



## SAFETY DATA SHEET

### Formula 1

According to Regulation (EC) No 1907/2006, Annex II

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) No 453/2010

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

##### 1.1. Product identifier

Product name                      Formula 1  
Product number                    386-18

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

Identified uses                    Cleaning agent. - Traffic Film Remover  
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)  
Fax: +44 (0) 1543 481549 (09:00 - 17:00)  
info@autosmartinternational.com

Contact person                    Mr. Russell Butler

##### 1.4. Emergency telephone number

Emergency telephone            Mob: +44 (0) 7808 971321 (24hrs) Tel: +44 (0) 1543 481616 (09:00 - 17:00) Fax: +44 (0) 1543 481549 (09:00 - 17:00) 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. If NHS 111 does not yet cover your area, you can call NHS Direct in England or Wales on 08 45 46 47\* or NHS 24 in Scotland on 0845 24 24 24\* (UK Only) The NHS 111 service will also be available via the harmonised European number for medical advice 116 117\* Calls to 084 numbers are charged at a higher rate than standard calls on BT's most popular call plan (BT Unlimited Weekend). Mobile and other providers costs will vary and you should check the costs of calls with your provider

#### SECTION 2: Hazards identification

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

###### Classification

###### Physical hazards

Met. Corr. 1 - H290

###### Health hazards

Skin Irrit. 2 - H315 Eye Dam. 1 - H318

###### Environmental hazards

Not Classified

###### Classification (67/548/EEC or 1999/45/EC)

Xi; R38, R41.

##### 2.2. Label elements

Pictogram

## Formula 1



<b>Signal word</b>	Danger
<b>Hazard statements</b>	H290 May be corrosive to metals. H315 Causes skin irritation. H318 Causes serious eye damage.
<b>Precautionary statements</b>	P264 Wash contaminated skin thoroughly after handling. P280 Wear protective gloves/protective clothing/eye protection/face 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. P362+P364 Take off contaminated clothing and wash it before reuse.
<b>Contains</b>	C9-C11 Alcohol ethoxylate (6), 1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-,N-C8-18(even numbered) acyl derivs., hydroxides, inner salts, SODIUM HYDROXIDE
<b>Detergent labelling</b>	5 - < 15% non-ionic surfactants, < 5% NTA (nitrilotriacetic acid) and salts thereof, < 5% amphoteric surfactants
<b>Supplementary precautionary statements</b>	P332+P313 If skin irritation occurs: Get medical advice/attention. P390 Absorb spillage to prevent material damage.

**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**

<b>C9-C11 Alcohol ethoxylate (6)</b> CAS number: 68439-46-3 EC number: – REACH registration number: Polymer	<b>5-10%</b>
<b>Classification</b> Acute Tox. 4 - H302 Eye Dam. 1 - H318	<b>Classification (67/548/EEC or 1999/45/EC)</b> Xn;R22. Xi;R41.
<b>Trisodium Nitrilotriacetate</b> CAS number: 5064-31-3 EC number: 225-768-6 REACH registration number: 01-2119519239-36-xxxx	<b>2-5%</b>
<b>Classification</b> Acute Tox. 4 - H302 Eye Irrit. 2 - H319 Carc. 2 - H351	<b>Classification (67/548/EEC or 1999/45/EC)</b> Carc. Cat. 3;R40 Xn;R22 Xi;R36
<b>1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-,N-C8-18(even numbered) acyl derivs., hydroxides, inner salts</b> CAS number: 0000000-00-0 EC number: 931-296-8 REACH registration number: 01-2119488533-30-XXXX	<b>2-5%</b>
<b>Classification</b> Eye Dam. 1 - H318 Aquatic Chronic 3 - H412	<b>Classification (67/548/EEC or 1999/45/EC)</b> Xi;R36.

