



## SAFETY DATA SHEET

### Duet Plus

According to the Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practise, 2021.

#### SECTION 1: Identification: Product identifier and chemical identity

##### Product identifier

**Product name** Duet Plus

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

**Application** Car maintenance product. - Auto shampoo.

**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.

##### Details of the supplier of the safety data sheet

**Supplier** Autosmart Australia  
 11 Darrambal Close  
 Rathmines  
 NSW 2283  
 Australia  
[www.autosmartaustralia.com.au](http://www.autosmartaustralia.com.au)  
 Tel: 02 49 75 14 88 (Mon to Fri, 08:00 - 16:00 AEST) (General Information. Transport Information. Mild Medical Information)  
[autosmart@autosmartaustralia.com.au](mailto:autosmart@autosmartaustralia.com.au)

**Contact Person** Mr. Russell Butler

##### Emergency telephone number

**Emergency telephone** NCEC - For Chemical Emergency Support ONLY (spill, leak, fire, exposure or accident), Call NCEC at 18000 74234 (toll free 24Hrs) - when calling please quote "AUTOSMART 29003-NCEC"

Local number +61 2 8 014 4558

General Information. Transport Information. Mild medical Information:-

Tel: 02 49 75 14 88 (Mon to Fri, 08:00 - 16:00 AEST)

**National emergency telephone number** Poison Information Hotline: 13 11 26

#### SECTION 2: Hazard(s) identification

##### Classification of the substance or mixture

**Physical hazards** Not Classified

**Health hazards** Eye Irrit. 2A - H319

**Environmental hazards** Aquatic Acute 3 - H402

##### Label elements

## Duet Plus

### Hazard pictograms



### Signal word

WARNING

### Hazard statements

H319 Causes serious eye irritation.  
H402 Harmful to aquatic life.

### Precautionary statements

P264 Wash contaminated skin thoroughly after handling.  
P280 Wear protective gloves.  
P280 Wear eye protection.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P302+P335+P334 IF ON SKIN: Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.  
P332+P313 If skin irritation occurs: Get medical advice/ attention.

### Supplemental label information

For professional users only.

### Other hazards

This product does not contain any substances classified as PBT (persistent, bioaccumulative and toxic) or vPvB (very persistent and very bioaccumulative).

## SECTION 3: Composition and information on ingredients

### Mixtures

1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-,N-C8-18(even numbered) acyl derivs., hydroxides, inner salts	3<5%
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CAS number: 97862-59-4

#### Classification

Eye Dam. 1 - H318  
Aquatic Chronic 3 - H412

COCONUT DIETHANOLAMIDE	1.5<1.75%
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CAS number: 68155-07-7

#### Classification

Skin Irrit. 2 - H315  
Eye Dam. 1 - H318  
Aquatic Chronic 2 - H411

## Duet Plus

<b>Dicocodimethylammonium chloride</b> <span style="float: right;"><b>0.7&lt;1.0%</b></span> CAS number: 61789-77-3 M factor (Acute) = 1
<b>Classification</b> Acute Tox. 4 - H302 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Aquatic Acute 1 - H400 Aquatic Chronic 2 - H411
<b>Amines, C12-14 - alkydimethyl, N-oxides.</b> <span style="float: right;"><b>0.7&lt;1.0%</b></span> CAS number: 308062-28-4 M factor (Acute) = 1
<b>Classification</b> Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Aquatic Acute 1 - H400 Aquatic Chronic 2 - H411
<b>Isopropyl alcohol</b> <span style="float: right;"><b>0.2&lt;0.5%</b></span> CAS number: 67-63-0 Substance with a Community workplace exposure limit.
<b>Classification</b> Flam. Liq. 2 - H225 Eye Irrit. 2A - H319 STOT SE 3 - H336
<b>2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol</b> <span style="float: right;"><b>0.1&lt;0.2%</b></span> CAS number: 4719-04-4
<b>Classification</b> Acute Tox. 4 - H302 Acute Tox. 2 - H330 Skin Sens. 1 - H317 STOT RE 1 - H372

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

### SECTION 4: First aid measures

#### Description of first aid measures

##### **General information**

Get medical attention immediately. Show this Safety Data Sheet to the medical personnel.

