



SAFETY DATA SHEET

Ali

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

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

1.1. Product identifier

Product name Ali
Product number 020-17

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

Identified uses Car maintenance product. - Aluminium cleaner
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.

The NHS 111 service will also be available via the harmonised European number for medical advice 116 117

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Met. Corr. 1 - H290
Health hazards Acute Tox. 3 - H301 Acute Tox. 2 - H310 Acute Tox. 3 - H331 Skin Corr. 1B - H314 Eye Dam. 1 - H318
Environmental hazards Not Classified

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Classification (67/548/EEC or 1999/45/EC) T+; R27. T; R23/25. C; R35

2.2. Label elements

Pictogram



Signal word

Danger

Hazard statements

H290 May be corrosive to metals.
 H301+H331 Toxic if swallowed or if inhaled.
 H310 Fatal in contact with skin.
 H314 Causes severe skin burns and eye damage.

Precautionary statements

P262 Do not get in eyes, on skin, or on clothing.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P320 Specific treatment is urgent (see medical advice on this label).
 P308+P313 IF exposed or concerned: Get medical advice/ attention.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P501 Dispose of contents/ container in accordance with national regulations.

Contains

HYDROFLUORIC ACID 5.32%, Phosphoric Acid, C9-C11 Alcohol ethoxylate (6)

Detergent labelling

< 5% non-ionic surfactants, < 5% phosphates

Supplementary precautionary statements

P260 Do not breathe vapour/ spray.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area.
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P361+P364 Take off immediately all contaminated clothing and wash it before reuse.
 P405 Store locked up.

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

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HYDROFLUORIC ACID 5.32%		5<10%
CAS number: 7664-39-3	EC number: 231-634-8	REACH registration number: 01-2119458860-33-XXXX
Classification Acute Tox. 2 - H300 Acute Tox. 1 - H310 Acute Tox. 2 - H330 Skin Corr. 1A - H314 Eye Dam. 1 - H318 STOT SE 3 - H335	Classification (67/548/EEC or 1999/45/EC) T+;R26/27/28 C;R35	
Phosphoric Acid		3<5%
CAS number: 7664-38-2	EC number: 231-633-2	REACH registration number: 01-2119485924-24-XXXX
Classification Skin Corr. 1B - H314 Eye Dam. 1 - H318	Classification (67/548/EEC or 1999/45/EC) C;R34	
C9-C11 Alcohol ethoxylate (6)		3<5%
CAS number: 68439-46-3	REACH registration number: Polymer	
Classification Acute Tox. 4 - H302 Eye Dam. 1 - H318	Classification (67/548/EEC or 1999/45/EC) Xn;R22. Xi;R41.	

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

Get medical attention immediately. Chemical burns must be treated by a physician. First aid personnel should wear appropriate protective equipment during any rescue. Show this Safety Data Sheet to the medical personnel. Effects may be delayed. Keep affected person under observation. Immediate first aid is imperative.

Inhalation

If spray/mist has been inhaled, proceed as follows. If throat irritation or coughing persists, proceed as follows. 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. Symptoms of lung oedema (shortness of breath) may develop up to 24 hours after exposure. Keep affected person under observation. Place unconscious person on their side in the recovery position and ensure breathing can take place. Never give anything by mouth to an unconscious person. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation. Get medical attention immediately.

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Ingestion	Rinse mouth thoroughly with water. Remove any dentures. Promptly get affected person to drink large volumes of water to dilute the swallowed chemical. Give milk instead of water if readily available. 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. Get medical attention immediately.
Skin contact	It is important to remove the substance from the skin immediately. Take off immediately all contaminated clothing and wash it before reuse. Care should be taken to avoid contact with contaminants when removing contaminated clothing. Rinse immediately with plenty of water. Apply Calcium Gluconate Gel over the affected areas. Chemical burns must be treated by a physician. Get medical attention immediately. Show this Safety Data Sheet to the medical personnel. Effects may be delayed. Keep affected person under observation.
Eye contact	Get medical attention immediately. Remove any contact lenses and open eyelids wide apart. Rinse immediately with plenty of water. May cause permanent damage if eye is not immediately irrigated. Continue to rinse for at least 10 minutes. Consult a physician for specific advice. Effects may be delayed. Medical aid should instil several drops of sterile calcium gluconate solution. Show this Safety Data Sheet to the medical personnel.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue. If it is suspected that airborne 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.