**Formula 1**

<b>SODIUM HYDROXIDE</b> <span style="float: right;"><b>1-2%</b></span>	
CAS number: 1310-73-2 EC number: 215-185-5 REACH registration number: 01-2119457892-27-xxxx Substance with a Community workplace exposure limit.	
<b>Classification</b> Met. Corr. 1 - H290 Skin Corr. 1A - H314 Eye Dam. 1 - H318	<b>Classification (67/548/EEC or 1999/45/EC)</b> C;R35
<b>2-BUTOXYETHANOL</b> <span style="float: right;"><b>0.7-1.0%</b></span>	
CAS number: 111-76-2 EC number: 203-905-0 REACH registration number: 01-2119475108-36-xxxx Substance with a Community workplace exposure limit.	
<b>Classification</b> Acute Tox. 4 - H302 Acute Tox. 4 - H312 Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319	<b>Classification (67/548/EEC or 1999/45/EC)</b> Xn;R20/21/22 Xi;R36/38

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

**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

Treat symptomatically.

**Inhalation**

Move affected person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.

**Ingestion**

Remove affected person from source of contamination. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention if any discomfort continues.

**Skin contact**

Remove affected person from source of contamination. Remove contaminated clothing. Rinse immediately with plenty of water. Use suitable lotion to moisturise skin. Get medical attention if any discomfort continues.

**Eye contact**

Remove any contact lenses and open eyelids wide apart. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Continue to rinse for at least 15 minutes. 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 dependent on the concentration and the length of exposure.

**Inhalation**

Coughing, chest tightness, feeling of chest pressure.

**Ingestion**

May cause discomfort if swallowed. May cause stomach pain or vomiting.

**Skin contact**

Prolonged contact may cause redness, irritation and dry skin.

**Eye contact**

May cause blurred vision and serious eye damage.

**4.3. Indication of any immediate medical attention and special treatment needed****Notes for the doctor**

No specific recommendations. If in doubt, get medical attention promptly.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

The product is not flammable. The product is non-combustible. Use fire-extinguishing media suitable for the surrounding fire.

## Formula 1

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

#### **Specific hazards**

The product is non-combustible. Irritating gases or vapours. Thermal decomposition or combustion products may include the following substances: Acrid smoke or fumes. Oxides of the following substances: Carbon. Nitrogen. No unusual fire or explosion hazards noted.

#### **Hazardous combustion products**

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

### 5.3. Advice for firefighters

#### **Protective actions during firefighting**

Avoid breathing fire gases or vapours. 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 chemical protective suit. Use air-supplied respirator, gloves and protective goggles. Use protective equipment appropriate for surrounding materials.

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## **SECTION 6: Accidental release measures**

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

#### **Personal precautions**

For personal protection, see Section 8.

### 6.2. Environmental precautions

#### **Environmental precautions**

Do not discharge into drains or watercourses or onto the ground. To prevent release, place container with damaged side up. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body. Contain spillage with sand, earth or other suitable non-combustible material.

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

#### **Methods for cleaning up**

Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Stop leak if possible without risk. Large Spillages: Dike far ahead of larger spills for later disposal. Absorb in vermiculite, dry sand or earth and place into containers. Avoid the spillage or runoff entering drains, sewers or watercourses. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Flush contaminated area with plenty of water. Take care as floors and other surfaces may become slippery. Flush contaminated area with plenty of water. The requirements of the local water authority must be complied with if contaminated water is flushed directly to the sewer. Small Spillages: Flush away spillage with plenty of water. Wash thoroughly after dealing with a spillage. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible.

### 6.4. Reference to other sections

#### **Reference to other sections**

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

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## **SECTION 7: Handling and storage**

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### 7.1. Precautions for safe handling

#### **Usage precautions**

Read and follow manufacturer's recommendations. Avoid spilling. Avoid contact with skin and eyes. Good personal hygiene procedures should be implemented. Follow instructions and ensure correct dilution of this product before use.

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

#### **Storage precautions**

Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep only in the original container. Keep above the chemical's freezing point to avoid rupturing the container. Store at temperatures not exceeding «Value in °C»°C/«Value in °F»°F.

#### **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.

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## **SECTION 8: Exposure Controls/personal protection**

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### 8.1. Control parameters

## Formula 1

### Occupational exposure limits

#### **SODIUM HYDROXIDE**

Short-term exposure limit (15-minute): WEL 2 mg/m<sup>3</sup>

#### **2-BUTOXYETHANOL**

Long-term exposure limit (8-hour TWA): WEL 25 ppm 123 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 50 ppm 246 mg/m<sup>3</sup>

Sk

WEL = Workplace Exposure Limit

Sk = Can be absorbed through the skin.

**Formula 1****C9-C11 Alcohol ethoxylate (6) (CAS: 68439-46-3)****Ingredient comments**

No exposure limits known for ingredient(s).

