



# Porcelain Etchant(9.5%HF)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 03/20/2018

Version: 1.0

### SECTION 1: Identification

#### 1.1. Identification

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

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : For RX only

#### 1.3. Supplier

##### Manufacturer

Bisco, Inc.  
1100 W. Irving Park Rd.  
Schaumburg, IL 60193  
T 1.847.534.6000 - F 1.847.891.5049  
[sales@bisco.com](mailto:sales@bisco.com) - [www.bisco.com](http://www.bisco.com)

#### 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: Hazard(s) identification

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

##### GHS-US classification

Acute toxicity (dermal) Category 1	H310	Fatal in contact with skin
Acute toxicity (inhalation:vapour) Category 3	H331	Toxic if inhaled
Skin corrosion/irritation Category 1A	H314	Causes severe skin burns and eye damage

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



Hazard statements (GHS-US) : H310 - Fatal in contact with skin  
H314 - Causes severe skin burns and eye damage  
H331 - Toxic if inhaled

Precautionary statements (GHS-US) : P260 - Do not breathe vapors  
P261 - Avoid breathing vapors  
P262 - Do not get in eyes, on skin, or on clothing  
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 Wash skin with soap and 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  
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, a doctor  
P311 - Call a POISON CENTER, a doctor  
P321 - Specific treatment (see First aid measures on this label)  
P322 - Specific treatment (see Wash skin with soap and water on this label)  
P361+P364 - Take off immediately all contaminated clothing and wash it before reuse  
P363 - Wash contaminated clothing before reuse

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P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
P405 - Store locked up  
P501 - Dispose in a safe manner in accordance with local/national regulations

### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Hydrofluoric Acid,7%<=conc<=60%,aqueous solutions	(CAS-No.) 7664-39-3	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

Full text of hazard classes and 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 (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. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

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

### 5.2. Specific hazards arising from the chemical

Fire hazard	: Combustible.
Reactivity	: The product is non-reactive under normal conditions of use, storage and transport.

### 5.3. Special protective equipment and precautions for fire-fighters

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/vapors/spray.

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

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Hydrofluoric Acid,7%<=conc<=60%,aqueous solutions (7664-39-3)

ACGIH	ACGIH TWA (ppm)	0.5 ppm (Hydrogen fluoride, as F; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	ACGIH Ceiling (ppm)	2 ppm (Hydrogen fluoride, as F; USA; Momentary value; TLV - Adopted Value)

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

#### Hand protection:

Protective gloves

#### Eye protection:

Protective goggles

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

Wear respiratory protection

## SECTION 9: Physical and chemical properties

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

Physical state : Liquid  
Appearance : Gel.  
Color : Yellow

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Odor	: Odorless
Odor threshold	: No data available
pH	: 0
Melting point	: < 0 °C
Freezing point	: No data available
Boiling point	: > 100 °C
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: > 1
Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: 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 : Dermal: Fatal in contact with skin. Inhalation:vapour: Toxic if inhaled.

Porcelain Etchant(9.5%HF)	
LD50 oral rat	> 2000
ATE US (dermal)	25.7864878804 mg/kg body weight
ATE US (vapors)	2.578648788 mg/l/4h
Hydrofluoric Acid,7%<=conc<=60%,aqueous solutions (7664-39-3)	
ATE US (oral)	5 mg/kg body weight
ATE US (dermal)	5 mg/kg body weight
ATE US (gases)	100 ppmV/4h
ATE US (vapors)	0.5 mg/l/4h
ATE US (dust, mist)	0.05 mg/l/4h

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Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: 2
Serious eye damage/irritation	: Not classified pH: 2
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Symptoms/effects after skin contact	: Burns.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : Before neutralisation, the product may represent a danger to aquatic organisms.

#### 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

#### 12.3. Bioaccumulative potential

##### Hydrofluoric Acid,7%<=conc<=60%,aqueous solutions (7664-39-3)

Log Pow	-0.9 (Calculated)
Bioaccumulative potential	Bioaccumulation: not applicable.

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

Effect on the global warming : No known effects from this product.  
GWPmix comment : No known effects from this product.

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

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

### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1790 Hydrofluoric acid (with not more than 60 percent strength), 8, II  
UN-No.(DOT) : UN1790  
Proper Shipping Name (DOT) : Hydrofluoric acid  
with not more than 60 percent strength  
Class (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136

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Packing group (DOT) : II - Medium Danger  
Hazard labels (DOT) : 8 - Corrosive  
6.1 - Poison



DOT Packaging Non Bulk (49 CFR 173.xxx) : 202  
DOT Packaging Bulk (49 CFR 173.xxx) : 243  
DOT Special Provisions (49 CFR 172.102) : A6 - For combination packaging, if plastic inner packaging are used, they must be packed in tightly closed metal receptacles before packing in outer packaging.  
A7 - Steel packaging must be corrosion-resistant or have protection against corrosion.  
B15 - Packaging must be protected with non-metallic linings impervious to the lading or have a suitable corrosion allowance.  
IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.  
N5 - Glass materials of construction are not authorized for any part of a packaging which is normally in contact with the hazardous material.  
N34 - Aluminum construction materials are not authorized for any part of a packaging which is normally in contact with the hazardous material.  
T8 - 4 178.274(d)(2) Normal..... Prohibited  
TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.  
TP12 - This material is considered highly corrosive to steel.  
DOT Packaging Exceptions (49 CFR 173.xxx) : 154  
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 30 L  
DOT Vessel Stowage Location : D - The material must be stowed "on deck only" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers or one passenger per each 3 m of overall vessel length, but the material is prohibited on passenger vessels in which the limiting number of passengers is exceeded.  
DOT Vessel Stowage Other : 12 - Keep as cool as reasonably practicable, 40 - Stow "clear of living quarters"  
Other information : No supplementary information available.

### TDG

Transport document description : UN1790 HYDROFLUORIC ACID (HYDROFLUORIC ACID), 8 (6.1), I  
UN-No. (TDG) : UN1790  
Proper Shipping Name (TDG) : HYDROFLUORIC ACID  
TDG Primary Hazard Classes : 8 - Class 8 - Corrosives  
Packing group : I - Great Danger  
TDG Subsidiary Classes : 6.1  
ERAP Index : 1 000  
Explosive Limit and Limited Quantity Index : 0  
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index : 0.5  
Passenger Carrying Ship Index : Forbidden

### Transport by sea

### Air transport

Transport document description (IATA) : UN 1790 , 8

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UN-No. (IATA) : 1790  
Class (IATA) : 8 - Corrosives

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

No additional information available

#### 15.2. International regulations

##### CANADA

No additional information available

##### EU-Regulations

No additional information available

##### National regulations

No additional information available

#### 15.3. US State regulations

No additional information available

### SECTION 16: Other information

Revision date : 01/30/2018

Full text of H-phrases:

H300	Fatal if swallowed
H310	Fatal in contact with skin
H314	Causes severe skin burns and eye damage
H330	Fatal if inhaled
H331	Toxic if inhaled

SDS US (GHS HazCom 2012)

*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*