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

General information	See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure. Effects may be delayed. Keep affected person under observation.
Inhalation	A single exposure may cause the following adverse effects: Severe irritation of nose and throat. Symptoms following overexposure may include the following: Corrosive to the respiratory tract. Delayed, often serious, breathing problems. Development of symptoms may be delayed for 24 to 48 hours.
Ingestion	May cause chemical burns in mouth, oesophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, vomiting. May cause unconsciousness, blindness and possibly death.
Skin contact	A single exposure may cause the following adverse effects: Reddened skin if chemical is not removed by washing. Later, white and wrinkled skin without pain, often with delayed skin burns. Development of symptoms may be delayed for 24 to 48 hours. Symptoms following overexposure may include the following: Pain. Unconsciousness, possibly death. Prolonged contact causes serious tissue damage.
Eye contact	Causes serious eye damage. Small amounts may cause serious damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness. Vapour or spray may cause eye damage, impaired sight or blindness.

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

Notes for the doctor	Treat symptomatically. Keep affected person under observation. Development of symptoms may be delayed for 24 to 48 hours.
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Specific treatments Specific notes for fluoride derivatives: If calcium gluconate gel is available, rub it into affected skin. Massage continuously until pain disappears. Do not use this method for treatment of eyes. If ingested, give milk or calcium gluconate by mouth.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

Specific hazards Containers can burst violently or explode when heated, due to excessive pressure build-up. This product is toxic. Severe corrosive hazard. Water used for fire extinguishing, which has been in contact with the product, may be corrosive. Thermal decomposition or combustion products may include the following substances: Toxic gases/vapours/fumes of: Hydrogen fluoride (HF).

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Very toxic or corrosive gases or vapours. Hydrogen fluoride (HF). Fluorides.

5.3. Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Ventilate closed spaces before entering them. 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. Avoid discharge to the aquatic environment. 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 Regular protection may not be safe. Wear chemical protective suit. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material. Avoid inhalation of vapours and spray/mists. Use suitable respiratory protection if ventilation is inadequate. Avoid contact with skin and eyes. Avoid contact with contaminated tools and objects.

6.2. Environmental precautions

Environmental precautions Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

6.3. Methods and material for containment and cleaning up

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Methods for cleaning up

Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. This product is corrosive. Provide adequate ventilation. 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. Discharge of small quantities to the sewer with plenty of water may be permitted. 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. Neutralise with alkali. Caution. May generate heat. Following dilution and neutralisation, discharge to the sewer with plenty of water may be permitted. The requirements of the local water authority must be complied with if contaminated water is flushed directly to the sewer. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

6.4. Reference to other sections

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions

Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists. This product is toxic. This product is corrosive. Immediate first aid is imperative. 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. Antidote must be found in place of work.

Advice on general occupational hygiene

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

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions

Store away from incompatible materials (see Section 10). Store in accordance with local regulations. Store away from the following materials: Alkalis. 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. Store at temperatures between 1°C and 35°C. Protect from freezing and direct sunlight.

Storage class

Toxic storage.

7.3. Specific end use(s)

Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

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HYDROFLUORIC ACID 5.32%

Long-term exposure limit (8-hour TWA): WEL 1.8 ppm 1.5 mg/m³

Short-term exposure limit (15-minute): WEL 3 ppm 2.5 mg/m³
as F

Phosphoric Acid

Long-term exposure limit (8-hour TWA): WEL 1 mg/m³

Short-term exposure limit (15-minute): WEL 2 mg/m³

WEL = Workplace Exposure Limit

Phosphoric Acid (CAS: 7664-38-2)

DNEL

Consumer - Inhalation; Long term local effects: 0.73 mg/m³

Professional - Inhalation; Long term local effects: 2.92 mg/m³

C9-C11 Alcohol ethoxylate (6) (CAS: 68439-46-3)

Ingredient comments

No exposure limits known for ingredient(s).

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

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

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374. 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.

Other skin and body protection

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

Hygiene measures

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

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Respiratory protection	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.
Environmental exposure controls	Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. Store in a demarcated bunded area to prevent release to drains and/or watercourses.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Clear liquid.
Odour	Acidic.
Odour threshold	Not available.
pH	pH (concentrated solution): ~ 1.0
Melting point	~ 0°C
Initial boiling point and range	~ 100°C @ 760 mm Hg
Flash point	Not applicable.
Evaporation rate	Not available. «59» «184» «109020»
Upper/lower flammability or explosive limits	Not applicable.
Vapour pressure	Not available.
Relative density	~ 1.047 @ 20°C
Solubility(ies)	Soluble in water. Miscible with water.
Partition coefficient	Not available.
Auto-ignition temperature	Not applicable.
Decomposition Temperature	Not available.
Viscosity	~1 cSt @ 20°C
Oxidising properties	Not applicable.
Comments	Information declared as "Not available" or "Not applicable" is not considered to be relevant to the implementation of the proper control measures.

9.2. Other information

Volatile organic compound This product contains a maximum VOC content of 0 g/litre.