**Trisodium Nitritotriacetate (CAS: 5064-31-3)****Ingredient comments**

No exposure limits known for ingredient(s).

DNEL	Industry - Inhalation; Short term : 5.25 mg/m <sup>3</sup> Industry - Inhalation; Long term : 3.5 mg/m <sup>3</sup> Consumer - Inhalation; Short term : 1.75 mg/m <sup>3</sup> Consumer - Inhalation; Long term : 0.5 mg/kg/day
PNEC	- Fresh water; 0.93 mg/l - Marine water; 0.093 mg/l - STP; 540 mg/l - Sediment; 3.64 mg/kg - Soil; 0.182 mg/kg

**1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-N-C8-18(even numbered) acyl derivs., hydroxides, inner salts (CAS: 0000000-00-0)****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/m <sup>3</sup> 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

**SODIUM HYDROXIDE (CAS: 1310-73-2)**

DNEL	Consumer - Inhalation; Short term : 1 mg/m <sup>3</sup> Industry - Inhalation; Short term : 1 mg/m <sup>3</sup> Industry - Inhalation; Long term : 1 mg/m <sup>3</sup>
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**2-BUTOXYETHANOL (CAS: 111-76-2)****Ingredient comments**

Due to the hazardous nature of ingredients, exposure should be minimal.

DNEL	Industry - Dermal; Short term : 89 mg/kg/day Industry - Inhalation; Short term : 246 mg/m <sup>3</sup> Industry - Dermal; Long term : 75 mg/kg/day Industry - Inhalation; Long term : 98 mg/m <sup>3</sup> Consumer - Dermal; Short term : 44.5 mg/kg/day Consumer - Inhalation; Short term : 123 mg/m <sup>3</sup> Consumer - Oral; Short term : 13.4 mg/kg/day Consumer - Dermal; Long term : 38 mg/kg/day Consumer - Inhalation; Long term : 49 mg/m <sup>3</sup>
PNEC	- Fresh water; 8.8 mg/l - Marine water; 0.88 mg/l - Sediment (Freshwater); 8.14 mg/kg - Soil; 2.8 mg/kg - STP; 463 mg/l

**8.2. Exposure controls****Protective equipment****Appropriate engineering controls**

No specific ventilation requirements. This product must not be handled in a confined space without adequate ventilation.

## Formula 1

### Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles.

### Hand protection

Wear protective gloves made of the following material: Rubber (natural, latex). Polyvinyl chloride (PVC). Nitrile rubber. 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. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended. Use thin cotton gloves inside the rubber gloves if allergy risk.

### Other skin and body protection

Provide eyewash station.

### Hygiene measures

Provide eyewash station. Do not smoke in work area. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

### Respiratory protection

No specific recommendations. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Seek advice from supervisor on the company's respiratory protection standards. If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Combination filter, type A2/P3.

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## SECTION 9: Physical and Chemical Properties

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

#### Appearance

Liquid.

#### Colour

Light (or pale). Yellow.

#### Odour

Mild.

#### Odour threshold

Not available. Not available.

#### pH

pH (concentrated solution): ~ 13.2 pH (diluted solution): ~ 10.8 @ 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

~ 1.060 @ (20°C)°C

#### Solubility(ies)

Soluble in water. Miscible with water.

#### Partition coefficient

Not available.

#### Auto-ignition temperature

Not applicable.

#### Decomposition Temperature

Not available.

## Formula 1

### Viscosity

~ 1 cSt @ °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 7 g/litre.

## **SECTION 10: Stability and reactivity**

### 10.1. Reactivity

There are no known reactivity hazards associated with this product.

### 10.2. Chemical stability

#### Stability

Stable at normal ambient temperatures.

### 10.3. Possibility of hazardous reactions

Will not polymerise.

### 10.4. Conditions to avoid

There are no known conditions that are likely to result in a hazardous situation. Avoid excessive heat for prolonged periods of time. Avoid freezing.

### 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

Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic 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. IARC Int. Agency for Cancer Research. IARC Not Listed. OSHA Not Regulated. NTP Not Listed.

#### Acute toxicity - oral

##### ATE oral (mg/kg)

4,921.25984252

#### Skin corrosion/irritation

##### Human skin model test

Scientifically unjustified.

