature	Not applicable.
Decomposition Temperature	Not available.
Viscosity	~ 350 cSt @ 20°C
Oxidising properties	Not applicable.
Comments	Information declared as "Not available" or "Not applicable" is not considered to be relevant to the implementation of the proper control measures.

9.2. Other information

Volatile organic compound This product contains a maximum VOC content of 2 g/litre.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity See the other subsections of this section for further details.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions No potentially hazardous reactions known.

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10.4. Conditions to avoid

Conditions to avoid There are no known conditions that are likely to result in a hazardous situation.

10.5. Incompatible materials

Materials to avoid No specific material or group of materials is likely to react with the product to produce a hazardous situation.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Other health effects There is no evidence that the product can cause cancer.

Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data Based on available data the classification criteria are not met.

Human skin model test Scientifically unjustified.

Extreme pH Moderate pH (> 2 and < 11.5).

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

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Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

General information

The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation

Prolonged inhalation of high concentrations may damage respiratory system.

Ingestion

Gastrointestinal symptoms, including upset stomach. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.

Skin contact

Prolonged contact may cause dryness of the skin.

Eye contact

Irritating to eyes.

Acute and chronic health hazards

Because of the product's quantity and composition, the health hazard is regarded as low. No specific long-term effects known.

Route of exposure

Ingestion Inhalation Skin and/or eye contact

Target organs

No specific target organs known.

Medical symptoms

No specific symptoms noted, but this chemical may still have adverse health impact, either in general or on certain individuals.

Toxicological information on ingredients.

1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-,N-C8-18(even numbered) acyl derivs., hydroxides, inner salts

Other health effects There is no evidence that the product can cause cancer.

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 7,783.0

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 2,066.0

Species Rat

Skin sensitisation

Skin sensitisation Not sensitising.

Reproductive toxicity

Reproductive toxicity - development Developmental toxicity: - NOAEL: 1,000 mg/kg, Oral, Rat

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure NOAEL 300 mg/kg, Oral, Rat Not classified as a specific target organ toxicant after repeated exposure.

COCONUT DIETHANOLAMIDE

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Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,000.0

Species Rat

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 2,000.0

Species Rat

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data Irritating.

Serious eye damage/irritation

Serious eye damage/irritation Eye Dam. 1 - H318 Causes serious eye damage.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

IARC carcinogenicity None of the ingredients are listed or exempt.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

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General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Prolonged inhalation of high concentrations may damage respiratory system.
Ingestion	May cause irritation.
Skin contact	Redness. Irritating to skin.
Eye contact	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target organs	No specific target organs known.

Dicocodimethylammonium chloride

Other health effects	There is no evidence that the product can cause cancer.
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Amines, C12-14 - alkydimethyl, N-oxides.

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg)	1,064.0
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Species	Rat
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ATE oral (mg/kg)	1,064.0
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Skin sensitisation

Skin sensitisation	Not sensitising.
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Carcinogenicity

Carcinogenicity	There is no evidence that the product can cause cancer.
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propan-2-ol

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg)	5,840.0
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Species	Rat
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Notes (oral LD₅₀)	Based on available data the classification criteria are not met.
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Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg)	16.4
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Species	Rabbit
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Notes (dermal LD₅₀)	Based on available data the classification criteria are not met.
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Acute toxicity - inhalation

Notes (inhalation LC₅₀)	Based on available data the classification criteria are not met.
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Skin corrosion/irritation

Animal data	Based on available data the classification criteria are not met.
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Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

IARC carcinogenicity IARC Group 3 Not classifiable as to its carcinogenicity to humans.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure STOT SE 3 - H336 May cause drowsiness or dizziness.

Target organs Central nervous system

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

General information The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation A single exposure may cause the following adverse effects: Headache. Nausea, vomiting. Central nervous system depression. Drowsiness, dizziness, disorientation, vertigo. Narcotic effect.

Ingestion A single exposure may cause the following adverse effects: Confusion, agitation and/or excitation. Symptoms following overexposure may include the following: May cause nausea, headache, dizziness and intoxication. Unconsciousness.

Skin contact A single exposure may cause the following adverse effects: Temporary irritation. Prolonged contact may cause dryness of the skin.

Eye contact Irritating to eyes.

Route of exposure Ingestion Inhalation Skin and/or eye contact

Target organs Central nervous system

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SECTION 12: Ecological information

Ecotoxicity Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

Ecological information on ingredients.

1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-,N-C8-18(even numbered) acyl derivs., hydroxides, inner salts

Ecotoxicity Harmful to aquatic life.

COCONUT DIETHANOLAMIDE

Ecotoxicity The product is mildly toxic to aquatic organisms.

Amines, C12-14 - alkydimethyl, N-oxides.

Ecotoxicity The product contains a substance which is very toxic to aquatic organisms.

propan-2-ol

Ecotoxicity Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Toxicity Based on available data the classification criteria are not met.

Acute aquatic toxicity

Acute toxicity - fish Not determined.

Acute toxicity - aquatic invertebrates Not determined.

Acute toxicity - aquatic plants Not determined.

Acute toxicity - microorganisms Not determined.

Acute toxicity - terrestrial Not determined.

Ecological information on ingredients.

1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-,N-C8-18(even numbered) acyl derivs., hydroxides, inner salts

Acute aquatic toxicity

Acute toxicity - fish LC50, 96 hours: ~ 1.11 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 1.9 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: 2.4 mg/l, Freshwater algae

Acute toxicity - microorganisms EC₀, : 3,000 mg/l, Activated sludge

Chronic aquatic toxicity

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Chronic toxicity - fish early life stage NOEC, : 0.135 mg/l, Oncorhynchus mykiss (Rainbow trout)

Chronic toxicity - aquatic invertebrates NOEC, : 0.3 mg/l, Daphnia magna

COCONUT DIETHANOLAMIDE

Toxicity Aquatic Chronic 2 - H411 Toxic to aquatic life with long lasting effects.

