



## SAFETY DATA SHEET HYDROFLUORIC ACID 1-7%

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

#### 1.1. Product identifier

|                           |                        |
|---------------------------|------------------------|
| Product name              | HYDROFLUORIC ACID 1-7% |
| Product number            | 23076                  |
| REACH registration number | 01-2119458860-33       |
| CAS number                | 7664-39-3              |
| EU index number           | 009-003-00-1           |
| EC number                 | 231-634-8              |

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

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

|          |                                                                                                                                      |
|----------|--------------------------------------------------------------------------------------------------------------------------------------|
| Supplier | Univar<br>Aquarius House<br>6 Mid Point Business Park<br>Bradford<br>BD3 7AY<br>+44 1274 267300<br>sds@univar.com<br>+44 1274 267306 |
|----------|--------------------------------------------------------------------------------------------------------------------------------------|

#### 1.4. Emergency telephone number

Emergency Contact Number SGS - +32 (0)3 575 55 55 (24h)  
(Outside Office Hours)

Sds No. 23076

### SECTION 2: Hazards identification

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

##### Classification (EC/1272/2008)

|                       |                                                                                                    |
|-----------------------|----------------------------------------------------------------------------------------------------|
| Physical hazards      | Not Classified                                                                                     |
| Health hazards        | Acute Tox. 2 - H300 Acute Tox. 1 - H310 Acute Tox. 1 - H330 Skin Corr. 1A - H314 Eye Dam. 1 - H318 |
| Environmental hazards | Not Classified                                                                                     |

Classification (67/548/EEC or 1999/45/EC) T;R23/24/25. C;R34. Xi;R37.

#### 2.2. Label elements

EC number 231-634-8

## HYDROFLUORIC ACID 1-7%

### Pictogram



### Signal word

Danger

### Hazard statements

H314 Causes severe skin burns and eye damage.  
H300+H310+H330 Fatal if swallowed, in contact with skin or if inhaled.

### Precautionary statements

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER/ doctor.  
P361 Take off immediately all contaminated clothing.  
P363 Wash contaminated clothing before reuse.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

### Supplementary precautionary statements

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P302+P352 IF ON SKIN: Wash with plenty of water.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P312 Call a POISON CENTER/ doctor if you feel unwell.  
P330 Rinse mouth.  
P405 Store locked up.

### 2.3. Other hazards

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

|                           |                        |
|---------------------------|------------------------|
| Product name              | HYDROFLUORIC ACID 1-7% |
| REACH registration number | 01-2119458860-33       |
| EU index number           | 009-003-00-1           |
| CAS number                | 7664-39-3              |
| EC number                 | 231-634-8              |

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|                     |                                                                                                                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General information | Effects may be delayed. Keep affected person under observation.                                                                                                                                                                |
| Inhalation          | Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention.                                               |
| Ingestion           | Rinse mouth thoroughly with water. Drink plenty of Milk of Magnesia or 6 effervescent soluble Calcium Tablets in water Get medical attention.                                                                                  |
| Skin contact        | Remove contaminated clothing immediately and wash skin with soap and water. Massage Calcium Gluconate Gel into the burnt area, continue this procedure until medical attention is available Get medical attention immediately. |

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**Eye contact** Irrigate thoroughly with water or saline solution. Get medical attention. Show this Safety Data Sheet to the medical personnel.

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

**General information** Effects may be delayed. Keep affected person under observation.

**Inhalation** Get medical attention immediately.

**Ingestion** Get medical attention immediately.

**Skin contact** Burns can occur. Get medical attention immediately. Massage Calcium Gluconate Gel into the burnt area, continue this procedure until medical attention is available

**Eye contact** Get medical attention immediately.

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

**Notes for the doctor** Calcium Gluconate Antidote kits must be available at workplace. antidote should be administered without delay and patients sent immediately to hospital.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**Suitable extinguishing media** Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

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

**Specific hazards** Hydrogen fluoride (HF). Oxides of the following substances: Fluorides. Thermal decomposition or combustion products may include the following substances: Very toxic or corrosive gases or vapours.

### 5.3. Advice for firefighters

**Protective actions during firefighting** Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Contain and collect extinguishing water.

**Special protective equipment for firefighters** Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

## SECTION 6: Accidental release measures

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

**Personal precautions** Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of spray mist and contact with skin and eyes. Provide adequate ventilation.

### 6.2. Environmental precautions

**Environmental precautions** Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

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

**Methods for cleaning up** Bund material with inert material, carefully dilute with water spray to minimize fume emission and heat generation. Carefully neutralize using excess of slaked lime or soda ash to form a slurry. take up slurry into plastic containers and hold for disposal.

### 6.4. Reference to other sections

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Usage precautions** Avoid contact with skin and eyes. Mechanical ventilation or local exhaust ventilation may be required.

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

**Storage precautions** Keep container tightly closed. Keep only in the original container. Suitable container materials: Polyethylene.

**Storage class** Toxic storage.

### 7.3. Specific end use(s)

## SECTION 8: Exposure Controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

Long-term exposure limit (8-hour TWA): WEL 1.8 ppm 1.5 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 3 ppm 2.5 mg/m<sup>3</sup>  
as F

WEL = Workplace Exposure Limit

**DNEL** Workers - Inhalation; Short term local effects, systemic effects: 2.5 mg/m<sup>3</sup>  
Workers - Inhalation; Long term systemic effects, local effects: 1.5 mg/m<sup>3</sup>

**PNEC**

- Fresh water; 0.9 mg/l
- Marine water; 0.9 mg/l
- Sediment; 0.766 mg/kg

### 8.2. Exposure controls

#### Protective equipment



#### Appropriate engineering controls

Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients.

