

# Porcelain Etch

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830  
Date of issue: 31 January 2019 Version: 1.0

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

#### 1.1. Product identifier

Product form : Mixture  
Trade name : Porcelain Etch

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

##### 1.2.1. Relevant identified uses

Main use category : Professional use  
Use of the substance/mixture : Hydrofluoric acid solution used to prepare the tooth or porcelain for cementation or repair

##### 1.2.2. Uses advised against

Restrictions on use : None known

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

Supplier:

Emergo Europe  
Prinsessegracht 20  
2514 AP The Hague  
The Netherlands  
+31 (0) 70 345 8570

Manufacturer:

Inter-Med, Inc. / Vista Dental Products  
2200 South Street  
Racine, WI 53404  
T: (877)-418-4782

#### 1.4. Emergency telephone number

Emergency number : 800-424-9300 (North America) / +1 (703) 527-3887 (International)

### SECTION 2: Hazards identification

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

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 3 H301  
Acute toxicity (dermal), Category 2 H310  
Acute toxicity (inhal.), Category 3 H331  
Skin corrosion/irritation, Category 1A H314  
Full text of H statements : see section 16

##### Adverse physicochemical, human health and environmental effects

Toxic if swallowed or if inhaled. Fatal in contact with skin. Causes severe skin burns and eye damage.

#### 2.2. Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

GHS06

Signal word (CLP) : Danger

Hazardous ingredients : Hydrofluoric acid

Hazard statements (CLP) : H301+H331 - Toxic if swallowed or if inhaled.  
H310 - Fatal in contact with skin.  
H314 - Causes severe skin burns and eye damage.

Precautionary statements (CLP) : P262 - Do not get in eyes, on skin, or on clothing.  
P264 - Wash hands thoroughly after handling.  
P280 - Wear protective clothing, eye protection.  
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.  
P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.  
P303+P361+P353+P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor.

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### 2.3. Other hazards not contributing to the classification

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hydrofluoric acid	(CAS-No.) 7664-39-3 (EC-No.) 231-634-8	<= 9	Acute Tox. 2 (Oral), H300 Acute Tox. 1 (Dermal), H310 Acute Tox. 2 (Inhalation), H330 Skin Corr. 1A, H314

Full text of H-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Burns caused by weak hydrofluoric acid may go unnoticed for several hours. Therefore, first aid procedures must be followed if any contact is suspected.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Give artificial respiration if necessary. Get medical advice/attention.
First-aid measures after skin contact	: Immediately flush the contact area with plenty of water. Limit flushing with water to 5 minutes if 2.5% calcium gluconate gel is available. Wearing chemical protective gloves, start massaging 2.5% calcium gluconate gel into the burn site. Apply gel frequently and massage continuously until medical attention is available. If 2.5% calcium gluconate gel is not available, continue flushing until medical treatment is available. Take off immediately all contaminated clothing and wash it before reuse. Get immediate medical advice/attention.
First-aid measures after eye contact	: In case of eye contact, immediately rinse with clean water for 20-30 minutes. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Take care not to rinse contaminated water into the unaffected eye. If sterile 1% calcium gluconate is available, limit water flushing to 5 minutes. Then, use the 1% calcium gluconate solution to repeatedly rinse the eye(s). Immediately transport victim to an emergency care facility. Continue flushing with water, neutral saline or 1% calcium gluconate during transport, if at all possible. Seek immediate medical advice.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting. Get medical advice/attention.

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

Symptoms/effects after inhalation	: Toxic if inhaled. Inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.
Symptoms/effects after skin contact	: Fatal in contact with skin. Causes severe burns.
Symptoms/effects after eye contact	: Causes serious eye burns.
Symptoms/effects after ingestion	: Toxic if swallowed. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

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

Treat symptomatically. Administer calcium gluconate to counteract the effects of hydrofluoric acid.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: None known.

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

Fire hazard	: On combustion, forms: carbon oxides (CO and CO <sub>2</sub> ). Combustion produces irritating gases. Toxic and corrosive vapours may be released.
Explosion hazard	: No direct explosion hazard.