## Duet Plus

<b>Inhalation</b>	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.
<b>Ingestion</b>	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.
<b>Skin Contact</b>	It is important to remove the substance from the skin immediately. In the event of any sensitisation symptoms developing, ensure further exposure is avoided. Remove contamination with soap and water or recognised skin cleansing agent. Get medical attention if symptoms are severe or persist after washing.
<b>Eye contact</b>	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes.
<b>Protection of first aiders</b>	First aid personnel should wear appropriate protective equipment during any rescue. If it is suspected that volatile contaminants are still present around the affected person, first aid personnel should wear an appropriate respirator or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

### Most important symptoms and effects, both acute and delayed

<b>General information</b>	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.
<b>Inhalation</b>	Prolonged inhalation of high concentrations may damage respiratory system.
<b>Ingestion</b>	May cause sensitisation or allergic reactions in sensitive individuals. Gastrointestinal symptoms, including upset stomach. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.
<b>Skin contact</b>	May cause skin sensitisation or allergic reactions in sensitive individuals. Prolonged contact may cause dryness of the skin.
<b>Eye contact</b>	Irritating to eyes.

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

<b>Notes for the doctor</b>	Treat symptomatically. May cause sensitisation or allergic reactions in sensitive individuals.
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### **SECTION 5: Firefighting measures**

#### Extinguishing media

<b>Suitable extinguishing media</b>	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.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.

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

<b>Specific hazards</b>	Containers can burst violently or explode when heated, due to excessive pressure build-up.
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## Duet Plus

<b>Hazardous combustion products</b>	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.
<b><u>Advice for firefighters</u></b>	
<b>Protective actions during firefighting</b>	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.
<b>Special protective equipment for firefighters</b>	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to Australia/New Zealand Standards AS/NZS 4967 (for clothing) AS/NZS 1801 (for helmets), AS/NZS 4821 (for protective boots), AS/NZS 1801 (for protective gloves) will provide a basic level of protection for chemical incidents.

### SECTION 6: Accidental release measures

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

<b>Personal precautions</b>	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. Avoid contact with skin and eyes.
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#### Environmental precautions

<b>Environmental precautions</b>	Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).
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#### Methods and material for containment and cleaning up

<b>Methods for cleaning up</b>	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.
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#### Reference to other sections

<b>Reference to other sections</b>	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.
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### SECTION 7: Handling and storage, including how the chemical may be safely used

#### Precautions for safe handling

## Duet Plus

**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. Do not reuse empty containers.

**Advice on general occupational hygiene** Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. 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.

### 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.

### Specific end use(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.

## SECTION 8: Exposure controls and personal protection

### Control parameters

#### Occupational exposure limits

#### Isopropyl alcohol

Long-term exposure limit (8-hour TWA): 400 ppm 983 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): 500 ppm 1230 mg/m<sup>3</sup>

#### 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).

#### Dicocodimethylammonium chloride (CAS: 61789-77-3)

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

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

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

### Exposure controls

#### Protective equipment



## Duet Plus

<b>Appropriate engineering controls</b>	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.
<b>Eye/face protection</b>	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with Australia/New Zealand Standard AS/NZS 1337. Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
<b>Hand protection</b>	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/manufacturer, 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, gloves should comply with Australia/New Zealand Standard AS/NZS 2161. 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: >0.2mm 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.
<b>Other skin and body protection</b>	Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.
<b>Hygiene measures</b>	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.
<b>Respiratory protection</b>	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 complies with Australia/New Zealand Standard AS/NZS 1716. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with Australia/New Zealand Standard AS/NZS 1716. Full face mask respirators with replaceable filter cartridges should comply with Australia/New Zealand Standard AS/NZS 1716. Half mask and quarter mask respirators with replaceable filter cartridges should comply with Australia/New Zealand Standard AS/NZS 1716.
<b>Environmental exposure controls</b>	Keep container tightly sealed when not in use.

