



**SAFETY DATA SHEET**  
**Duet**

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1. Product identifier**

Product Name Duet  
Product No. 231-1

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

Identified uses Auto shampoo  
Uses Advised Against None

**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)  
Fax: +44 (0) 1543 481549 (09:00 - 17:00)  
info@autosmartinternational.com  
Contact Person Mr. Russell Butler

**1.4. Emergency telephone number**

Mob: +44 (0) 7808 971321 (24hrs)  
Tel: +44 (0) 1543 481616 (09:00 - 17:00)  
Fax: +44 (0) 1543 481549 (09:00 - 17:00)

**SECTION 2: HAZARDS IDENTIFICATION**

**2.1. Classification of the substance or mixture**

Classification (1999/45/EEC) Not classified.  
Environment  
The product is not expected to be hazardous to the environment.

**2.2. Label elements**

Detergent Labelling:

5 - < 15%	Amphoteric surfactants
< 5%	Non-ionic surfactants
	Cationic surfactants
	Perfumes
Contains	Formaldehyde,d-LIMONENE,METHYL-2H or METHYL-4 (3:1) Mixture of EC NO 220-239-6,TETRAMETHYLOLGLYCOLURIL

Risk Phrases

NC	Not classified.
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Safety Phrases

S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37	Wear suitable gloves.
P13	Safety data sheet available for professional user on request.

**2.3. Other hazards**

This product does not contain any PBT or vPvB Substances.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**3.2. Mixtures**

## Duet

ALKYL AMIDO PROPYL DIMETHYLAMINE BETAINE		5-10%
CAS-No.: 61789-40-0	EC No.: 263-058-8	
Classification (EC 1272/2008) Eye Irrit. 2 - H319	Classification (67/548/EEC) Xi;R36.	
COCONUT DIETHANOLAMIDE		1-5%
CAS-No.: 68603-42-9	EC No.: 271-657-0	
Classification (EC 1272/2008) Skin Irrit. 2 - H315 Eye Dam. 1 - H318	Classification (67/548/EEC) Xi;R38,R41.	
DICOCODIMETHYL AMMONIUM CHLORIDE		1-5%
CAS-No.: 61789-77-3	EC No.: 263-087-6	
Classification (EC 1272/2008) Acute Tox. 4 - H302 Skin Corr. 1B - H314 Aquatic Acute 1 - H400	Classification (67/548/EEC) Xn;R22. C;R34. N;R50.	
Amines, C12-18-alkyldimethyl, N-oxides		< 1%
CAS-No.: 68955-55-5	EC No.: 273-281-2	
Classification (EC 1272/2008) Not classified.	Classification (67/548/EEC) Xi;R38,R41. N;R50.	
PROPAN-2-OL		< 1%
CAS-No.: 67-63-0	EC No.: 200-661-7	
Classification (EC 1272/2008) Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT Single 3 - H336	Classification (67/548/EEC) F;R11 Xi;R36 R67	

The Full Text for all R-Phrases and Hazard Statements is Displayed in Section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

Inhalation.

Get medical attention if any discomfort continues.

Ingestion

Rinse mouth thoroughly. Drink plenty of water. Get medical attention if any discomfort continues.

Skin Contact

Remove contaminated clothing. Rinse with water. Use suitable lotion to moisturise skin. Get medical attention if any discomfort continues.

Eye Contact

Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Make sure to remove any contact lenses from the eyes before rinsing. Get medical attention if any discomfort continues.

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

General Information

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

## Duet

Inhalation.

No specific symptoms noted.

Ingestion

May cause discomfort if swallowed.

Skin Contact

Prolonged skin contact may cause redness and irritation.

Eye Contact

Prolonged contact may cause redness and/or tearing.

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

No recommendation given, but first aid may still be required in case of accidental exposure, inhalation or ingestion of this chemical. If in doubt, GET MEDICAL ATTENTION PROMPTLY!

## SECTION 5: FIREFIGHTING MEASURES

### **5.1. Extinguishing media**

Extinguishing Media

This product is not flammable. Use fire-extinguishing media appropriate for surrounding materials.

### **5.2. Special hazards arising from the substance or mixture**

Hazardous Combustion Products

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

Specific Hazards

Oxides of: Carbon. Nitrogen.

### **5.3. Advice for firefighters**

Special Fire Fighting Procedures

No specific fire fighting procedure given.

Protective Measures In Fire

Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### **6.1. Personal precautions, protective equipment and emergency procedures**

For personal protection, see section 8.

### **6.2. Environmental precautions**

Do not discharge onto the ground or into water courses. To prevent release, place container with damaged side up.

### **6.3. Methods and material for containment and cleaning up**

Stop leak if possible without risk. Large Spillages: Absorb in vermiculite, dry sand or earth and place into containers. Flush area clean with lots of water. Be aware of potential for surfaces to become slippery. Do not contaminate water sources or sewer. Small quantities may be flushed to drains with plenty of water.