### 5.3. Advice for firefighters

Firefighting instructions	: Exercise caution when fighting any chemical fire.
Protective equipment for firefighters	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

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

General measures	: Avoid any direct contact with the product.
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### 6.1.1. For non-emergency personnel

- Protective equipment : Use personal protective equipment as required. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel.

### 6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. In case of inadequate ventilation wear respiratory protection.
- Emergency procedures : Stop leak if safe to do so. Ventilate spillage area.

### 6.2. Environmental precautions

Avoid release to the environment.

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

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage.
- Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of residues refer to section 13: "Disposal considerations".

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Avoid any direct contact with the product. Do not breathe mist, vapours. Wear personal protective equipment.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Handle in accordance with good industrial hygiene and safety practice. Wash contaminated clothing before reuse.

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

- Storage conditions : Keep only in original container. Store locked up. Store in a well-ventilated place. Keep cool. Store away from direct sunlight or other heat sources.
- Incompatible products : Glass packaging.
- Incompatible materials : Strong bases. Metals. Metallic oxides. organic anhydrides.
- Packaging materials : Polyethylene.

### 7.3. Specific end use(s)

See Heading 1.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Porcelain Etch		
EU	IOELV TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
EU	IOELV TWA (ppm)	1.8 ppm
EU	IOELV STEL (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
EU	IOELV STEL (ppm)	3 ppm
Austria	MAK (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Austria	MAK (ppm)	1.8 ppm
Austria	MAK Short time value (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Austria	MAK Short time value (ppm)	3 ppm
Bulgaria	OEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Bulgaria	OEL TWA (ppm)	1.8 ppm
Bulgaria	OEL STEL (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Bulgaria	OEL STEL (ppm)	3 ppm
Croatia	GVI (granična vrijednost izloženosti) (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Croatia	GVI (granična vrijednost izloženosti) (ppm)	1.8 ppm
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	3 ppm

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Croatia	Croatia - BLV	7 mg/g creatinine Parameter: Fluorides - Medium: urine - Sampling time: at the end of the work shift (for all results that are expressed as Creatinine, Creatinine concentration less than 0.5 g/L and greater than 3.0 g/L should not be considered) 4 mg/g creatinine Parameter: Fluorides - Medium: urine - Sampling time: about 16 hours after completion of the work shift (for all results that are expressed as Creatinine, Creatinine concentration less than 0.5 g/L and greater than 3.0 g/L should not be considered)
Cyprus	OEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Cyprus	OEL TWA (ppm)	1.8 ppm
Cyprus	OEL STEL (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Cyprus	OEL STEL (ppm)	3 ppm
Czech Republic	Expoziční limity (PEL) (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Denmark	Grænseværdie (langvarig) (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Denmark	Grænseværdie (langvarig) (ppm)	1.8 ppm
Estonia	OEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Estonia	OEL TWA (ppm)	1.8 ppm
Estonia	OEL STEL (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Estonia	OEL STEL (ppm)	3 ppm
Finland	HTP-arvo (8h) (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Finland	HTP-arvo (8h) (ppm)	1.8 ppm
Finland	HTP-arvo (15 min)	2.5 mg/m <sup>3</sup>
Finland	HTP-arvo (15 min) (ppm)	3 ppm
France	VME (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup> (restrictive limit)
France	VME (ppm)	1.8 ppm (restrictive limit)
France	VLE (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup> (restrictive limit)
France	VLE (ppm)	3 ppm (restrictive limit)
France	France - BLV	3 mg/g creatinine Parameter: Fluorides - Medium: urine - Sampling time: beginning of shift (Background noise on non-exposed subjects, Non-specific (observed after the exposure to other substances)) 10 mg/g creatinine Parameter: Fluorides - Medium: urine - Sampling time: end of shift (Background noise on non-exposed subjects, Non-specific (observed after the exposure to other substances))
Germany	TRGS 900 Occupational exposure limit value (mg/m <sup>3</sup> )	0.83 mg/m <sup>3</sup> (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 900 Occupational exposure limit value (ppm)	1 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 903 Biological limit value	7 mg/g Parameter: Fluoride - Medium: urine - Sampling time: end of shift (measured as mg/g Creatinine) 4 mg/g Parameter: Fluoride - Medium: urine - Sampling time: before beginning of next shift (measured as mg/g Creatinine)
Greece	OEL TWA (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Greece	OEL TWA (ppm)	3 ppm
Greece	OEL STEL (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Greece	OEL STEL (ppm)	3 ppm
Hungary	AK-érték	1.5 mg/m <sup>3</sup>
Hungary	CK-érték	2.5 mg/m <sup>3</sup>
Ireland	OEL (8 hours ref) (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>

