

## **SAFETY DATA SHEETS**

**This SDS packet was issued with item:**

077144116

**The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).**

077086176

**The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).**

071080563

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

- **Product identifier**
- **Trade name:** **IPS Ceramic Etching Gel**
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation** Etching gel for dental ceramic
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Ivoclar Vivadent Inc.  
175 Pineview Drive, Amherst, N.Y. 14228  
USA  
Tel. +1 800 533 6825  
Fax +1 716 691 2285
- **Manufacturer/Supplier:**  
Ivoclar Vivadent Inc.  
2785 Skymark Avenue, Unit 1, Mississauga, Ontario L4W4Y3  
CANADA  
Tel. +1 800 263 8182  
Fax +1 905 238 5711
- **Information department:** Quality Assurance / Regulatory Affairs
- **Emergency telephone number:**  
24 Hour Emergency Assistance:  
Emergency-Call USA - Infotrac: 1-800-535-5053  
Emergency-Call Canada - Canutec: 1-613-996-6666
- **General MSDS Assistance:**  
US: 1-800-533-6825  
Canada: 1-800-263-8182



## 2 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

|           |                   |  |      |
|-----------|-------------------|--|------|
| 7664-39-3 | hydrofluoric acid |  H300; H310; H330;  H314 | 1-7% |
|-----------|-------------------|--|------|

## 3 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
-  **Toxic**  
Toxic by inhalation, in contact with skin and if swallowed.
-  **Corrosive**  
Causes burns.
- **Information concerning particular hazards for human and environment:**  
The product has to be labelled due to the calculation procedure of international guidelines.
- **Classification system:**  
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

· **Label elements**

- **Labelling according to EU guidelines:**  
The product has been classified and marked in accordance with directives on hazardous materials.

(Contd. on page 2)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 01/20/2011

Version number 10

Reviewed on 01/20/2011

Trade name: **IPS Ceramic Etching Gel**

(Contd. of page 1)

· **Code letter and hazard designation of product:**



Toxic

· **Hazard-determining components of labelling:**

hydrofluoric acid

· **Risk phrases:**

Toxic by inhalation, in contact with skin and if swallowed.  
Causes burns.

· **Safety phrases:**

Keep away from living quarters.  
Keep container in a well-ventilated place.  
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
Wear suitable protective clothing, gloves and eye/face protection.  
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
This material and its container must be disposed of as hazardous waste.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 4  
Fire = 0  
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 4  
Fire = 0  
Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## 4 First aid measures

· **Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.  
In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:**

Immediately rinse with water.  
Rub in Ca-gluconate solution or Ca-gluconate gel immediately.  
Seek medical treatment.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.  
Do not induce vomiting; immediately call for medical help.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

(Contd. on page 3)

USA

# Material Safety Data Sheet

## acc. to ISO/DIS 11014

Printing date 01/20/2011

Version number 10

Reviewed on 01/20/2011

**Trade name: IPS Ceramic Etching Gel**

(Contd. of page 2)

- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
The product is not flammable.  
Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture**  
Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.
- **Additional information** Cool endangered receptacles with water spray.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Use neutralizing agent.  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Alternative: Add IPS Ceramic neutralizing powder and wait for 5 minutes.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Store only in the original receptacle.  
The hydrofluoric acid in IPS Ceramic Etching Gel attacks quartz, silicate and borate glasses, as well as sanitary ceramics and various metals and alloys (e.g. high-grade steel). Nickel, copper, polyethylene, PVC, and Teflon are resistant to hydrofluoric acid.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

(Contd. on page 4)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 01/20/2011

Version number 10

Reviewed on 01/20/2011

Trade name: **IPS Ceramic Etching Gel**

(Contd. of page 3)

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

**7664-39-3 hydrogen fluoride**

|     |   |
|-----|---|
| PEL | 3 ppm<br>as F   |
| REL | Short-term value: C 5* mg/m <sup>3</sup> , C 6* ppm<br>Long-term value: 2.5 mg/m <sup>3</sup> , 3 ppm<br>*15-min, as F          |
| TLV | Short-term value: C 1.64 mg/m <sup>3</sup> , C 2* ppm<br>Long-term value: 0.41 mg/m <sup>3</sup> , 0.5* ppm<br>*as F; Skin; BEI |

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Usual hygienic measures for dental practice.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

Butyl rubber, BR

Fluorocarbon rubber (Viton)

Chloroprene rubber, CR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

USA

(Contd. on page 5)

# Material Safety Data Sheet

## acc. to ISO/DIS 11014

Printing date 01/20/2011

Version number 10

Reviewed on 01/20/2011

**Trade name: IPS Ceramic Etching Gel**

(Contd. of page 4)

### 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

**Form:** Viscous

**Color:** Red

· **Odor:** Pungent

· **Odour threshold:** Not determined.