### **6.4. Reference to other sections**

For personal protection, see section 8. For waste disposal, see section 13.

## SECTION 7: HANDLING AND STORAGE

### **7.1. Precautions for safe handling**

Read and follow manufacturer's recommendations. Avoid spilling, skin and eye contact.

### **7.2. Conditions for safe storage, including any incompatibilities**

Store in tightly closed original container in a dry, cool and well-ventilated place.

Storage Class

Chemical storage.

### **7.3. 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**

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
PROPAN-2-OL	WEL	400 ppm	999 mg/m3	500 ppm	1250 mg/m3	

## Duet

WEL = Workplace Exposure Limit.

## 8.2. Exposure controls

### Protective Equipment



### Process Conditions

Provide eyewash station.

### Engineering Measures

No particular ventilation requirements.

### Respiratory Equipment

No specific recommendation made, but respiratory protection must be used if the general level exceeds the recommended occupational exposure limit.

### Hand Protection

For prolonged or repeated skin contact use suitable protective gloves. PVC gloves are recommended. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

### Eye Protection

Not relevant. Wear approved chemical safety goggles where eye exposure is reasonably probable.

### Other Protection

Wear appropriate clothing to prevent repeated or prolonged skin contact. Provide eyewash station.

### Hygiene Measures

DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes wet or contaminated. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	Yellow
Odour	Mild
Solubility	Soluble in water.
Initial Boiling Point and Boiling Range:	~ 100 @ 760 mm Hg
Melting Point (°C)	~ 0
Relative Density	~ 1.000 (20°C)
Vapour Density (Air=1)	Not applicable.
Vapour Pressure	Not applicable.
Evaporation Rate	Not available.
pH-Value, Conc. Solution	~ 7.0
pH-Value, Diluted Solution	7.0 @ 1%
Viscosity	~ 350 cSt @ 20°C
Decomposition Temperature (°C)	Not available.
Odour Threshold, Lower	Not available.
Odour Threshold, Upper	Not available.
Flash Point (°C)	Not applicable.
Auto Ignition Temperature (°C)	Not applicable.
Flammability Limit - Lower(%)	Not applicable.
Flammability Limit - Upper(%)	Not applicable.

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Partition Coefficient  
(N-Octanol/Water)

Not available.

Oxidising Properties

Not applicable.

Comments

Information declared as "Not available" or "Not applicable" is not considered to be justified for enabling proper control measures to be taken.

**9.2. Other information**

Volatile Organic Compound (VOC) 2 g/litre

**SECTION 10: STABILITY AND REACTIVITY****10.1. Reactivity**

There are no known reactivity hazards associated with this product.

**10.2. Chemical stability**

Stable under normal temperature conditions and recommended use.

**10.3. Possibility of hazardous reactions**

Not relevant.

Hazardous Polymerisation

Will not polymerise.

**10.4. Conditions to avoid**

Avoid excessive heat for prolonged periods of time.

**10.5. Incompatible materials**

Materials To Avoid

Strong acids. Strong alkalis.

**10.6. Hazardous decomposition products**

Fire creates: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

**SECTION 11: TOXICOLOGICAL INFORMATION****11.1. Information on toxicological effects**

Other Health Effects

This substance has no evidence of carcinogenic properties.

Skin Corrosion/Irritation - Animal Data

Scientifically unjustified.

Skin Corrosion/Irritation - Human Skin Model Test

Scientifically unjustified.

Skin Corrosion/Irritation - Extreme Moderate pH (> 2 and < 11.5).

pH

Not irritating.

General Information

This product has low toxicity. Only large volumes may have adverse impact on human health.

Inhalation

No specific health warnings noted.

Ingestion.

May cause discomfort if swallowed.

Skin Contact

May cause defatting of the skin, but is not an irritant.

Eye Contact

Spray and vapour in the eyes may cause irritation and smarting.

Health Warnings

Because of quantity and composition, the health hazard is small. Serious long-term effects are not known to be related to this type of product.

Route of entry

Ingestion.

Medical Symptoms

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

**Name**

**PROPAN-2-OL**

Toxic Dose 1 - LD 50

5500 mg/kg (oral rat)

**Duet**

Toxic Conc. - LC 50 47-73 ppm/4h (inh-rat)

Other Health Effects

This substance has no evidence of carcinogenic properties. IARC Not Listed. NTP Not Listed. OSHA Not Regulated.

**Name COCONUT DIETHANOLAMIDE**

Toxic Dose 1 - LD 50 12400 mg/kg (oral rat)

**Name DICOCODIMETHYL AMMONIUM CHLORIDE**

Toxic Dose 1 - LD 50 960 mg/kg (oral rat)

Other Health Effects

This substance has no evidence of carcinogenic properties.