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Porcelain Etch		
Ireland	OEL (8 hours ref) (ppm)	1.8 ppm
Ireland	OEL (15 min ref) (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Ireland	OEL (15 min ref) (ppm)	3 ppm
Italy	OEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Italy	OEL TWA (ppm)	1.8 ppm
Italy	OEL STEL (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Italy	OEL STEL (ppm)	3 ppm
Latvia	OEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Latvia	OEL TWA (ppm)	1.8 ppm
Lithuania	IPRV (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Lithuania	IPRV (ppm)	1.8 ppm
Lithuania	TPRV (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Lithuania	TPRV (ppm)	3 ppm
Luxembourg	OEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Luxembourg	OEL TWA (ppm)	1.8 ppm
Luxembourg	OEL STEL (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Luxembourg	OEL STEL (ppm)	3 ppm
Malta	OEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Malta	OEL TWA (ppm)	1.8 ppm
Malta	OEL STEL (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Malta	OEL STEL (ppm)	3 ppm
Netherlands	Grenswaarde TGG 15MIN (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Poland	NDS (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Poland	NDSch (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Portugal	OEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup> (indicative limit value)
Portugal	OEL TWA (ppm)	0.5 ppm (indicative limit value)
Portugal	OEL STEL (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup> (indicative limit value)
Portugal	OEL STEL (ppm)	3 ppm (indicative limit value)
Portugal	OEL - Ceilings (ppm)	2 ppm
Romania	OEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Romania	OEL TWA (ppm)	1.8 ppm
Romania	OEL STEL (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Romania	OEL STEL (ppm)	3 ppm
Slovakia	NPHV (priemerná) (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Slovakia	NPHV (priemerná) (ppm)	1.8 ppm
Slovakia	NPHV (Hraničná) (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Slovakia	Slovakia - BLV	7 mg/g creatinine Parameter: Fluoride - Medium: urine - Sampling time: end of exposure or work shift 4 mg/g creatinine Parameter: Fluoride - Medium: urine - Sampling time: prior to shift
Slovenia	OEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup> 2.5 mg/m <sup>3</sup> (total value, with Fluoride ion)
Slovenia	OEL TWA (ppm)	1.8 ppm
Slovenia	OEL STEL (mg/m <sup>3</sup> )	2.25 mg/m <sup>3</sup> 2.5 mg/m <sup>3</sup> (total value, with Fluoride ion)
Slovenia	OEL STEL (ppm)	2.7 ppm