#### Extreme pH

= 11.5 Classification based on Conventional Method, and In Vitro Approaches - Corrosive or Irritant by measuring pH and Acid/Alkali Reserve. Irritating.

#### Skin sensitisation

Not sensitising.

#### General information

This product has low toxicity. Only large quantities are likely to have adverse effects on human health.

#### Inhalation

May cause respiratory system irritation.

#### Ingestion

May cause discomfort if swallowed.

#### Skin contact

Irritating to skin. The product contains a small amount of sensitising substance. May cause sensitisation or allergic reactions in sensitive individuals.



## Formula 1

### Eye contact

Risk of serious damage to eyes.

### Acute and chronic health hazards

No specific long-term effects known. No specific acute or chronic health impact noted, but this chemical may still have adverse impact on human health, either in general or on certain individuals with pre-existing or latent health problems.

### Route of entry

Ingestion. Skin and/or eye contact

### Medical symptoms

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

### Medical considerations

Skin disorders and allergies.

#### Toxicological information on ingredients.

##### C9-C11 Alcohol ethoxylate (6)

#### Other health effects

There is no evidence that the product can cause cancer.

##### Trisodium Nitrilotriacetate

#### Toxicological effects

Nitrilotriacetic acid, trisodium salt (NTA) has caused kidney tumours in rats and mice when administered orally in high concentrations. The tumours are based on organ damage that can only occur when extremely high threshold limit concentrations, as compared with possible human exposure, are exceeded. In view of the potential degree of exposure, there should be no cancer risk to humans.

#### Other health effects

Possible cancer hazard (contains material which) may cause cancer based on animal data.

#### Carcinogenicity

Limited evidence of a carcinogenic effect.

##### 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

#### Species

Rat

#### Acute toxicity - dermal

Acute toxicity dermal (LD50 mg/kg)

2066

#### Species

Rat

#### 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.

## Formula 1

### SODIUM HYDROXIDE

#### **Other health effects**

There is no evidence that the product can cause cancer.

#### **Acute toxicity - oral**

**Acute toxicity oral (LD50 mg/kg)**

2,000

#### **Species**

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**

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

#### **Aspiration hazard**

Not anticipated to present an aspiration hazard, based on chemical structure.

#### **Skin contact**

Not a skin sensitiser.

#### **Route of entry**

Skin absorption Ingestion. Skin and/or eye contact

#### **Target organs**

No specific target organs known.

**Formula 1****2-BUTOXYETHANOL****Other health effects**

ACGIH Carcinogen List. Possible cancer hazard (contains material which) may cause cancer based on animal data. Carcinogen Category 3.

**Acute toxicity - oral****Acute toxicity oral (LD50 mg/kg)**

1,300.0

**Species**

Rat

**ATE oral (mg/kg)**

1,300.0

**Acute toxicity - dermal****Acute toxicity dermal (LD50 mg/kg)**

2270.0

**Species**

Rat

**ATE dermal (mg/kg)**

1100

**Acute toxicity - inhalation****ATE inhalation (vapours mg/l)**

11.0

**Skin sensitisation**

Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising.

**Germ cell mutagenicity****Genotoxicity - in vitro**

Gene mutation:: Negative. This substance has no evidence of mutagenic properties.

**Reproductive toxicity****Reproductive toxicity - fertility**

Fertility: - NOAEL 720 mg/kg, , Mouse

**Reproductive toxicity - development**

Developmental toxicity: - NOAEL: 100 mg/kg, , Rat

**SECTION 12: Ecological Information****Ecotoxicity**

The product is not expected to be hazardous to the environment. The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment. The product may affect the acidity (pH) of water which may have hazardous effects on aquatic organisms. The product is not expected to be hazardous to wastewater treatment processes. The product does not contain organic complexing agents with a DOC level of degradation of < 80% after 28 days. The product does not contain organically bound halogen.

**Ecological information on ingredients.****1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-N-C8-18(even numbered) acyl derivs., hydroxides, inner salts****Ecotoxicity**

The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

**SODIUM HYDROXIDE****Ecotoxicity**

The product may affect the acidity (pH) of water which may have hazardous effects on aquatic organisms.

**2-BUTOXYETHANOL****Ecotoxicity**

Not regarded as dangerous for the environment.