· **pH-value at 20°C (68°F):** 2

· **Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** Undetermined.

· **Flash point:** Not applicable.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

**Lower:** Not determined.

**Upper:** Not determined.

· **Vapor pressure at 20°C (68°F):** 23 hPa (17 mm Hg)

· **Density at 20°C (68°F):** 1.13 g/cm<sup>3</sup> (9.43 lbs/gal)

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

**Water:** Soluble.

· **Segregation coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

**Dynamic:** Not determined.

**Kinematic:** Not determined.

· **Other information** No further relevant information available.

### 10 Stability and reactivity

· **Reactivity** No further relevant information available.

· **Chemical stability** Stable under normal handling and storage conditions.

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **Possibility of hazardous reactions** No dangerous reactions known.

· **Conditions to avoid** Keep away from heat and direct sunlight.

· **Incompatible materials:** No further relevant information available.

· **Hazardous decomposition products:** None under normal conditions of storage and use.

### 11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **Primary irritant effect:**

**on the skin:** Caustic effect on skin and mucous membranes.

**on the eye:** Strong caustic effect.

· **Sensitization:** No sensitizing effects known.

(Contd. on page 6)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 01/20/2011

Version number 10

Reviewed on 01/20/2011

**Trade name: IPS Ceramic Etching Gel**

(Contd. of page 5)

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Toxic

Corrosive

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

## 12 Ecological information

· **Toxicity**

· **Acquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Neutralize the etching gel! (see instructions for use)

To neutralize the diluted solution, add neutralizing powder and wait for 5 minutes. After 5 minutes, dispose of the neutralized solution under running water.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

· **DOT regulations:**



· **Hazard class:**

8

· **Identification number:**

UN1790

· **Packing group:**

II

· **Proper shipping name (technical name):** HYDROFLUORIC ACID

(Contd. on page 7)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 01/20/2011

Version number 10

Reviewed on 01/20/2011

**Trade name: IPS Ceramic Etching Gel**

(Contd. of page 6)

· **Label** 8+6.1

· **Land transport ADR/RID (cross-border):**



· **ADR/RID class:** 8 (CT1) Corrosive substances  
 · **Danger code (Kemler):** 86  
 · **UN-Number:** 1790  
 · **Packaging group:** II  
 · **Label:** 8+6.1  
 · **UN proper shipping name:** 1790 HYDROFLUORIC ACID

· **Maritime transport IMDG:**



· **IMDG Class:** 8  
 · **UN Number:** 1790  
 · **Label** 8+6.1  
 · **Packaging group:** II  
 · **EMS Number:** F-A,S-B  
 · **Marine pollutant:** No  
 · **Segregation groups** Acids  
 · **Propper shipping name:** HYDROFLUORIC ACID

· **Air transport ICAO-TI and IATA-DGR:**



· **ICAO/IATA Class:** 8  
 · **UN/ID Number:** 1790  
 · **Label** 8+6.1  
 · **Packaging group:** II  
 · **Propper shipping name:** HYDROFLUORIC ACID

· **Special precautions for user** Warning: Corrosive substances  
 · **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

## 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Sara**

· **Section 355 (extremely hazardous substances):**

7664-39-3 hydrofluoric acid

· **Section 313 (Specific toxic chemical listings):**

7664-39-3 hydrofluoric acid

· **TSCA (Toxic Substances Control Act):**

7732-18-5 water, distilled, conductivity or of similar purity

7664-39-3 hydrofluoric acid

(Contd. on page 8)

USA



# Material Safety Data Sheet

## acc. to ISO/DIS 11014

Printing date 01/20/2011

Version number 10

Reviewed on 01/20/2011

**Trade name: IPS Ceramic Etching Gel**

(Contd. of page 7)

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**



Toxic

· **Hazard-determining components of labelling:**

hydrofluoric acid

· **Risk phrases:**

Toxic by inhalation, in contact with skin and if swallowed.

Causes burns.

· **Safety phrases:**

Keep away from living quarters.

Keep container in a well-ventilated place.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wear suitable protective clothing, gloves and eye/face protection.