### SECTION 9: Physical and chemical properties

## Duet Plus

### Information on basic physical and chemical properties

<b>Appearance</b>	Liquid.
<b>Colour</b>	Light (or pale). Red.
<b>Odour</b>	Fruity. Pleasant, agreeable.
<b>Odour threshold</b>	Not available. Not available.
<b>pH</b>	pH (concentrated solution): ~ 7.0 pH (diluted solution): ~ 7.0 @ 1%
<b>Melting point</b>	~ 0°C
<b>Initial boiling point and range</b>	~ 100 @°C @ 760 mm Hg
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Not available.
<b>Flammability Limit - Lower(%)</b>	Not applicable.
<b>Vapour pressure</b>	Not applicable.
<b>Vapour density</b>	Not applicable.
<b>Relative density</b>	~ 1.000 @ (20°C)°C
<b>Solubility(ies)</b>	Soluble in water.
<b>Partition coefficient</b>	Not available.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Decomposition Temperature</b>	Not available.
<b>Viscosity</b>	~ 350 cSt @ 20°C
<b>Oxidising properties</b>	Not applicable.
<b>Comments</b>	Information declared as "Not available" or "Not applicable" is not considered to be relevant to the implementation of the proper control measures.
<b>Volatile organic compound</b>	This product contains a maximum VOC content of 2 g/litre.

### SECTION 10: Stability and reactivity

<b>Reactivity</b>	See the other subsections of this section for further details.
<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
<b>Possibility of hazardous reactions</b>	No potentially hazardous reactions known.
<b>Conditions to avoid</b>	There are no known conditions that are likely to result in a hazardous situation.
<b>Materials to avoid</b>	No specific material or group of materials is likely to react with the product to produce a hazardous situation.
<b>Hazardous decomposition products</b>	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



## Duet Plus

### Information on toxicological effects

#### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)** Based on available data the classification criteria are not met.

#### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** Based on available data the classification criteria are not met.

#### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** Based on available data the classification criteria are not met.

**ATE inhalation (vapours mg/l)** 444.44

#### Skin corrosion/irritation

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

#### 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** May cause skin sensitisation or allergic reactions in sensitive individuals.

#### 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.

#### 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**

May cause sensitisation or allergic reactions in sensitive individuals. Gastrointestinal symptoms, including upset stomach. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.

#### **Skin Contact**

May cause skin sensitisation or allergic reactions in sensitive individuals. Prolonged contact may cause dryness of the skin.

#### **Eye contact**

Irritating to eyes.

## Duet Plus

<b>Route of exposure</b>	Ingestion Inhalation Skin and/or eye contact
<b>Target Organs</b>	No specific target organs known.
<b>Medical considerations</b>	Skin disorders and allergies.

### 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 (LD<sub>50</sub> mg/kg)** 7,783.0

**Species** Rat

#### Acute toxicity - dermal

**Acute toxicity dermal (LD<sub>50</sub> 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.

#### Dicocodimethylammonium chloride

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

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

#### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 1,064.0

**Species** Rat

**ATE oral (mg/kg)** 1,064.0

#### Skin sensitisation

**Skin sensitisation** Not sensitising.

#### Carcinogenicity

**Carcinogenicity** There is no evidence that the product can cause cancer.

## Duet Plus

### Isopropyl alcohol

#### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 5,840.0

**Species** Rat

**Notes (oral LD<sub>50</sub>)** Based on available data the classification criteria are not met.

#### Acute toxicity - dermal

**Acute toxicity dermal (LD<sub>50</sub> mg/kg)** 16.4

**Species** Rabbit

**Notes (dermal LD<sub>50</sub>)** Based on available data the classification criteria are not met.

#### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** 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.