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 2.4 mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 3.2 mg/l, Daphnia magna

Acute toxicity - aquatic plants LC₅₀, 72 hours: 3.9 mg/l, Algae

Dicocodimethylammonium chloride

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

Acute toxicity - fish LC₅₀, 96 hours: 0.195 mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 0.01-0.1 mg/l, Daphnia magna

Amines, C12-14 - alkydimethyl, N-oxides.

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

Acute toxicity - fish LC₅₀, : 2.67 mg/l,

Acute toxicity - aquatic invertebrates EC₅₀, : 3.1 mg/l, Daphnia magna

Acute toxicity - aquatic plants IC₅₀, : 0.143 mg/l, Freshwater algae
NOEC, : 0.067 mg/l, Freshwater algae

propan-2-ol

Toxicity Based on available data the classification criteria are not met.

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: ~ 9640 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC₅₀, >: > 1000 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: > 1000 mg/l, Scenedesmus subspicatus

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Acute toxicity -
microorganisms

EC₅₀, >: > 1000 mg/l, Activated sludge

12.2. Persistence and degradability

Persistence and degradability The surfactant(s) contained in this product complies(comply) with the biodegradability criteria as laid down in The Detergents Regulations (as amended).

Ecological information on ingredients.

1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-,N-C8-18(even numbered) acyl derivs., hydroxides, inner salts

Persistence and degradability

The product is biodegradable.

COCONUT DIETHANOLAMIDE

Persistence and degradability

The surfactant(s) contained in this product complies(comply) with the biodegradability criteria as laid down in The Detergents Regulations (as amended).

Dicocodimethylammonium chloride

Persistence and degradability

The product is biodegradable.

Amines, C12-14 - alkydimethyl, N-oxides.

Persistence and degradability

The product is biodegradable.

propan-2-ol

Persistence and degradability

The product is readily biodegradable.

Biodegradation

Degradation (%)
- 95: 21 days

Biological oxygen demand

~ 1171 g O₂/g substance

Chemical oxygen demand

~ 2294 g O₂/g substance

12.3. Bioaccumulative potential

Bioaccumulative potential

No data available on bioaccumulation.

Partition coefficient

Not available.

Ecological information on ingredients.

1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-,N-C8-18(even numbered) acyl derivs., hydroxides, inner salts

Bioaccumulative potential

The product does not contain any substances expected to be bioaccumulating.
BCF: 71,

COCONUT DIETHANOLAMIDE

Bioaccumulative potential

No data available on bioaccumulation.

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Dicocodimethylammonium chloride

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

Amines, C12-14 - alkydimethyl, N-oxides.

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

propan-2-ol

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient log Pow: 0.05

12.4. Mobility in soil

Mobility The product is water-soluble and may spread in water systems. The product is non-volatile.

Ecological information on ingredients.

1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-,N-C8-18(even numbered) acyl derivs., hydroxides, inner salts

Mobility The product is soluble in water.

COCONUT DIETHANOLAMIDE

Mobility The product is water-soluble and may spread in water systems. The product is non-volatile.

Dicocodimethylammonium chloride

Mobility The product is soluble in water.

Amines, C12-14 - alkydimethyl, N-oxides.

Mobility The product is soluble in water.

propan-2-ol

Mobility The product is water-soluble and may spread in water systems. Volatile liquid. The product contains organic solvents which will evaporate easily from all surfaces.

Adsorption/desorption coefficient Water - Koc: ~ 1.1 @ °C

Henry's law constant 0.00000338 atm m³/mol @ 25°C

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-,N-C8-18(even numbered) acyl derivs., hydroxides, inner salts

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

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Amines, C12-14 - alkydimethyl, N-oxides.

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

propan-2-ol

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current UK criteria.

12.6. Other adverse effects

Other adverse effects None known.

Ecological information on ingredients.

COCONUT DIETHANOLAMIDE

Other adverse effects None known.

propan-2-ol

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Waste packaging should be collected for reuse or recycling. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

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14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Not applicable.

Annex II of MARPOL 73/78
and the IBC Code

SECTION 15: Regulatory information

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

National regulations Health and Safety at Work etc. Act 1974 (as amended).
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment
Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].
EH40/2005 Workplace exposure limits.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

All the ingredients are listed or exempt.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
IATA: International Air Transport Association.
ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.
IMDG: International Maritime Dangerous Goods.
CAS: Chemical Abstracts Service.
ATE: Acute Toxicity Estimate.
LC50: Lethal Concentration to 50 % of a test population.
LD50: Lethal Dose to 50% of a test population (Median Lethal Dose).
EC₅₀: 50% of maximal Effective Concentration.
PBT: Persistent, Bioaccumulative and Toxic substance.
vPvB: Very Persistent and Very Bioaccumulative.

Classification abbreviations and acronyms Eye Irrit. = Eye irritation

General information This product has been manufactured under ISO 9001 and ISO 14001 Quality and Environmental Management Systems.

Classification procedures according to SI 2019 No. 720 Eye Irrit. 2 - H319: : Calculation method.

Training advice Read and follow manufacturer's recommendations. Only trained personnel should use this material.

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Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
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Revision date	16/01/2023
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Supersedes date	13/12/2022
SDS number	21648
SDS status	Approved.
Hazard statements in full	H225 Highly flammable liquid and vapour. H301 Toxic if swallowed. H302 Harmful if swallowed. H311 Toxic in contact with skin. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H319 Causes serious eye irritation. H330 Fatal if inhaled. 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.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.