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

This material and its container must be disposed of as hazardous waste.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

USA

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 04/15/2016

Version number 13

Reviewed on 04/14/2016



**1 Identification**

- **Product identifier**
- **Trade name: *IPS Ceramic Etching Gel***
- **Application of the substance / the mixture** Etching gel for dental ceramic
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Ivoclar Vivadent Inc.  
175 Pineview Drive, Amherst, N.Y. 14228  
USA  
Tel. +1 800 533 6825  
Fax +1 716 691 2285
  
- Ivoclar Vivadent Inc.  
1-6600 Dixie Road  
Mississauga, Ontario  
L5T 2Y2  
Canada  
Phone: +1 905 670 8499  
Fax: +1 905 670 3102
- **Information department:** Quality Assurance / Regulatory Affairs
- **Emergency telephone number:**  
24 Hour Emergency Assistance:  
Emergency-Call USA - Infotrac: 1-800-535-5053  
Emergency-Call Canada - Canutec: 1-613-996-6666
  
- General SDS Assistance:  
US: 1-800-533-6825  
Canada: 1-800-263-8182

**2 Hazard(s) identification**

- **Classification of the substance or mixture**  
Acute Tox. 3 H301 Toxic if swallowed.  
Acute Tox. 2 H310 Fatal in contact with skin.  
Acute Tox. 4 H332 Harmful if inhaled.  
Skin Corr. 1B H314 Causes severe skin burns and eye damage.  
Eye Dam. 1 H318 Causes serious eye damage.

---

- **Label elements**
- **GHS label elements**  
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**  

  
 GHS05 GHS06
- **Signal word** Danger
- **Hazard-determining components of labeling:**  
hydrofluoric acid
- **Hazard statements**  
Toxic if swallowed.

(Contd. on page 2)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 04/15/2016

Version number 13

Reviewed on 04/14/2016

Trade name: **IPS Ceramic Etching Gel**

(Contd. of page 1)

*Fatal in contact with skin.*

*Harmful if inhaled.*

*Causes severe skin burns and eye damage.*

· **Precautionary statements**

*Wear protective gloves/protective clothing/eye protection/face protection.*

*IF SWALLOWED: Immediately call a POISON CENTER/ doctor.*

*If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*

*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*

*Continue rinsing.*

*If swallowed: Rinse mouth. Do NOT induce vomiting.*

*Specific measures (see on this label).*

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**

|            |   |                |
|------------|---|----------------|
| HEALTH     | 4 | Health = 4     |
| FIRE       | 0 | Fire = 0       |
| REACTIVITY | 0 | Reactivity = 0 |

· **Other hazards**

*Special safety notes for the use of IPS Ceramic Etching Gel: Hydrofluoric acid is highly toxic. It is strongly corrosive and does not cause any warning pain on the surface of skin and mucous membranes, but causes subsequent, painful in-depth effect.*

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### \* 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

|                |                   |         |
|----------------|-------------------|---------|
| CAS: 7664-39-3 | hydrofluoric acid | 2.5-<7% |
|----------------|-------------------|---------|

### 4 First-aid measures

· **Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:**

*Supply fresh air or oxygen; call for doctor.*

*In case of unconsciousness place patient stably in side position for transportation.*

· **After skin contact:**

*Immediately wash with water and soap and rinse thoroughly.*

*Rub in Ca-gluconate solution or Ca-gluconate gel immediately.*

*Seek medical treatment.*

· **After eye contact:**

*Rinse opened eye for several minutes under running water.*

*Seek immediate medical advice.*

(Contd. on page 3)

US

## Safety Data Sheet acc. to OSHA HCS

Printing date 04/15/2016

Version number 13

Reviewed on 04/14/2016

**Trade name: IPS Ceramic Etching Gel**

(Contd. of page 2)

- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
Do not induce vomiting; immediately call for medical help.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
Antidote: Ca-gluconate solution / Ca-gluconate gel

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
The product is not flammable.  
Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture**  
Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.
- **Additional information** Cool endangered receptacles with water spray.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Use neutralizing agent.  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Alternative: Add IPS Ceramic neutralizing powder and wait for 5 minutes.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Only adequately trained personnel should handle this product.  
For use in dentistry only.  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Store only in the original receptacle.  
The hydrofluoric acid in IPS Ceramic Etching Gel attacks quartz, silicate and borate glasses, as well as sanitary ceramics and various metals and alloys (e.g. high-grade steel). Nickel, copper, polyethylene, PVC, and Teflon are resistant to hydrofluoric acid.