SECTION 10: Stability and reactivity

10.1. Reactivity

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Reactivity May be corrosive to metals. Reacts with alkalis and generates heat. The following materials may react with the product: Strong reducing agents. Peroxides.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Always dilute by carefully pouring the product into water.

10.4. Conditions to avoid

Conditions to avoid Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials

Materials to avoid Alkalis. Amines. Mild steel. Stainless steel. Powdered metal. May be corrosive to metals.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Toxic and corrosive gases or vapours. Hydrogen fluoride (HF). Fluorine.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects This product is toxic.

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

Acute toxicity - oral

Notes (oral LD₅₀) Acute Tox. 3 - H301 Toxic if swallowed.

ATE oral (mg/kg) 93.37

Acute toxicity - dermal

Notes (dermal LD₅₀) Acute Tox. 2 - H310 Fatal in contact with skin.

ATE dermal (mg/kg) 93.98

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Acute Tox. 3 - H331 Toxic if inhaled.

ATE inhalation (vapours mg/l) 9.4

ATE inhalation (dusts/mists mg/l) 0.94

Skin corrosion/irritation

Animal data Skin Corr. 1B - H314 Causes severe burns.

Extreme pH ≤ 2 Corrosive.

Serious eye damage/irritation

Serious eye damage/irritation Eye Dam. 1 - H318 Corrosive to skin. Corrosivity to eyes is assumed.

Respiratory sensitisation

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

Skin sensitisation

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Skin sensitisation	Based on available data the classification criteria are not met.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	
Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	None of the ingredients are listed or exempt.
<u>Reproductive toxicity</u>	
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.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.
<u>Aspiration hazard</u>	
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	Corrosive to the respiratory tract. Symptoms following overexposure may include the following: Severe irritation of nose and throat.
Ingestion	May cause chemical burns in mouth, oesophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, vomiting. Unconsciousness, possibly death.
Skin contact	A single exposure may cause the following adverse effects: Pain. Unconsciousness, possibly death.
Eye contact	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness. Vapour or spray may cause eye damage, impaired sight or blindness.
Acute and chronic health hazards	Repeated exposure to high concentrations of materials containing fluorine may increase bone density leading to Osteosclerosis.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target organs	Bone structure Heart and cardiovascular system Central nervous system Teeth
Medical symptoms	Severe skin irritation. Severe lung irritation. Reddened skin if chemical is not removed by washing. Later, white and wrinkled skin without pain, often with delayed skin burns. Unconsciousness, possibly death.

Toxicological information on ingredients.**HYDROFLUORIC ACID 5.32%**

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

Ali**Acute toxicity - inhalation**

ATE inhalation (vapours mg/l) 0.5

ATE inhalation (dusts/mists mg/l) 0.05

Acute and chronic health hazards This chemical can be hazardous when inhaled and/or touched. Toxic in contact with skin.

Route of exposure Inhalation Skin absorption Ingestion.

Target organs Bone structure Heart & cardiovascular system Teeth Central nervous system

Medical symptoms Reddened skin if chemical is not removed by washing. Later, white and wrinkled skin without pain, often with delayed skin burns.

Phosphoric Acid

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

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 3,500.0

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 1,689.0

Skin sensitisation

Skin sensitisation Not sensitising.

C9-C11 Alcohol ethoxylate (6)

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

SECTION 12: Ecological Information

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

Ecological information on ingredients.**HYDROFLUORIC ACID 5.32%**

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

Phosphoric Acid

Ecotoxicity The product may contribute to an excessive enrichment of the aquatic environment with nutrients. The product may affect the acidity (pH) of water which may have hazardous effects on aquatic organisms.

12.1. Toxicity

Ali**Acute aquatic toxicity****Acute toxicity - fish** Not determined.**Acute toxicity - aquatic invertebrates** Not determined.**Acute toxicity - aquatic plants** Not determined.**Acute toxicity - microorganisms** Not determined.**Acute toxicity - terrestrial** Not determined.**Ecological information on ingredients.****HYDROFLUORIC ACID 5.32%****Acute aquatic toxicity****Acute toxicity - aquatic invertebrates** EC₅₀, 48 hours: ~ 10.6 mg/l, Daphnia magna**Phosphoric Acid****Acute aquatic toxicity****Acute toxicity - fish** LC₅₀, : 100 mg/l, Freshwater fish**Acute toxicity - aquatic invertebrates** EC₅₀, : 29 mg/l, Daphnia magna
NOEC, 72 hours: 100 mg/l, Daphnia magna**Acute toxicity - aquatic plants** IC₅₀, 72 hours: 590 mg/l, Freshwater algae**C9-C11 Alcohol ethoxylate (6)****Acute aquatic toxicity****Acute toxicity - fish** LC₅₀, 96 hours: 10 mg/l, Fish**Acute toxicity - aquatic invertebrates** EC₅₀, 48 hours: 10 mg/l, Daphnia magna**Acute toxicity - aquatic plants** IC₅₀, 72 hours: 10 mg/l, Algae**12.2. Persistence and degradability****Persistence and degradability** The product is potentially degradable. The surfactant(s) contained in this product 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.**Ecological information on ingredients.****HYDROFLUORIC ACID 5.32%****Persistence and degradability**

The product contains inorganic substances which are not biodegradable.