#### 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

## Duet Plus

<b>Aspiration hazard</b>	Based on available data the classification criteria are not met. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.
<b>General information</b>	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
<b>Inhalation</b>	A single exposure may cause the following adverse effects: Headache. Nausea, vomiting. Central nervous system depression. Drowsiness, dizziness, disorientation, vertigo. Narcotic effect.
<b>Ingestion</b>	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.
<b>Skin Contact</b>	A single exposure may cause the following adverse effects: Temporary irritation. Prolonged contact may cause dryness of the skin.
<b>Eye contact</b>	Irritating to eyes.
<b>Route of exposure</b>	Ingestion Inhalation Skin and/or eye contact
<b>Target Organs</b>	Central nervous system

### 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.

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

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

**Isopropyl alcohol**

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

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

#### 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** EC<sub>50</sub>, 48 hours: 1.9 mg/l, Daphnia magna

**Acute toxicity - aquatic plants** EC<sub>50</sub>, 72 hours: 2.4 mg/l, Freshwater algae

## Duet Plus

**Acute toxicity - microorganisms** EC<sub>50</sub> : 3,000 mg/l, Activated sludge

### Chronic aquatic toxicity

**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

### Dicocodimethylammonium chloride

#### Acute aquatic toxicity

**LE(C)<sub>50</sub>** 0.1 < L(E)C<sub>50</sub> ≤ 1

**M factor (Acute)** 1

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: 0.195 mg/l, Fish

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours: 0.01-0.1 mg/l, Daphnia magna

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

#### Acute aquatic toxicity

**LE(C)<sub>50</sub>** 0.1 < L(E)C<sub>50</sub> ≤ 1

**M factor (Acute)** 1

**Acute toxicity - fish** LC<sub>50</sub>, : 2.67 mg/l,

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, : 3.1 mg/l, Daphnia magna

**Acute toxicity - aquatic plants** IC<sub>50</sub>, : 0.143 mg/l, Freshwater algae  
NOEC, : 0.067 mg/l, Freshwater algae

### Isopropyl alcohol

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

#### Acute aquatic toxicity

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: ~ 9640 mg/l, Pimephales promelas (Fat-head Minnow)

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, >: > 1000 mg/l, Daphnia magna

**Acute toxicity - aquatic plants** EC<sub>50</sub>, 72 hours: > 1000 mg/l, Scenedesmus subspicatus

**Acute toxicity - microorganisms** EC<sub>50</sub>, >: > 1000 mg/l, Activated sludge

### Persistence and degradability

**Persistence and degradability** The degradability of the product is not known.

### Ecological information on ingredients.

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

## Duet Plus

**Persistence and degradability** The product is biodegradable.

### Dicocodimethylammonium chloride

**Persistence and degradability** The product is biodegradable.

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

**Persistence and degradability** The product is biodegradable.

### Isopropyl alcohol

**Persistence and degradability** The product is readily biodegradable.

**Biodegradation** Degradation (%)  
- 95: 21 days

**Biological oxygen demand** ~ 1171 g O<sub>2</sub>/g substance

**Chemical oxygen demand** ~ 2294 g O<sub>2</sub>/g substance

### 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,

### 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.

### Isopropyl alcohol

**Bioaccumulative Potential** No data available on bioaccumulation.

**Partition coefficient** log Pow: 0.05

### Mobility in soil

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

### Ecological information on ingredients.

## Duet Plus

### 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.

#### Dicocodimethylammonium chloride

**Mobility** The product is soluble in water.

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

**Mobility** The product is soluble in water.

#### Isopropyl alcohol

**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 m<sup>3</sup>/mol @ 25°C

#### Other adverse effects

**Other adverse effects** None known.

#### Ecological information on ingredients.

#### Isopropyl alcohol

**Other adverse effects** None known.

### SECTION 13: Disposal considerations

#### 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** Do not empty into drains. 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. 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, ADG).

#### UN number

Not applicable.

## Duet Plus

### UN proper shipping name

Not applicable.

### Transport hazard class(es)

No transport warning sign required.

### Packing group

Not applicable.

### Environmental hazards

#### **Environmentally hazardous substance/marine pollutant**

No.

### Special precautions for user

Not applicable.