(Contd. on page 4)

US

## Safety Data Sheet

acc. to OSHA HCS

Printing date 04/15/2016

Version number 13

Reviewed on 04/14/2016

**Trade name: IPS Ceramic Etching Gel**

(Contd. of page 3)

- **Information about storage in one common storage facility:** Store away from flammable substances.
- **Further information about storage conditions:**
  - Keep receptacle tightly sealed.
  - Protect from exposure to the light.
  - Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

**CAS: 7664-39-3 hydrofluoric acid**

|     |   |
|-----|---|
| PEL | Long-term value: 3 ppm<br>as F  |
| REL | Long-term value: 2.5 mg/m <sup>3</sup> , 3 ppm<br>Ceiling limit value: 5* mg/m <sup>3</sup> , 6* ppm<br>*15-min, as F       |
| TLV | Long-term value: 0.41 mg/m <sup>3</sup> , 0.5 ppm<br>Ceiling limit value: 1.64 mg/m <sup>3</sup> , 2 ppm<br>as F; Skin; BEI |

- **Ingredients with biological limit values:**

**CAS: 7664-39-3 hydrofluoric acid**

|     |   |
|-----|---|
| BEI | 3 mg/g creatinine<br>Medium: urine<br>Time: prior to shift<br>Parameter: Flourides (background) |
|     | 10 mg/g creatinine<br>Medium: urine<br>Time: end of shift<br>Parameter: Flourides (background)  |

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Usual hygienic measures for dental practice and dental laboratories.  
 Keep away from foodstuffs, beverages and feed.  
 Wash hands before breaks and at the end of work.  
 Remove contaminated clothing and wash before reuse.  
 Store protective clothing separately.  
 Avoid contact with the eyes and skin.  
 Do not inhale gases / fumes / aerosols.

- **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- **Recommended filter device for short term use:**

Combination filter E-P2  
 Combination filter B-P2

(Contd. on page 5)

US

## Safety Data Sheet

acc. to OSHA HCS

Printing date 04/15/2016

Version number 13

Reviewed on 04/14/2016

**Trade name: IPS Ceramic Etching Gel**

(Contd. of page 4)

· **Protection of hands:**



Protective gloves

After use of gloves apply skin-cleaning agents and skin cosmetics.

· **Material of gloves**

Butyl rubber, BR

Fluorocarbon rubber (Viton)

Chloroprene rubber, CR

PVC gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

· **Body protection:** Protective work clothing

### 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Viscous

Color: Red

· **Odor:** Pungent

· **Odor threshold:** Not determined.

· **pH-value at 20 °C (68 °F):** 2

· **Change in condition**

Melting point/Melting range: Not applicable.

Boiling point/Boiling range: Undetermined.

· **Flash point:** Not applicable.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

· **Vapor pressure:** Not determined.

· **Density at 20 °C (68 °F):** 1.13 g/cm<sup>3</sup> (9.43 lbs/gal)

· **Relative density** Not determined.

· **Vapor density** Not determined.

· **Evaporation rate** Not determined.

(Contd. on page 6)

US

## Safety Data Sheet

acc. to OSHA HCS

Printing date 04/15/2016

Version number 13

Reviewed on 04/14/2016

**Trade name: IPS Ceramic Etching Gel**

(Contd. of page 5)

- |   |  |
|---|--|
| <b>· Solubility in / Miscibility with Water:</b>  | Fully miscible.                            |
| <b>· Partition coefficient (n-octanol/water):</b> | Not determined.                            |
| <b>· Viscosity:</b>                               |  |
| <b>Dynamic:</b>                                   | Not determined.                            |
| <b>Kinematic:</b>                                 | Not determined.                            |
| <b>· Other information</b>                        | No further relevant information available. |

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability** Stable under normal handling and storage conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions**
- Reacts with:
- Ammonia
- Sulfuric acid
- Reacts with alkali (lyes).
- Reacts with organic substances.
- Reacts with metals forming hydrogen.
- **Conditions to avoid** Keep away from heat and direct sunlight.
- **Incompatible materials:** Attacks materials containing glass and silicate.
- **Hazardous decomposition products:** None under normal conditions of storage and use.

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:**
- Strong caustic effect.
- Strong irritant with the danger of severe eye injury.
- **Additional toxicological information:**
- Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **Carcinogenic categories**

|  |
|--|
| <b>· NTP (National Toxicology Program)</b> |
| None of the ingredients is listed.         |

|  |
|--|
| <b>· OSHA-Ca (Occupational Safety &amp; Health Administration)</b> |
| None of the ingredients is listed.                                 |

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.