#### Eye/face protection

The following protection should be worn: Chemical splash goggles or face shield.

#### Hand protection

It is recommended that gloves are made of the following material: Polyvinyl chloride (PVC). 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.

#### Other skin and body protection

Wear rubber apron. Wear rubber footwear. Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

#### Hygiene measures

Provide eyewash station and safety shower. Do not smoke in work area. When using do not eat, drink or smoke. 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 wet or contaminated. Contaminated clothing should be placed in a closed container for disposal or decontamination. Warn cleaning personnel of any hazardous properties of the product. Provide shower facilities near the workplace.

#### Respiratory protection

In confined or poorly-ventilated spaces, a supplied-air respirator must be worn.

## SECTION 9: Physical and Chemical Properties

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

**Appearance** Clear liquid.

**Colour** Colourless.

**Odour** Penetrating.

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|                                        |                               |
|----------------------------------------|-------------------------------|
| <b>pH</b>                              | pH (concentrated solution): 2 |
| <b>Initial boiling point and range</b> | 100°C @ 760 mm Hg             |
| <b>Relative density</b>                | 1.01 @ 16°C                   |
| <b>Solubility(ies)</b>                 | Soluble in water.             |

### 9.2. Other information

#### SECTION 10: Stability and reactivity

##### 10.1. Reactivity

##### 10.2. Chemical stability

**Stability** Stable at normal ambient temperatures and when used as recommended.

##### 10.3. Possibility of hazardous reactions

##### 10.4. Conditions to avoid

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

##### 10.5. Incompatible materials

**Materials to avoid** Strong alkalis. Massive, solid metal. Powdered metal. Alkalis - inorganic.

##### 10.6. Hazardous decomposition products

**Hazardous decomposition products** Toxic gases/vapours/fumes of: Hydrogen fluoride (HF).

#### SECTION 11: Toxicological information

##### 11.1. Information on toxicological effects

###### Acute toxicity - oral

**ATE oral (mg/kg)** 5.0

###### Acute toxicity - dermal

**ATE dermal (mg/kg)** 5.0

###### Acute toxicity - inhalation

**ATE inhalation (gases ppm)** 100.0

**ATE inhalation (vapours mg/l)** 0.5

**ATE inhalation (dusts/mists mg/l)** 0.05

##### Specific target organ toxicity - repeated exposure

**Target organs** Eyes Gastro-intestinal tract Respiratory system, lungs Skin Bone structure

**Inhalation** Toxic by inhalation. Irritating to respiratory system.

**Ingestion** Toxic if swallowed.

**Skin contact** Toxic in contact with skin.

**Eye contact** Causes burns. Contact with concentrated chemical may very rapidly cause severe eye damage, possibly loss of sight.

**Route of entry** Inhalation Ingestion. Skin and/or eye contact

#### SECTION 12: Ecological Information

## HYDROFLUORIC ACID 1-7%

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

### 12.1. Toxicity

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours: 10.6 mg/l, Daphnia magna

### 12.2. Persistence and degradability

### 12.3. Bioaccumulative potential

### 12.4. Mobility in soil

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

### 12.5. Results of PBT and vPvB assessment

### 12.6. Other adverse effects

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**General information** Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Do not puncture or incinerate, even when empty.

**Disposal methods** Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

## SECTION 14: Transport information

### 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

**Proper shipping name (IMDG)** HYDROFLUORIC ACID

**Proper shipping name (ICAO)** HYDROFLUORIC ACID

**Proper shipping name (ADN)** HYDROFLUORIC ACID

### 14.3. Transport hazard class(es)

**ADR/RID class** 8

**ADR/RID subsidiary risk** 6.1

**ADR/RID label** 8 & 6.1

**IMDG class** 8

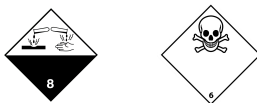
**IMDG subsidiary risk** 6.1

**ICAO class/division** 8

**ICAO subsidiary risk** 6.1

## HYDROFLUORIC ACID 1-7%

### Transport labels



### 14.4. Packing group

ADR/RID packing group II

IMDG packing group II

ICAO packing group II

### 14.5. Environmental hazards

### 14.6. Special precautions for user

EmS F-A, S-B

Emergency Action Code 2X

Hazard Identification Number 86  
(ADR/RID)

Tunnel restriction code (E)

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

## SECTION 15: Regulatory information

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

**National regulations** The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).

**EU legislation** 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).  
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).  
This product may impact SEVESO storage regulations.

**Guidance** CHIP for everyone HSG228.  
Workplace Exposure Limits EH40.  
Safety Data Sheets for Substances and Preparations.  
Approved Classification and Labelling Guide (Sixth edition) L131.

### 15.2. Chemical safety assessment

#### Inventories

Canada - DSL/NDL  
DSL

## SECTION 16: Other information

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

**Revision date** 13/12/2010

**Revision** 01

**SDS number** 23076

**Version number** 1.000

**HYDROFLUORIC ACID 1-7%**

|                                  |                                                                                                                                                                            |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SDS status</b>                | Approved.                                                                                                                                                                  |
| <b>Signature</b>                 | Jitendra Panchal                                                                                                                                                           |
| <b>Risk phrases in full</b>      | R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.<br>R34 Causes burns.<br>R37 Irritating to respiratory system.                                        |
| <b>Hazard statements in full</b> | H300 Fatal if swallowed.<br>H310 Fatal in contact with skin.<br>H314 Causes severe skin burns and eye damage.<br>H318 Causes serious eye damage.<br>H330 Fatal if inhaled. |