SAFETY DATA SHEET (GHS)

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1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE/PRODUCT AND MANUFACTURER/IMPORTER

1.1 Product identifier:-

Product name: **IPS Ceramic Etching Gel**
Product number: 531548 / 531550

1.2 Other means of identification:-

Not applicable.

1.3 Recommended use of the chemical and restrictions on use:-

Not applicable.

Identified uses: Etching Gel for dental ceramic.

1.4 Details of the manufacturer and importer:-

Manufacturer:
Ivoclar Vivadent AG
Bendererstrasse 2 FL-9494 Schaan
Principality of Liechtenstein
Tel: + 423 235 35 35 Fax: + 423 235 33 60

Importer:
Ivoclar Vivadent Pty Ltd
1- 5 Overseas Drive Noble Park North VIC 3174
Tel: + 61 3 9795 9599 Fax: + 61 3 9795 9645
Email: info@ivoclarvivadent.com

1.5 Emergency phone number:
13 11 26
Poisons Hotline (24 hours / 7 days)

2. HAZARD(S) IDENTIFICATION

2.1 GHS Classification:-

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.

2.2 GHS Label elements, including precautionary statements:-

Hazard Pictogram:


GHS05


GHS06

Signal word: Danger

Hazard-determining components of labelling: Hydrofluoric acid

Hazard statements:
H301 Toxic if swallowed.
H310 Fatal in contact with skin.
H332 Harmful if inhaled.
H314 Causes severe skin burns and eye damage.

Precautionary statements:
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

	P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P501 Dispose of contents/container in accordance with local/ regional/ national/ international regulations.

Additional information:
EUH071 Corrosive to the respiratory tract.

2.3 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

Ingredient name	CAS No.	Classification	Concentration
Hydrofluoric acid	7664-39-3	Acute Tox. 2 - H300 Acute Tox. 1- H310 Acute Tox. 2 - H330 Skin Corr. 1A - H314	2.5<7%%
Non-hazardous ingredients	N/A	N/A	to 100%

For the full text of the H-Statements mentioned in this Section, refer to Section 16.

4. FIRST AID MEASURES

4.1 Description of necessary first aid measures:-

General advice:	Remove contaminated clothing and shoes immediately and launder thoroughly before reusing. First aid facilities include first aid rooms and medical centres. If a risk assessment determines that a first aid room or medical centre is not needed, a rest area within the workplace may be suitable to assist an injured or ill person.
If inhaled:	Ensure supply of fresh air or oxygen – seek medical attention immediately. If required, provide artificial respiration. Remove affected person from the immediate area. Keep patient warm. In case of unconsciousness place patient stably in side position for transportation.
In case of skin contact:	Wash off immediately with water and soap and rinse thoroughly. Rub in Ca-gluconate solution or Ca-gluconate gel immediately – seek medical attention immediately.
In case of eye contact:	Remove contact lenses, irrigate copiously with clean, fresh water for at least 15 minutes holding the eyelids apart and seek medical attention immediately.
If swallowed:	Do not induce vomiting. Rinse mouth thoroughly with water. Let plenty of water be drunk in small gulps. Never give anything by mouth to an unconscious person. Seek medical attention immediately.
4.2 Symptoms caused by exposure:-	Please refer to section 2.2 and section 11.

5. FIRE FIGHTING MEASURES

5.1 Suitable extinguishing equipment:-

Suitable extinguishing media:	The product is not flammable. Use fire extinguishing methods suitable to surrounding conditions.
Unsuitable extinguishing media:	No further relevant information available.
5.2 Specific hazards arising from the substance/mixture/product	Formation of toxic gases is possible during heating or in case of fire.

5.3 Special protective equipment and precautions for fire fighters:-

Special personal protective equipment:	Wear self-contained respiratory protective device.
Precautions:	Cool endangered receptacles with water spray.
Hazchem code:	8 Corrosive substances.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:-

Wear protective equipment. Keep unprotected persons away.
Use of suitable equipment (incl PPE) to prevent contamination of skin, eyes, clothing, removal of ignition sources, ventilation, emergency procedures (eg. evacuate, consult expert).

6.2 Environmental precautions:-

Do not allow to enter sewers/surface or ground water.

6.3 Methods and materials for containment and cleaning up:-

Use neutralising 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.
Do not flush with water or aqueous cleansing agents.

6.4 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

7.1 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.
Keep ignition sources away – do not smoke.
Wash hands before breaks and after work.
Do not eat, drink or smoke during work time.
Remove soiled or soaked clothing immediately.
Keep away from foodstuffs and beverages.