**Name ALKYL AMIDO PROPYL DIMETHYLAMINE BETAINE**

Toxic Dose 1 - LD 50 5,000 mg/kg (oral rat)

Other Health Effects

This substance has no evidence of carcinogenic properties.

**Name Amines, C12-18-alkyldimethyl, N-oxides**

Toxic Dose 1 - LD 50 &gt;2000 mg/kg (oral rat)

**SECTION 12: ECOLOGICAL INFORMATION**

Ecotoxicity:

The product is not expected to be hazardous to the environment. The product is not expected to be hazardous to waste water treatment processes. The product contains a substance which is harmful to aquatic organisms. The product does not contain organically bound halogen. The product does not contain organic complexing agents with a DOC level of degradation of < 80% after 28 days.

**12.1. 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.

**12.2. Persistence and degradability**

Degradability:

The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer. The product is biodegradable, but it must not be discharged into drains without permission from the authorities.

**12.3. Bioaccumulative potential**

Bioaccumulative Potential:

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

**12.4. Mobility in soil**

Mobility:

The product is soluble in water.

**12.5. Results of PBT and vPvB assessment**

This product does not contain any PBT or vPvB Substances.

**12.6. Other adverse effects**

Not applicable.

**Duet****Name PROPAN-2-OL**

LC 50, 96 Hrs, Fish mg/l 9600

EC 50, 48 Hrs, Daphnia, mg/l 4600

**Mobility**

The product is soluble in water.

**Bioaccumulative Potential**

Will not bio-accumulate.

**Degradability**

The product is expected to be biodegradable.

**Name COCONUT DIETHANOLAMIDE****Ecotoxicity**

The product is mildly toxic to aquatic organisms.

LC 50, 96 Hrs, Fish mg/l 4

EC 50, 48 Hrs, Daphnia, mg/l 2.39

**Bioaccumulative Potential**

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

**Degradability**

The product is biodegradable.

**Name DICOCODIMETHYL AMMONIUM CHLORIDE**

LC 50, 96 Hrs, Fish mg/l 0.195

EC 50, 48 Hrs, Daphnia, mg/l 0.01-0.1

**Mobility**

The product is soluble in water.

**Bioaccumulative Potential**

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

**Degradability**

The product is not readily biodegradable.

**Name ALKYL AMIDO PROPYL DIMETHYLAMINE BETAINE**

LC 50, 96 Hrs, Fish mg/l 9.6

EC 50, 48 Hrs, Daphnia, mg/l 21.5

IC 50, 72 Hrs, Algae, mg/l 30

**Mobility**

The product is soluble in water.

**Bioaccumulative Potential**

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

**Degradability**

The product is biodegradable.

**Name Amines, C12-18-alkyldimethyl, N-oxides**

LC 50, 96 Hrs, Fish mg/l &lt;1

**Mobility**

The product is soluble in water.

**Bioaccumulative Potential**

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

**Degradability**

The product is biodegradable.

**SECTION 13: DISPOSAL CONSIDERATIONS****General Information**

The packaging must be empty (drop-free, when inverted)

**13.1. Waste treatment methods**

Dispose of waste and residues in accordance with local authority requirements. Recover and reclaim or recycle, if practical.

**SECTION 14: TRANSPORT INFORMATION****General**

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

**14.1. UN number**

Not applicable.

**14.2 UN Proper shipping name**

Not applicable.

## Duet

**14.3 Transport hazard class(es)**

Not applicable.  
Transport Labels

No transport warning sign required.

**14.4. Packing group**

Not applicable.

**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 MARPOL73/78 and the IBC Code**

Not applicable.

**SECTION 15: REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Approved Code Of Practice

Safety Data Sheets for Substances and Preparations.

Guidance Notes

Workplace Exposure Limits EH40.

EU Legislation

Dangerous Substance Directive 67/548/EEC. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

National Regulations

Commission Decision 2000/532/EC as amended by Decision 2001/118/EC establishing a list of wastes and hazardous waste pursuant to Council Directive 75/442/EEC on waste and Directive 91/689/EEC on hazardous waste with amendments.

Water Hazard Classification

WGK 2

**15.2. Chemical Safety Assessment**

No chemical safety assessment has been carried out.

**SECTION 16: OTHER INFORMATION**

General Information

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

Only trained personnel should use this material.

Revision Comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision Date 14/06/2011

Revision 5

Supersedes Date 28/03/2011

Risk Phrases In Full

R34	Causes burns.
R22	Harmful if swallowed.
R11	Highly flammable.
R36	Irritating to eyes.
R38	Irritating to skin.
R41	Risk of serious damage to eyes.
R67	Vapours may cause drowsiness and dizziness.
R50	Very toxic to aquatic organisms.

**Duet**

## Hazard Statements In Full

H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H302	Harmful if swallowed.
H225	Highly flammable liquid and vapour.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.

## Disclaimer

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.