

Porcelain Etch

Safety Data Sheet

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

Date of issue: 02 January 2019 Revision date: 02 January 2019 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Trade name : Porcelain Etch

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Hydrofluoric acid solution used to prepare the tooth or porcelain for cementation or repair
Restrictions on use : None known

1.3. Supplier

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: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Acute toxicity (oral) Category 3	Toxic if swallowed
Acute toxicity (dermal) Category 2	Fatal in contact with skin
Acute toxicity (inhalation) Category 3	Toxic if inhaled
Skin corrosion/irritation Category 1A	Causes severe skin burns and eye damage
Serious eye damage/eye irritation Category 1	Causes serious eye damage

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger

Hazard statements (GHS US) : Toxic if swallowed or if inhaled
Fatal in contact with skin
Causes severe skin burns and eye damage
Causes serious eye damage

Precautionary statements (GHS US) :

- Do not breathe mist, vapors.
- Do not get in eyes, on skin, or on clothing.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Wear protective gloves, eye protection.
- If swallowed: Immediately call a doctor, a POISON CENTER
- If swallowed: rinse mouth. Do NOT induce vomiting
- If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
- If inhaled: Remove person to fresh air and keep comfortable for breathing
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- Specific treatment (see supplemental first aid instructions on this label)
- Take off immediately all contaminated clothing and wash it before reuse.
- Wash contaminated clothing before reuse.
- Store in a well-ventilated place. Keep container tightly closed.
- Store locked up.
- Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

Porcelain Etch

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and 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	(CAS-No.) 7664-39-3	<= 9	Acute Tox. 2 (Oral), H300 Acute Tox. 1 (Dermal), H310 Acute Tox. 2 (Inhalation), H330 Skin Corr. 1A, H314 Eye Dam. 1, H318

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 : 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 (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. Immediate medical attention and special treatment, if necessary

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

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

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

5.2. Specific hazards arising from the chemical

- Fire hazard : On combustion, forms: carbon oxides (CO and CO₂). Combustion produces irritating gases. Toxic and corrosive vapors may be released.
- Explosion hazard : No direct explosion hazard.
- Reactivity : Stable under normal conditions of use.

5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Exercise caution when fighting any chemical fire.

Porcelain Etch

Safety Data Sheet

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

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

General measures : Avoid any direct contact with the product.

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, vapors. 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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Hydrofluoric acid (7664-39-3)		
ACGIH	ACGIH TWA (ppm)	0.5 ppm
ACGIH	ACGIH Ceiling (ppm)	2 ppm
OSHA	OSHA PEL (TWA) (ppm)	3 ppm
IDLH	US IDLH (ppm)	30 ppm
NIOSH	NIOSH REL (TWA) (mg/m ³)	2.5 mg/m ³
NIOSH	NIOSH REL (TWA) (ppm)	3 ppm
NIOSH	NIOSH REL (ceiling) (mg/m ³)	5 mg/m ³
NIOSH	NIOSH REL (ceiling) (ppm)	6 ppm
NIOSH	US-NIOSH chemical category	SK: SYS(FATAL)-DIR(COR) Apr 2011

Porcelain Etch

Safety Data Sheet

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

8.2. Appropriate engineering controls

- Appropriate engineering controls : Provide local exhaust or general room ventilation to minimize vapor concentrations. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
- Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Impermeable protective gloves

Eye protection:

Safety glasses with side shields

Skin and body protection:

Long sleeved protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. An approved organic vapor respirator/supplied air or self-contained breathing apparatus must be used when vapor 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.
- Color : light yellow
- Odor : Odorless
- Odor threshold : No data available
- pH : 1 - 1.5
- Melting point : No data available
- Freezing point : No data available
- Boiling point : No data available
- 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 : No data available
- 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

Stable under normal conditions of use.

10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use.

Porcelain Etch

Safety Data Sheet

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

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 CO₂). Combustion produces irritating gases. Toxic and corrosive vapors may be released.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

ATE US (oral)	56 mg/kg body weight
ATE US (dermal)	56 mg/kg body weight
ATE US (vapors)	3 mg/l/4h
ATE US (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)
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Skin corrosion/irritation : Causes severe skin burns and eye damage.
pH: 1 - 1.5

Serious eye damage/irritation : Causes serious eye damage.
pH: 1 - 1.5

Respiratory or skin sensitization : 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)

Specific target organ toxicity – single exposure : Not classified (Based on available data, the classification criteria are not met)

Specific target organ toxicity – 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)

Viscosity, kinematic : No data available

Likely routes of exposure : Inhalation. Ingestion. Skin and eye contact.

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.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : This material has not been tested for environmental effects.

Hydrofluoric acid (7664-39-3)

EC50 Daphnia 1	270 mg/l (Exposure time: 48 h - Species: Daphnia species)
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12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Hydrofluoric acid (7664-39-3)

BCF fish 1	(no bioaccumulation)
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Porcelain Etch

Safety Data Sheet

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

Hydrofluoric acid (7664-39-3)

Log Pow : -1.4

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal 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

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1790 Hydrofluoric acid, 8 (6.1), II
UN-No.(DOT) : UN1790
Proper Shipping Name (DOT) : Hydrofluoric acid
Class (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136
Packing group (DOT) : II - Medium Danger
Subsidiary risk (DOT) : 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132
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

Porcelain Etch

Safety Data Sheet

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

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"
Emergency Response Guide (ERG) Number	: 157
Other information	: No supplementary information available.

Transportation of Dangerous Goods

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

Transport by sea

Transport document description (IMDG)	: UN 1790 HYDROFLUORIC ACID, 8 (6.1), II
UN-No. (IMDG)	: 1790
Proper Shipping Name (IMDG)	: HYDROFLUORIC ACID
Class (IMDG)	: 8 - Corrosive substances
Packing group (IMDG)	: II - substances presenting medium danger
Subsidiary risks (IMDG)	: 6.1 - Toxic substances

Air transport

Transport document description (IATA)	: UN 1790 Hydrofluoric acid, 8 (6.1), II
UN-No. (IATA)	: 1790
Proper Shipping Name (IATA)	: Hydrofluoric acid
Class (IATA)	: 8 - Corrosives
Packing group (IATA)	: II - Medium Danger
Subsidiary risks (IATA)	: 6.1 - Toxic substances

SECTION 15: Regulatory information

15.1. US Federal regulations

Hydrofluoric acid (7664-39-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Subject to reporting requirements of United States SARA Section 313	
Listed on EPA Hazardous Air Pollutant (HAPS)	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	100 lb
Section 302 EPCRA Reportable Quantity (RQ)	100 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	100 lb

15.2. International regulations

CANADA

Hydrofluoric acid (7664-39-3)
Listed on the Canadian DSL (Domestic Substances List)

Porcelain Etch

Safety Data Sheet

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

EU-Regulations

Hydrofluoric acid (7664-39-3)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Hydrofluoric acid (7664-39-3)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Japanese Poisonous and Deleterious Substances Control Law
Japanese Pollutant Release and Transfer Register Law (PRTR Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

15.3. US State regulations

No additional information available

SECTION 16: Other information

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

Revision date : 02 January 2019

Full text of H-phrases:

H300	Fatal 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

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