**12.1. Toxicity****Acute toxicity - fish**

## Formula 1

Not determined.

### **Acute toxicity - aquatic invertebrates**

Not determined.

### **Acute toxicity - aquatic plants**

Not determined.

### **Acute toxicity - microorganisms**

Not determined.

### **Acute toxicity - terrestrial**

Not determined.

## Formula 1

### Ecological information on ingredients.

#### C9-C11 Alcohol ethoxylate (6)

##### **Acute toxicity - fish**

LC , 96 hours: 10 mg/l, Fish

##### **Acute toxicity - aquatic invertebrates**

EC , 48 hours: 10 mg/l, Daphnia magna

##### **Acute toxicity - aquatic plants**

IC , 72 hours: 10 mg/l, Algae

#### Trisodium Nitrilotriacetate

##### **Acute toxicity - fish**

LC , 96 hours: 114-470 mg/l, Fish

##### **Acute toxicity - aquatic invertebrates**

EC , 48 hours: 560-1,000 mg/l, Daphnia magna

##### **Acute toxicity - aquatic plants**

IC , 72 hours: 180-320 mg/l, Algae

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

##### **Acute toxicity - fish**

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

##### **Acute toxicity - aquatic invertebrates**

EC , 48 hours: 1.9 mg/l, Daphnia magna

##### **Acute toxicity - aquatic plants**

EC , 72 hours: 2.4 mg/l, Freshwater algae

##### **Acute toxicity - microorganisms**

EC , : 3,000 mg/l, Activated sludge

##### **Chronic toxicity - fish early life stage**

NOEC, : 0.135 mg/l, Onchorhynchus mykiss (Rainbow trout)

##### **Chronic toxicity - aquatic invertebrates**

NOEC, : 0.3 mg/l, Daphnia magna

#### SODIUM HYDROXIDE

##### **Acute toxicity - fish**

LC50, 48 hours: ~ 189 mg/l, Leuciscus idus (Golden orfe) LC , 96 hours: 125 mg/l, Fish

##### **Acute toxicity - aquatic invertebrates**

EC , 48 hours: > 100 mg/l, Daphnia magna EC , 48 hours: 40-240 mg/l, Daphnia magna

##### **Acute toxicity - aquatic plants**

Not known.

#### 2-BUTOXYETHANOL

##### **Acute toxicity - fish**

LC50, 96 hours: > 100 mg/l, Lepomis macrochirus (Bluegill)

##### **Acute toxicity - aquatic invertebrates**

EC , 48 hours: 1550 mg/l, Daphnia magna

##### **Acute toxicity - aquatic plants**

EC , >: > 100 mg/l,

##### **Acute toxicity - microorganisms**

EC , >: > 1000 mg/l,

##### **Chronic toxicity - fish early life stage**

NOEC, 21 days: > 100 mg/l,

##### **Chronic toxicity - aquatic invertebrates**

NOEC, 21 days: 100 mg/l, Daphnia magna

### 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 Regulation (EC)

### Formula 1

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.

#### Chemical oxygen demand

~ 0.199 g O2/g substance

#### Ecological information on ingredients.

##### C9-C11 Alcohol ethoxylate (6)

#### Persistence and degradability

The product is biodegradable. This surfactant complies 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.

##### Trisodium Nitilotriacetate

#### Persistence and degradability

The product is biodegradable.

##### 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.

##### SODIUM HYDROXIDE

#### Persistence and degradability

The product is biodegradable.

#### Stability (hydrolysis)

Not applicable.

#### Biological oxygen demand

~ 0 g O2/g substance

##### 2-BUTOXYETHANOL

#### Persistence and degradability

The product is biodegradable.

#### Biodegradation

water - Degradation (%) 90.4: 28 days

### 12.3. Bioaccumulative potential

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

#### Partition coefficient

Not available.

#### Ecological information on ingredients.

##### C9-C11 Alcohol ethoxylate (6)

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

##### Trisodium Nitilotriacetate

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

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

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

##### SODIUM HYDROXIDE

The product is not bioaccumulating.

##### 2-BUTOXYETHANOL

The product is not bioaccumulating.

#### Partition coefficient

: 0.81

### 12.4. Mobility in soil

#### Mobility

## Formula 1

The product is soluble in water.

