

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

1.1. Product identifier

Product form : Mixture
Product name : Porcelain Etchant(9.5%HF)

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

1.2.1. Relevant identified uses

Use of the substance/mixture : For RX only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer:

Bisco, Inc. 1100 W Irving Park Road, Schaumburg, IL 60193 USA
1-847-534-6000, during normal business hours
www.bisco.com

EC Representative:

Bisico France, 208, allée de la Coudoulette, 13680 Lançon de Provence, France
Telephone: 33-4-90-42-92-92

1.4. Emergency telephone number

Emergency number : CHEMTREC - 24-Hour Hazmat Emergency Communications Center
Domestic: 1-800-424-9300 Outside the U.S.: 1-703-527-3887, collect calls accepted

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity (dermal), Category 1 H310
Acute toxicity (inhalation:vapour) Category 3 H331
Skin corrosion/irritation, Category 1A H314

Full text of H statements : see section 16

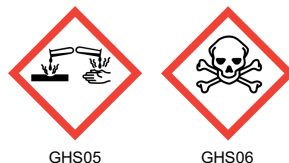
Adverse physicochemical, human health and environmental effects

Fatal in contact with skin. Toxic if inhaled. 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,7%<=conc<=60%,aqueous solutions
Hazard statements (CLP) : H310 - Fatal in contact with skin
H314 - Causes severe skin burns and eye damage.
H331 - Toxic if inhaled

Precautionary statements (CLP) : P260 - Do not breathe vapours
P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves, eye protection, face protection
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P302+P352 - IF ON SKIN: Wash with plenty of soap and water
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

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contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a doctor, a POISON CENTER
P321 - Specific treatment (see First aid measures on this label)
P361+P364 - Take off immediately all contaminated clothing and wash it before reuse
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation, a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste, a hazardous or special waste collection point.

2.3. Other hazards

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, 7% ≤ conc ≤ 60%, aqueous solutions	(CAS-No.) 7664-39-3 (EC-No.) 231-634-8 (EC Index-No.) 009-003-00-1	10 - 30	Acute Tox. 2 (Oral), H300 Acute Tox. 1 (Dermal), H310 Acute Tox. 2 (Inhalation), H330 Acute Tox. 2 (Inhalation: vapour), H330 Skin Corr. 1A, H314
Sodium Fluoride	(CAS-No.) 7681-49-4 (EC-No.) 231-667-8 (EC Index-No.) 009-004-00-7	< 1	Acute Tox. 3 (Oral), H301 Skin Irrit. 2, H315 Eye Irrit. 2, H319

Specific concentration limits:

Name	Product identifier	Specific concentration limits
Hydrofluoric Acid, 7% ≤ conc ≤ 60%, aqueous solutions	(CAS-No.) 7664-39-3 (EC-No.) 231-634-8 (EC Index-No.) 009-003-00-1	(0.1 ≤ C < 1) Eye Irrit. 2, H319 (1 ≤ C < 7) Skin Corr. 1B, H314 (C ≥ 7) 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	: Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Immediately consult a doctor/medical service. Call a doctor.
First-aid measures after skin contact	: Wash with water and soap. Remove/Take off immediately all contaminated clothing. Call a physician immediately. Rinse skin with water/shower.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Drink plenty of water. Do not induce vomiting. Rinse mouth. Do not induce vomiting. Call a physician immediately.

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

Symptoms/effects after skin contact	: Burns.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Dry chemical powder. Carbon dioxide. Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Combustible.

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Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : 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

6.1.1. For non-emergency personnel

Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Prevent soil and water pollution.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Absorb spillage to prevent material damage.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not get in eyes, on skin, or on clothing. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapours/spray.
Handling temperature : 20 - 25 °C
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a dry place. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.
Storage temperature : 20 - 25 °C

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Hydrofluoric Acid, 7% ≤ conc ≤ 60%, aqueous solutions (7664-39-3)		
EU	IOELV TWA (mg/m ³)	1.5 mg/m ³ (Hydrogen fluoride; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	1.8 ppm (Hydrogen fluoride; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV STEL (mg/m ³)	2.5 mg/m ³ (Hydrogen fluoride; EU; Short time value; Indicative occupational exposure limit value)
EU	IOELV STEL (ppm)	3 ppm (Hydrogen fluoride; EU; Short time value; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m ³)	1.5 mg/m ³ (Hydrogène (fluorure d'); Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	1.8 ppm (Hydrogène (fluorure d'); Belgium; Time-weighted average exposure limit 8 h)
Belgium	Short time value (mg/m ³)	2.5 mg/m ³ (Hydrogène (fluorure d'); Belgium; Short time value)
Belgium	Short time value (ppm)	3 ppm (Hydrogène (fluorure d'); Belgium; Short time value)
France	VME (mg/m ³)	1.5 mg/m ³ (Fluorure d'hydrogène; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)