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Porcelain Etch		
Spain	VLA-ED (mg/m³)	1.5 mg/m³ (indicative limit value)
Spain	VLA-ED (ppm)	1.8 ppm (indicative limit value)
Spain	VLA-EC (mg/m³)	2.5 mg/m³
Spain	VLA-EC (ppm)	3 ppm
Spain	Spain - BLV	2 mg/l Parameter: Fluorides - Medium: urine - Sampling time: pre-shift 3 mg/l Parameter: Fluorides - Medium: urine - Sampling time: end of shift
Sweden	nivågränsvärde (NVG) (mg/m³)	1.5 mg/m³
Sweden	nivågränsvärde (NVG) (ppm)	1.8 ppm
Sweden	kortidsvärde (KTV) (mg/m³)	1.7 mg/m³
Sweden	kortidsvärde (KTV) (ppm)	2 ppm
United Kingdom	WEL TWA (mg/m³)	1.5 mg/m³
United Kingdom	WEL TWA (ppm)	1.8 ppm
United Kingdom	WEL STEL (mg/m³)	2.5 mg/m³
United Kingdom	WEL STEL (ppm)	3 ppm
Norway	Grenseverdier (AN) (mg/m³)	0.5 mg/m³
Norway	Grenseverdier (Kortidsverdi) (mg/m³)	1.5 mg/m³ (value from the regulation)
Norway	Grenseverdier (Kortidsverdi) (ppm)	1.8 ppm (value from the regulation)
USA - ACGIH	Biological Exposure Indices (BEI)	3 mg/g creatinine Parameter: Fluoride - Medium: urine - Sampling time: prior to shift (background, nonspecific) 10 mg/g creatinine Parameter: Fluoride - Medium: urine - Sampling time: end of shift (background, nonspecific)
Hydrofluoric acid (7664-39-3)		
EU	IOELV TWA (mg/m³)	1.5 mg/m³
EU	IOELV TWA (ppm)	1.8 ppm
EU	IOELV STEL (mg/m³)	2.5 mg/m³
EU	IOELV STEL (ppm)	3 ppm
Austria	MAK (mg/m³)	1.5 mg/m³
Austria	MAK (ppm)	1.8 ppm
Austria	MAK Short time value (mg/m³)	2.5 mg/m³
Austria	MAK Short time value (ppm)	3 ppm
Bulgaria	OEL TWA (mg/m³)	1.5 mg/m³
Bulgaria	OEL TWA (ppm)	1.8 ppm
Bulgaria	OEL STEL (mg/m³)	2.5 mg/m³
Bulgaria	OEL STEL (ppm)	3 ppm
Croatia	GVI (granična vrijednost izloženosti) (mg/m³)	1.5 mg/m³
Croatia	GVI (granična vrijednost izloženosti) (ppm)	1.8 ppm
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m³)	2.5 mg/m³
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	3 ppm

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Croatia	Croatia - BLV	7 mg/g creatinine Parameter: Fluorides - Medium: urine - Sampling time: at the end of the work shift (for all results that are expressed as Creatinine, Creatinine concentration less than 0.5 g/L and greater than 3.0 g/L should not be considered) 4 mg/g creatinine Parameter: Fluorides - Medium: urine - Sampling time: about 16 hours after completion of the work shift (for all results that are expressed as Creatinine, Creatinine concentration less than 0.5 g/L and greater than 3.0 g/L should not be considered)
Cyprus	OEL TWA (mg/m³)	1.5 mg/m³
Cyprus	OEL TWA (ppm)	1.8 ppm
Cyprus	OEL STEL (mg/m³)	2.5 mg/m³
Cyprus	OEL STEL (ppm)	3 ppm
Czech Republic	Expoziční limity (PEL) (mg/m³)	1.5 mg/m³
Denmark	Grænseværdie (langvarig) (mg/m³)	1.5 mg/m³
Denmark	Grænseværdie (langvarig) (ppm)	1.8 ppm
Estonia	OEL TWA (mg/m³)	1.5 mg/m³
Estonia	OEL TWA (ppm)	1.8 ppm
Estonia	OEL STEL (mg/m³)	2.5 mg/m³
Estonia	OEL STEL (ppm)	3 ppm
Finland	HTP-arvo (8h) (mg/m³)	1.5 mg/m³
Finland	HTP-arvo (8h) (ppm)	1.8 ppm
Finland	HTP-arvo (15 min)	2.5 mg/m³
Finland	HTP-arvo (15 min) (ppm)	3 ppm
France	VME (mg/m³)	1.5 mg/m³ (restrictive limit)
France	VME (ppm)	1.8 ppm (restrictive limit)
France	VLE (mg/m³)	2.5 mg/m³ (restrictive limit)
France	VLE (ppm)	3 ppm (restrictive limit)
France	France - BLV	3 mg/g creatinine Parameter: Fluorides - Medium: urine - Sampling time: beginning of shift (Background noise on non-exposed subjects, Non-specific (observed after the exposure to other substances)) 10 mg/g creatinine Parameter: Fluorides - Medium: urine - Sampling time: end of shift (Background noise on non-exposed subjects, Non-specific (observed after the exposure to other substances))
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	0.83 mg/m³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 900 Occupational exposure limit value (ppm)	1 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 903 Biological limit value	7 mg/g Parameter: Fluoride - Medium: urine - Sampling time: end of shift (measured as mg/g Creatinine) 4 mg/g Parameter: Fluoride - Medium: urine - Sampling time: before beginning of next shift (measured as mg/g Creatinine)
Germany	TRGS 910 Acceptable concentration notes	
Greece	OEL TWA (mg/m³)	2.5 mg/m³
Greece	OEL TWA (ppm)	3 ppm
Greece	OEL STEL (mg/m³)	2.5 mg/m³
Greece	OEL STEL (ppm)	3 ppm
Hungary	AK-érték	1.5 mg/m³
Hungary	CK-érték	2.5 mg/m³
Ireland	OEL (8 hours ref) (mg/m³)	1.5 mg/m³