7.2 Conditions for safe storage, including any incompatibilities:-

Store only in original container.
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:

Store away from flammable substances.

Further information about storage conditions:

Keep container tightly sealed.
Protect from exposure to the light.
Protect from heat and direct sunlight.

Containers which are opened must be carefully closed and kept upright to prevent leakage.
Store in cool, dry conditions in well-sealed receptacles.
Store receptacle in a well ventilated area.
Recommended storage temperature for storage rooms and vessels is 20 - 30°C.

7.3 Specific end use:-
No further relevant information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure control measures:-
Occupational exposure limits:

Component	CAS No.	Value	Parameters	Basis
Hydrofluoric acid	7664-39-3	Short-term value: 2.5 mg/m^3 Long-term value: 1.5 mg/m^3	3 ppm 1.8 ppm	The lists valid during the making were used as basis.

Exposure should be kept to as low as practicable and below the AOES.

8.2 Biological monitoring:-
Assess in accordance with exposure limits – please refer to section 8.1.
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.
Immediately remove all soiled and contaminated clothing.
Store protective clothing separately.
Avoid contact with the eyes and skin.
Do not inhale gases / fumes / aerosols.

8.3 Control banding:-
Use good industrial hygiene practice and general ventilation**.**

8.4 Engineering controls:-
In case of intensive contact, wear protective gloves (EN 374).
Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties).
Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves.
Protective gloves shall be replaced immediately when physically damaged or worn.

8.5 Individual protection measures include PPE:-

Eye/face protection:

Safety glasses
Use tightly fitting safety glasses as per Australian Standard AS 1336 and AS/NZS 1337.

Skin protection: 	**Protective gloves** After use of gloves apply skin-cleaning agents and skin cosmetics. 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). PVA gloves. 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 cannot 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.
Respiratory protection:	Provide for good ventilation of working area (local exhaust ventilation, if necessary). In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Recommended filter device for short term use:	Combination filter E-P2. Combination filter B-P2.
Body Protection:	Protective work clothing.

9. PHYSICAL/CHEMICAL PROPERTIES

9.1 Information on physical/chemical properties:-

a)	**Appearance/Form:**	Viscous.
b)	**Colour:**	Red.
c)	**Odour:**	Pungent.
d)	**Odour threshold:**	Not determined.
e)	**pH value at 20°C:**	2.
f)	**Melting point/melting range:**	Not applicable.
g)	**Boiling point/boiling range:**	Undetermined.
h)	**Flash point:**	Not applicable.
i)	**Ignition temperature:**	Not applicable.
j)	**Self-igniting:**	Product is not self-igniting.
k)	**Danger of explosion:**	Product is not explosion hazard.
l)	**Upper/lower flammability or explosive limits:**	Lower: Not determined. Upper: Not determined.
m)	**Vapour pressure:**	Not determined.
n)	**Density at 20°C:**	1.13 g/cm^3.
o)	**Relative density:**	Not determined.
p)	**Vapour density:**	Not determined.
q)	**Evaporation rate:**	Not determined.

r)	**Solubility in/miscibility with water:**	Fully miscible.
s)	**Partition coefficient: n- octanol/water:**	Not determined.
t)	**Viscosity:**	Dynamic: Not determined. Kinematic: Not determined.

10. STABILITY AND REACTIVITY

10.1 Reactivity:-
No further relevant information available.

10.2 Chemical stability:-
Stable under normal handling and storage conditions.
Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions:-
Reacts with:
Ammonia
Sulphuric acid
Reacts with alkali (lyes).
Reacts with organic substances.
Reacts with metals forming hydrogen.

10.4 Conditions to avoid:-
Keep away from heat and direct sunlight.

10.5 Incompatible materials:-
Attacks materials containing glass and silicate.

10.6 Hazardous decomposition products:-
None under normal conditions of storage and use.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:-
Acute toxicity:
Toxic if swallowed.
Fatal in contact with skin.
Harmful if inhaled.
Values relevant for classification:
No further relevant information available.

Skin corrosion/irritation:	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation:	Causes serious eye damage.
Respiratory or skin sensitization:	Based on available data, the classification criteria are not met.
Germ cell mutagenicity:	Based on available data, the classification criteria are not met.
Carcinogenicity:	Based on available data, the classification criteria are not met.
Reproductive toxicity:	Based on available data, the classification criteria are not met.
Specific target organ toxicity - single exposure:	Based on available data, the classification criteria are not met.
Specific target organ toxicity - repeated exposure:	Based on available data, the classification criteria are not met.
Aspiration hazard:	Based on available data, the classification criteria are not met.
Additional information:	Based on available data, the classification criteria are not met.