### Ecological information on ingredients.

#### C9-C11 Alcohol ethoxylate (6)

##### **Mobility**

The product is soluble in water.

#### Trisodium Nitrilotriacetate

##### **Mobility**

The product is soluble in water.

#### 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.

#### SODIUM HYDROXIDE

##### **Mobility**

The product is soluble in water.

##### **Henry's law constant**

The product contains mainly inorganic substances which are not biodegradable.

#### 2-BUTOXYETHANOL

##### **Mobility**

The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces.

##### **Adsorption/desorption coefficient**

Soil - Koc: ~ 67 @ °C

##### **Henry's law constant**

0.000016 atm m<sup>3</sup>/mol @ °C

##### **Surface tension**

65 mN/m @ °C

### 12.5. Results of PBT and vPvB assessment

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

### Ecological information on ingredients.

#### C9-C11 Alcohol ethoxylate (6)

This substance is not classified as PBT or vPvB according to current EU criteria.

#### Trisodium Nitrilotriacetate

This substance is not classified as PBT or vPvB according to current EU criteria.

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

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

#### SODIUM HYDROXIDE

This substance is not classified as PBT or vPvB according to current EU criteria.

#### 2-BUTOXYETHANOL

This substance is not classified as PBT or vPvB according to current EU criteria.

### 12.6. Other adverse effects

Not applicable.

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## **SECTION 13: Disposal considerations**

### **13.1. Waste treatment methods**

#### **General information**

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

#### **Disposal methods**

Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Discharge of small quantities to the sewer with plenty of water may be permitted. The requirements of the local water authority

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must be complied with if contaminated water is flushed directly to the sewer. Larger quantities should be treated in a suitable plant or disposed of via a licensed waste disposal contractor. Packaging: Reuse or recycle products wherever possible.

**SECTION 14: Transport information****14.1. UN number**

UN No. (ADR/RID)	1824
UN No. (IMDG)	1824
UN No. (ICAO)	1824

**14.2. UN proper shipping name**

Proper shipping name (ADR/RID)	SODIUM HYDROXIDE SOLUTION
Proper shipping name (IMDG)	SODIUM HYDROXIDE SOLUTION
Proper shipping name (ICAO)	SODIUM HYDROXIDE SOLUTION
Proper shipping name (ADN)	SODIUM HYDROXIDE SOLUTION

**14.3. Transport hazard class(es)**

ADR/RID class	8
ADR/RID subsidiary risk	
ADR/RID label	8
IMDG class	8
IMDG subsidiary risk	
ICAO class/division	8
ICAO subsidiary risk	

**Transport labels****14.4. Packing group**

ADR/RID packing group	III
IMDG packing group	III
ICAO packing group	III

**14.5. Environmental hazards**

Environmentally hazardous substance/marine pollutant

No.

**14.6. Special precautions for user**

IMDG Code segregation group	18. Alkalis
EmS	F-A, S-B
Emergency Action Code	2W
Hazard Identification Number (ADR/RID)	80
Tunnel restriction code	(E)

**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****EU legislation**

Dangerous Preparations Directive 1999/45/EC. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of



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18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). 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 (as amended). Commission Directive 2000/39/EC of 8 June 2000 establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work (as amended).

### Guidance

Workplace Exposure Limits EH40. Safety Data Sheets for Substances and Preparations.

### Water hazard classification

WGK 2

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

## SECTION 16: Other information

### General information

Only trained personnel should use this material. This product has been manufactured under ISO 9001 and ISO 14001 Quality and Environmental Management Systems.

### Revision comments

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

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<b>Revision date</b>	05/11/2014
<b>Revision</b>	5
<b>Supersedes date</b>	20/03/2014
<b>SDS status</b>	Approved.
<b>Risk phrases in full</b>	

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.  
R22 Harmful if swallowed.  
R35 Causes severe burns.  
R36 Irritating to eyes.  
R36/38 Irritating to eyes and skin.  
R38 Irritating to skin.  
R40 Limited evidence of a carcinogenic effect.  
R41 Risk of serious damage to eyes.

### Hazard statements in full

H290 May be corrosive to metals.  
H302 Harmful if swallowed.  
H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H351 Suspected of causing cancer if swallowed.  
H412 Harmful to aquatic life with long lasting effects.

### 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.