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Ireland	OEL (8 hours ref) (ppm)	1.8 ppm
Ireland	OEL (15 min ref) (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Ireland	OEL (15 min ref) (ppm)	3 ppm
Italy	OEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Italy	OEL TWA (ppm)	1.8 ppm
Italy	OEL STEL (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Italy	OEL STEL (ppm)	3 ppm
Latvia	OEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Latvia	OEL TWA (ppm)	1.8 ppm
Lithuania	IPRV (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Lithuania	IPRV (ppm)	1.8 ppm
Lithuania	TPRV (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Lithuania	TPRV (ppm)	3 ppm
Luxembourg	OEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Luxembourg	OEL TWA (ppm)	1.8 ppm
Luxembourg	OEL STEL (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Luxembourg	OEL STEL (ppm)	3 ppm
Malta	OEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Malta	OEL TWA (ppm)	1.8 ppm
Malta	OEL STEL (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Malta	OEL STEL (ppm)	3 ppm
Netherlands	Grenswaarde TGG 15MIN (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Poland	NDS (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Poland	NDSch (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Portugal	OEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup> (indicative limit value)
Portugal	OEL TWA (ppm)	0.5 ppm (indicative limit value)
Portugal	OEL STEL (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup> (indicative limit value)
Portugal	OEL STEL (ppm)	3 ppm (indicative limit value)
Portugal	OEL - Ceilings (ppm)	2 ppm
Romania	OEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Romania	OEL TWA (ppm)	1.8 ppm
Romania	OEL STEL (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Romania	OEL STEL (ppm)	3 ppm
Slovakia	NPHV (priemerná) (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Slovakia	NPHV (priemerná) (ppm)	1.8 ppm
Slovakia	NPHV (Hraničná) (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Slovakia	Slovakia - BLV	7 mg/g creatinine Parameter: Fluoride - Medium: urine - Sampling time: end of exposure or work shift 4 mg/g creatinine Parameter: Fluoride - Medium: urine - Sampling time: prior to shift
Slovenia	OEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup> 2.5 mg/m <sup>3</sup> (total value, with Fluoride ion)
Slovenia	OEL TWA (ppm)	1.8 ppm
Slovenia	OEL STEL (mg/m <sup>3</sup> )	2.25 mg/m <sup>3</sup> 2.5 mg/m <sup>3</sup> (total value, with Fluoride ion)
Slovenia	OEL STEL (ppm)	2.7 ppm
Spain	VLA-ED (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup> (indicative limit value)