Transport in bulk according to Not applicable.

Annex II of MARPOL 73/78  
and the IBC Code

## SECTION 15: Regulatory information

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

#### **National regulations**

The Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).  
National Code of Practice for the Preparation of Material Safety Data Sheets.  
Approved Criteria for Classifying Hazardous Substances.  
Exposure Standards for Atmospheric Contaminants in the Occupational Environment.  
Guidance Note on the Interpretation of Exposure Standards for Atmospheric Contaminants in the Occupational Environment.  
National Code of Practice for the Labelling of Workplace Substances.  
National Model Regulations for the Control of Workplace Hazardous Substances.  
National Code of Practice for the Control of Workplace Hazardous Substances.  
National Standard for the Storage and Handling of Workplace Dangerous Goods.  
National Code of Practice for the Storage and Handling of Workplace Dangerous Goods.  
Guidance Note for Placarding Stores for Dangerous Goods and Specified Hazardous Substances. Guidance Note for the Assessment of Health Risks Arising from Hazardous Substances in the Workplace.  
National Standard for the Control of Major Hazard Facilities. National Code of Practice for the Control of Major Hazard Facilities.

#### **Schedule (SUSMP)**

No Poison Schedule number allocated

### Inventories

#### **Australia - AIC**

All the ingredients are listed or exempt.

## SECTION 16: Any other relevant information



## Duet Plus

<b>Abbreviations and acronyms used in the safety data sheet</b>	<p>ADG: Australian dangerous goods code</p> <p>IATA: International air transport association.</p> <p>ICAO: Technical instructions for the safe transport of dangerous goods by air.</p> <p>IMDG: International maritime dangerous goods.</p> <p>CAS: Chemical abstracts service.</p> <p>ATE: Acute toxicity estimate.</p> <p>LC<sub>50</sub>: Lethal concentration to 50 % of a test population.</p> <p>LD<sub>50</sub>: Lethal dose to 50% of a test population (median lethal dose).</p> <p>EC<sub>50</sub>: 50% of maximal effective concentration.</p> <p>PBT: Persistent, bioaccumulative and toxic substance.</p> <p>vPvB: Very persistent and very bioaccumulative.</p>
<b>Classification abbreviations and acronyms</b>	<p>Eye Irrit. = Eye irritation</p> <p>Skin Sens. = Skin sensitisation</p>
<b>Training advice</b>	Read and follow manufacturer's recommendations. Only trained personnel should use this material.
<b>Revision comments</b>	NOTE: Lines within the margin indicate significant changes from the previous revision.
<b>Issued by</b>	<p>Prepared by Autosmart International Ltd, Lynn Lane, Shenstone, Lichfield, Staffordshire, WS14 0DH, Great Britain.</p> <p><a href="http://www.autosmartinternational.com">www.autosmartinternational.com</a></p> <p><a href="mailto:rbutler@autosmart.co.uk">rbutler@autosmart.co.uk</a></p> <p>Tel +44 (0)1543 481616</p>
<b>Revision date</b>	14/06/2021
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<b>Supersedes date</b>	8/06/2021
<b>SDS No.</b>	21765
<b>SDS status</b>	Approved.
<b>Hazard statements in full</b>	<p>H225 Highly flammable liquid and vapour.</p> <p>H302 Harmful if swallowed.</p> <p>H314 Causes severe skin burns and eye damage.</p> <p>H315 Causes skin irritation.</p> <p>H317 May cause an allergic skin reaction.</p> <p>H318 Causes serious eye damage.</p> <p>H319 Causes serious eye irritation.</p> <p>H330 Fatal if inhaled.</p> <p>H336 May cause drowsiness or dizziness.</p> <p>H372 Causes damage to organs through prolonged or repeated exposure.</p> <p>H400 Very toxic to aquatic life.</p> <p>H402 Harmful to aquatic life.</p> <p>H411 Toxic to aquatic life with long lasting effects.</p> <p>H412 Harmful to aquatic life with long lasting effects.</p>

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.