Phosphoric Acid

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Persistence and degradability The product contains mainly inorganic substances which are not biodegradable. The other substances in the product are expected to be readily biodegradable.

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.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient Not available.

Ecological information on ingredients.

HYDROFLUORIC ACID 5.32%

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

Phosphoric Acid

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

C9-C11 Alcohol ethoxylate (6)

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

12.4. Mobility in soil

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

Ecological information on ingredients.

HYDROFLUORIC ACID 5.32%

Mobility The product is soluble in water.

Phosphoric Acid

Mobility The product is soluble in water.

C9-C11 Alcohol ethoxylate (6)

Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

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

Ecological information on ingredients.

HYDROFLUORIC ACID 5.32%

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

Ali**Phosphoric Acid**

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

C9-C11 Alcohol ethoxylate (6)

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

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

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

Disposal methods 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.

Waste class The waste code classification is to be carried out according to the European Waste Catalogue (EWC).

SECTION 14: Transport information

General For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.

14.1. UN number

UN No. (ADR/RID) 1790

UN No. (IMDG) 1790

UN No. (ICAO) 1790

14.2. UN proper shipping name

Proper shipping name (ADR/RID) HYDROFLUORIC ACID with not more than 60% hydrogen fluoride

Proper shipping name (IMDG) HYDROFLUORIC ACID with not more than 60% hydrogen fluoride

Proper shipping name (ICAO) HYDROFLUORIC ACID with not more than 60% hydrogen fluoride

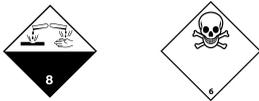
Proper shipping name (ADN) HYDROFLUORIC ACID with not more than 60% hydrogen fluoride

14.3. Transport hazard class(es)

ADR/RID class 8

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ADR/RID subsidiary risk	6.1
ADR/RID label	8 & 6.1
IMDG class	8
IMDG subsidiary risk	6.1
ICAO class/division	8
ICAO subsidiary risk	6.1

Transport labels**14.4. Packing group**

ADR/RID packing group	II
IMDG packing group	II
ICAO packing group	II

14.5. Environmental hazards**Environmentally hazardous substance/marine pollutant**

No.

14.6. Special precautions for user

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

IMDG Code segregation group	1. Acids
EmS	F-A, S-B
Emergency Action Code	2X
Hazard Identification Number (ADR/RID)	86
Tunnel restriction code	(E)

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

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

National regulations	Health and Safety at Work etc. Act 1974 (as amended). The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"]. EH40/2005 Workplace exposure limits.
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EU legislation 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) (as amended).
Commission Regulation (EU) No 2015/830 of 28 May 2015.
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).

Guidance Introduction to Local Exhaust Ventilation HS(G)37.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

All the ingredients are listed or exempt.

SECTION 16: Other information

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

Classification abbreviations and acronyms Met. Corr. = Corrosive to metals
Acute Tox. = Acute toxicity
Eye Dam. = Serious eye damage
Skin Corr. = Skin corrosion

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

Classification procedures according to Regulation (EC) 1272/2008 Acute Tox. 2 - H310: Acute Tox. 3 - H331: Acute Tox. 3 - H301: Eye Dam. 1 - H318: Skin Corr. 1B - H314: : Calculation method. Met. Corr. 1 - H290: : Expert judgement.

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

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

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Revision date	19/04/2018
Revision	10
Supersedes date	24/09/2015
SDS number	10015
SDS status	Approved.
Risk phrases in full	R22 Harmful if swallowed. R23/24/25 Toxic by inhalation, in contact with skin and if swallowed. R26/27/28 Very toxic by inhalation, in contact with skin and if swallowed. R34 Causes burns. R35 Causes severe burns. R37 Irritating to respiratory system. R41 Risk of serious damage to eyes.
Hazard statements in full	H290 May be corrosive to metals. H300 Fatal if swallowed. H301 Toxic if swallowed. H302 Harmful if swallowed. H310 Fatal in contact with skin. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H330 Fatal if inhaled. H331 Toxic if inhaled. H335 May cause respiratory irritation.

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.