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Spain	VLA-ED (ppm)	1.8 ppm (indicative limit value)
Spain	VLA-EC (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
Spain	VLA-EC (ppm)	3 ppm
Spain	2 mg/l Parameter: Fluorides - Medium: urine - Sampling time: pre-shift	2 mg/l Parameter: Fluorides - Medium: urine - Sampling time: pre-shift 3 mg/l Parameter: Fluorides - Medium: urine - Sampling time: end of shift
Sweden	nivågränsvärde (NVG) (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Sweden	nivågränsvärde (NVG) (ppm)	1.8 ppm
Sweden	kortidsvärde (KTV) (mg/m <sup>3</sup> )	1.7 mg/m <sup>3</sup>
Sweden	kortidsvärde (KTV) (ppm)	2 ppm
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
United Kingdom	WEL TWA (ppm)	1.8 ppm
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	2.5 mg/m <sup>3</sup>
United Kingdom	WEL STEL (ppm)	3 ppm
Norway	Grenseverdier (AN) (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Norway	Grenseverdier (Kortidsverdi) (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup> (value from the regulation)
Norway	Grenseverdier (Kortidsverdi) (ppm)	1.8 ppm (value from the regulation)
USA - ACGIH	ACGIH TWA (ppm)	0.5 ppm
USA - ACGIH	ACGIH Ceiling (ppm)	2 ppm
USA - ACGIH	Biological Exposure Indices (BEI)	3 mg/g creatinine Parameter: Fluoride - Medium: urine - Sampling time: prior to shift (background, nonspecific) 10 mg/g creatinine Parameter: Fluoride - Medium: urine - Sampling time: end of shift (background, nonspecific)

### 8.2. Exposure controls

#### Appropriate engineering controls:

Provide local exhaust or general room ventilation to minimize vapour concentrations. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

#### Hand protection:

Impermeable protective gloves. EN 374

#### Eye protection:

Safety glasses with side shields. DIN EN 166

#### Skin and body protection:

Long sleeved protective clothing

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. An approved organic vapour respirator/supplied air or self-contained breathing apparatus must be used when vapour concentration exceeds applicable exposure limits

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Appearance	: Viscous liquid.
Colour	: light yellow.
Odour	: Odourless.
Odour threshold	: No data available
pH	: 1 - 1.5
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable

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Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under normal conditions of use.

### 10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Do not expose to heat. Keep out of direct sunlight.

### 10.5. Incompatible materials

Strong bases. metals. Metallic oxides. organic anhydrides.

### 10.6. Hazardous decomposition products

On combustion, forms: carbon oxides (CO and CO<sub>2</sub>). Combustion produces irritating gases. Toxic and corrosive vapours may be released.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Toxic if swallowed.
Acute toxicity (dermal)	: Fatal in contact with skin.
Acute toxicity (inhalation)	: Toxic if inhaled.

ATE CLP (oral)	56 mg/kg bodyweight
ATE CLP (dermal)	56 mg/kg bodyweight
ATE CLP (vapours)	3 mg/l/4h
ATE CLP (dust,mist)	0.5 mg/l/4h

### Hydrofluoric acid (7664-39-3)

LC50 inhalation rat (mg/l)	0.79 mg/l (Exposure time: 1 h)
Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: 1 - 1.5
Serious eye damage/irritation	: Serious eye damage, category 1, implicit pH: 1 - 1.5
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
Other information	: Likely routes of exposure: ingestion, inhalation, skin and eye.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: This material has not been tested for environmental effects.
Acute aquatic toxicity	: Not classified (Based on available data, the classification criteria are not met)
Chronic aquatic toxicity	: Not classified (Based on available data, the classification criteria are not met)

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### Hydrofluoric acid (7664-39-3)

EC50 Daphnia 1 270 mg/l (Exposure time: 48 h - Species: Daphnia species)

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

#### Hydrofluoric acid (7664-39-3)

BCF fish 1 (no bioaccumulation)

Log Pow -1.4

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

No additional information available






## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
UN 1790	UN 1790	UN 1790	UN 1790	UN 1790
<b>14.2. UN proper shipping name</b>				
HYDROFLUORIC ACID	HYDROFLUORIC ACID	Hydrofluoric acid	HYDROFLUORIC ACID	HYDROFLUORIC ACID
<b>Transport document description</b>				
UN 1790 HYDROFLUORIC ACID, 8 (6.1), II, (E)	UN 1790 HYDROFLUORIC ACID, 8 (6.1), II	UN 1790 Hydrofluoric acid, 8 (6.1), II	UN 1790 HYDROFLUORIC ACID, 8 (6.1), II	UN 1790 HYDROFLUORIC ACID, 8 (6.1), II
<b>14.3. Transport hazard class(es)</b>				
8 (6.1)	8 (6.1)	8 (6.1)	8 (6.1)	8 (6.1)
				