(Contd. on page 7)

US



## Safety Data Sheet

acc. to OSHA HCS

Printing date 04/15/2016

Version number 13

Reviewed on 04/14/2016

**Trade name: IPS Ceramic Etching Gel**





(Contd. of page 6)

- **Additional ecological information:**
- **General notes:**  
*Water hazard class 1 (Self-assessment): slightly hazardous for water*  
*Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.*  
*Must not reach bodies of water or drainage ditch undiluted or unneutralized.*
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
*Neutralize the etching gel! (see instructions for use)*  
*To neutralize the diluted solution, add neutralizing powder and wait for 5 minutes. After 5 minutes, dispose of the neutralized solution under running water.*  
*Take to an approved landfill or a waste incineration plant, under conditions approved by the local authority.*
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, ADR, RID, ADN, IMDG, IATA</b></li> </ul>                         | <p style="margin-left: 20px;">UNI790</p>  |
| <ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>ADR/RID/ADN</b></li> <li>· <b>IMDG, IATA</b></li> </ul> | <p style="margin-left: 20px;">1790 HYDROFLUORIC ACID<br/>HYDROFLUORIC ACID</p>  |
| <ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT</b></li> </ul>                                   | <div style="display: flex; align-items: center; gap: 10px;">   </div> |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>  | <p style="margin-left: 20px;">8 Corrosive substances<br/>8, 6.1</p>   |
| <ul style="list-style-type: none"> <li>· <b>ADR/RID/ADN</b></li> </ul>  | <div style="display: flex; align-items: center; gap: 10px;">   </div> |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>  | <p style="margin-left: 20px;">8 (CT1) Corrosive substances<br/>8+6.1</p>  |

(Contd. on page 8)

US



## Safety Data Sheet

acc. to OSHA HCS

Printing date 04/15/2016

Version number 13

Reviewed on 04/14/2016

**Trade name: IPS Ceramic Etching Gel**

(Contd. of page 7)

· **IMDG**



· **Class** 8 Corrosive substances  
 · **Label** 8/6.1

· **IATA**



· **Class** 8 Corrosive substances  
 · **Label** 8 (6.1)

· **Packing group**  
 · **DOT, ADR, RID, ADN, IMDG, IATA** II

· **Environmental hazards:**  
 · **Marine pollutant:** No

· **Special precautions for user** Warning: Corrosive substances  
 · **Danger code (Kemler):** 86  
 · **EMS Number:** F-A, S-B  
 · **Segregation groups** Acids

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **ADR/RID/ADN**  
 · **Excepted quantities (EQ)** Code: E2  
 Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 500 ml

· **IMDG**  
 · **Limited quantities (LQ)** 1L  
 · **Excepted quantities (EQ)** Code: E2  
 Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":** UN1790, HYDROFLUORIC ACID, 8 (6.1), II

### 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Sara**

· **Section 355 (extremely hazardous substances):**

CAS: 7664-39-3 hydrofluoric acid

· **Section 313 (Specific toxic chemical listings):**

CAS: 7664-39-3 hydrofluoric acid

(Contd. on page 9)

US

## Safety Data Sheet acc. to OSHA HCS

Printing date 04/15/2016

Version number 13

Reviewed on 04/14/2016

**Trade name: IPS Ceramic Etching Gel**

(Contd. of page 8)

· **TSCA (Toxic Substances Control Act):**

CAS: 7664-39-3 hydrofluoric acid

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS05 GHS06

· **Signal word Danger**

· **Hazard-determining components of labeling:**

hydrofluoric acid

· **Hazard statements**

Toxic if swallowed.

Fatal in contact with skin.

Harmful if inhaled.

Causes severe skin burns and eye damage.

· **Precautionary statements**

Wear protective gloves/protective clothing/eye protection/face protection.

IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If swallowed: Rinse mouth. Do NOT induce vomiting.

Specific measures (see on this label).

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

(Contd. on page 10)

US

## Safety Data Sheet

### acc. to OSHA HCS

Printing date 04/15/2016

Version number 13

Reviewed on 04/14/2016

**Trade name: *IPS Ceramic Etching Gel***

(Contd. of page 9)

· **Date of preparation / last revision** 04/15/2016 / 12

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Acute Tox. 3: Acute toxicity, Hazard Category 3

Acute Tox. 2: Acute toxicity, Hazard Category 2

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

· **\* Data compared to the previous version altered.**

US