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Hydrofluoric Acid,7%<=conc<=60%,aqueous solutions (7664-39-3)		
France	VME (ppm)	1.8 ppm (Fluorure d'hydrogène; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
France	VLE (mg/m³)	2.5 mg/m³ (Fluorure d'hydrogène; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VLE (ppm)	3 ppm (Fluorure d'hydrogène; France; Short time value; VRC: Valeur réglementaire contraignante)
Netherlands	Grenswaarde TGG 15MIN (mg/m³)	1 mg/m³ (Fluorwaterstof (als F); Netherlands; Short time value; Public occupational exposure limit value; als F)
Netherlands	Grenswaarde TGG 15MIN (ppm)	1.2 ppm (Fluorwaterstof (als F); Netherlands; Short time value; Public occupational exposure limit value; als F)
United Kingdom	WEL TWA (mg/m³)	1.5 mg/m³ Hydrogen fluoride (as F); United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	1.8 ppm Hydrogen fluoride (as F); United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m³)	2.5 mg/m³ Hydrogen fluoride (as F); United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	3 ppm Hydrogen fluoride (as F); United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
USA - ACGIH	ACGIH TWA (ppm)	0.5 ppm (Hydrogen fluoride, as F; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
USA - ACGIH	ACGIH Ceiling (ppm)	2 ppm (Hydrogen fluoride, as F; USA; Momentary value; TLV - Adopted Value)
Sodium Fluoride (7681-49-4)		
EU	IOELV TWA (mg/m³)	2.5 mg/m³ (Fluorides, inorganic; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m³)	2.5 mg/m³ (Fluorures inorganiques (en F); Belgium; Time-weighted average exposure limit 8 h)
France	VME (mg/m³)	2 mg/m³ (Sodium (fluorure de), en F; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
Netherlands	Grenswaarde TGG 15MIN (mg/m³)	2 mg/m³ (Fluoriden, anorganisch en oplosbaar (als F); Netherlands; Short time value; Public occupational exposure limit value; als F)
United Kingdom	WEL TWA (mg/m³)	2.5 mg/m³ Fluorides (inorganic as F); United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
USA - ACGIH	ACGIH TWA (mg/m³)	2.5 mg/m³ (Fluorides, as F; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:

Protective gloves

Eye protection:

Protective goggles

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Wear respiratory protection

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Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Gel.
Colour	: Yellow.
Odour	: Odourless.
Odour threshold	: No data available
pH	: ~0
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: < 0 °C
Freezing point	: No data available
Boiling point	: > 100 °C
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: > 1
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

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Finely divided metals.

10.5. Incompatible materials

metals.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Dermal: Fatal in contact with skin.
Acute toxicity (inhalation)	: Inhalation:vapour: Toxic if inhaled.

Porcelain Etchant(9.5%HF)	
LD50 oral rat	> 2000
ATE CLP (dermal)	25.7864878804 mg/kg bodyweight
ATE CLP (vapours)	2.578648788 mg/l/4h

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Sodium Fluoride (7681-49-4)	
LD50 oral rat	52 mg/kg (Rat)
Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: 2
Serious eye damage/irritation	: Serious eye damage, category 1, implicit pH: 2
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Before neutralisation, the product may represent a danger to aquatic organisms.
Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

Sodium Fluoride (7681-49-4)	
LC50 fish 1	> 530 mg/l (LC50; 96 h)
EC50 Daphnia 1	98 mg/l (EC50; 48 h)

12.2. Persistence and degradability

Hydrofluoric Acid,7%<=conc<=60%,aqueous solutions (7664-39-3)	
Persistence and degradability	Biodegradability: not applicable. No (test)data on mobility of the components available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

Sodium Fluoride (7681-49-4)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

12.3. Bioaccumulative potential

Hydrofluoric Acid,7%<=conc<=60%,aqueous solutions (7664-39-3)	
Log Pow	-0.9 (Calculated)
Bioaccumulative potential	Bioaccumulation: not applicable.

Sodium Fluoride (7681-49-4)	
BCF fish 1	2.3 (BCF)
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

Sodium Fluoride (7681-49-4)	
Ecology - soil	Toxic to flora.

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

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

14.1. UN number

UN-No. (ADR) : 1790
UN-No. (IMDG) : Not applicable
UN-No. (IATA) : 1790
UN-No. (ADN) : Not applicable
UN-No. (RID) : Not applicable

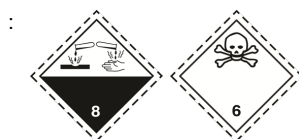
14.2. UN proper shipping name

Proper Shipping Name (ADR) : HYDROFLUORIC ACID
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable
Proper Shipping Name (ADN) : Not applicable
Proper Shipping Name (RID) : Not applicable
Transport document description (ADR) : UN 1790 HYDROFLUORIC ACID, 8 (6.1), II, (E)
Transport document description (IATA) : UN 1790 , 8

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 8 (6.1)
Danger labels (ADR) : 8, 6.1



IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : 8

ADN

Transport hazard class(es) (ADN) : Not applicable

RID

Transport hazard class(es) (RID) : Not applicable

14.4. Packing group

Packing group (ADR) : II
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable
Packing group (ADN) : Not applicable
Packing group (RID) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

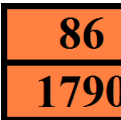
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14.6. Special precautions for user

- Overland transport

Classification code (ADR)	: CT1
Limited quantities (ADR)	: 11
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P001, IBC02
Mixed packing provisions (ADR)	: MP15
Portable tank and bulk container instructions (ADR)	: T8
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

No data available

- Air transport

No data available

- Inland waterway transport

No data available

- Rail transport

No data available

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

15.1.2. National regulations

Germany

VwVwS Annex reference : Water hazard class (WGK) 3, severe hazard to waters (Classification according to VwVwS, Annex 4)

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

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

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

Denmark

Recommendations Danish Regulation : 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 chemical safety assessment has been carried out

SECTION 16: Other information

Revision date :07/17/2018

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 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 2
Acute Tox. 2 (Oral)	Acute toxicity (oral), Category 2
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H300	Fatal if swallowed
H301	Toxic if swallowed
H310	Fatal in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H319	Causes serious eye irritation
H330	Fatal if inhaled
H331	Toxic if inhaled

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