<b>14.4. Packing group</b>				
II	II	II	II	II
<b>14.5. Environmental hazards</b>				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

### 14.6. Special precautions for user

#### Overland transport

Classification code (ADR) : CT1  
Limited quantities (ADR) : 1I  
Excepted quantities (ADR) : E2  
Packing instructions (ADR) : P001, IBC02  
Mixed packing provisions (ADR) : MP15  
Portable tank and bulk container instructions (ADR) : T8

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Portable tank and bulk container special provisions (ADR) : TP2

Tank code (ADR) : L4DH

Tank special provisions (ADR) : TU14, TE21

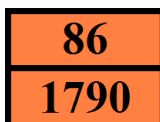
Vehicle for tank carriage : AT

Transport category (ADR) : 2

Special provisions for carriage - Loading, unloading and handling (ADR) : CV13, CV28

Hazard identification number (Kemler No.) : 86

Orange plates :



Tunnel restriction code (ADR) : E

EAC code : 2W

APP code : B

### Transport by sea

Packing instructions (IMDG) : P001

Special packing provisions (IMDG) : PP81

IBC packing instructions (IMDG) : IBC02

IBC special provisions (IMDG) : B20

Tank instructions (IMDG) : T8

Tank special provisions (IMDG) : TP2

EmS-No. (Fire) : F-A

EmS-No. (Spillage) : S-B

Stowage category (IMDG) : D

Stowage and handling (IMDG) : SW1, SW2, H2

Properties and observations (IMDG) : Colourless liquid with an irritating odour. Highly corrosive to glass, other siliceous materials and most metals. Toxic if swallowed, by skin contact or by inhalation. Both the liquid and its fumes cause severe burns to skin, eyes and mucous membranes.

### Air transport

PCA Excepted quantities (IATA) : E2

PCA Limited quantities (IATA) : Y840

PCA limited quantity max net quantity (IATA) : 0.5L

PCA packing instructions (IATA) : 851

PCA max net quantity (IATA) : 1L

CAO packing instructions (IATA) : 855

CAO max net quantity (IATA) : 30L

ERG code (IATA) : 8P

### Inland waterway transport

Classification code (ADN) : CT1

Special provisions (ADN) : 802

Limited quantities (ADN) : 1 L

Excepted quantities (ADN) : E2

Equipment required (ADN) : PP, EP, TOX, A

Ventilation (ADN) : VE02

Number of blue cones/lights (ADN) : 2

### Rail transport

Classification code (RID) : CT1

Limited quantities (RID) : 1L

Excepted quantities (RID) : E2

Packing instructions (RID) : P001, IBC02

Mixed packing provisions (RID) : MP15

Portable tank and bulk container instructions (RID) : T8

Portable tank and bulk container special provisions (RID) : TP2

Tank codes for RID tanks (RID) : L4DH

Special provisions for RID tanks (RID) : TU14, TE17, TE21, TT4

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Transport category (RID)	: 2
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW28
Colis express (express parcels) (RID)	: CE6
Hazard identification number (RID)	: 86

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

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

#### 15.1.2. National regulations

##### Germany

Reference to AwSV : Water hazard class (WGK) 2, Significantly hazardous to water (Classification according to AwSV, Annex 1)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

##### Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product  
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Sources of Key data : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Full text of H- and EUH-statements:	
Acute Tox. 1 (Dermal)	Acute toxicity (dermal), Category 1
Acute Tox. 2 (Inhalation)	Acute toxicity (inhal.), Category 2
Acute Tox. 2 (Oral)	Acute toxicity (oral), Category 2
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H330	Fatal if inhaled.

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H331	Toxic if inhaled.	
Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Acute Tox. 3 (Oral)	H301	Calculation method
Acute Tox. 2 (Dermal)	H310	Calculation method
Acute Tox. 3 (Inhalation)	H331	Calculation method
Skin Corr. 1	H314	On basis of test data

SDS EU (REACH Annex II)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*