11.2	**Information on possible routes of exposure:-**	
	Short Term (Acute) Exposure:	No further relevant information available.
	Swallowed:	Toxic if swallowed.
	Eyes:	Causes serious eye damage.
	Skin:	Causes severe skin burns and eye damage.
	Inhaled:	Harmful if inhaled.
	Long Term (Chronic) Exposure:	No further relevant information available.
	Swallowed:	Toxic if swallowed.
	Eyes:	Causes serious eye damage.
	Skin:	Causes severe skin burns and eye damage.
	Inhaled:	Harmful if inhaled.
11.3	**Early onset symptoms related to exposure:-**	No further relevant information available.
11.4	**Delayed health effects from exposure:-**	No further relevant information available.
11.5	**Exposure levels and health effects:-**	No further relevant information available.
11.6	**Interactive effects:-**	No further relevant information available.
11.7	**Other:-**	No further relevant information available.

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity:-
No further relevant information available.

12.2 Persistence/degradability:-
No further relevant information available.

12.3 Bioaccumulative potential:-
No further relevant information available.

12.4 Mobility in soil:-
No further relevant information available.

12.5 Other adverse effects:-
No further relevant information available.

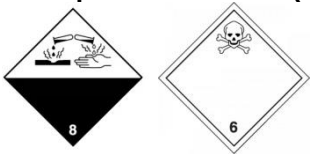
Additional ecological information / General notes:
Do not allow undiluted product or large quantities if it to reach ground water, water course or sewage system.

12.6 Other adverse effects:-
No further relevant information available.

13. DISPOSAL CONSIDERATIONS

13.1 Disposal methods:-
Neutralise the etching gel (see instructions for use).
To neutralise the diluted solution, add neutralising powder and wait for 5 minutes. After 5 minutes, dispose of the neutralised solution under running water.
Must not be disposed together with household garbage.
Do not allow product to reach sewage system.
Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal.
Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.
Disposal must be made according to official regulations.
Take to an approved landfill or a waste incineration plant, under conditions approved by the local authority.

14. TRANSPORT INFORMATION

UN number ADR / IMDG / IATA:-	UN1790
UN proper shipping name or technical name:-	
ADR:	1790 HYDROFLUORIC ACID.
IMDG, IATA:	HYDROFLUORIC ACID.
Transport hazard class(es):	
	8 (CTI) Corrosive substances.
Label:	8 + 6.1
Packaging group:	II
Environmental hazards:	Not applicable.
Special precautions for user:	Warning: Corrosive substances.
Danger code:	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.
Additional information – ADR:-	
Limited quantities:	1L
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 m
Transport category:	2
Tunnel restriction code:	E
Additional information – IMDG:-	
Limited quantities:	1L
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 m
Hazchem or emergency action code:	8 (CTI) Corrosive substances.

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance/mixture/product:-

Classified as Hazardous according to the criteria of the National Occupational Health and Safety Commission (NOHSC) approved criteria for the classifying hazardous substances [NOHSC: 1008] 3rd edition.
Standard for the Uniform Scheduling of Medicines and Poisons.
Carcinogen classification under WHS Regulation 2011, Schedule 10.
Notification status in accordance with section 3 and current national legislation.

16. OTHER INFORMATION

Key to abbreviations/acronyms used in SDS:-	H300 Fatal if swallowed. H310 Fatal in contact with skin. H314 Causes severe skin burns and eye damage. H330 Fatal if inhaled.

Key literature references/data sources used to compile SDS:-
Standard EN420:2003 General requirements for protective gloves: disposable gloves, e.g. nitrile rubber, material thickness 0.1 mm (Australian Standard 2161).
Long-term exposure (Level 6: < 480 min): protective gloves, e.g. nitrile rubber, material thickness 0.7 mm (Australian Standard 2161).
Personal eye protection - Eye and face protectors for occupational applications: safety glasses (Australian Standard AS 1336 and AS/NZS 1337.1:2010).

Copyright statement:-

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.
IATA: International Air Transport Association.
GHS: Globally Harmonised System of Classification and Labelling of Chemicals.
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).
LC50: Lethal concentration, 50 percent.
LD50: Lethal dose, 50 percent.
Flam. Liq. 2: Flammable liquids, Hazard Category 2.
Flam. Liq. 3: Flammable liquids, Hazard Category 3.
Acute Tox. 4: Acute toxicity, Hazard Category 4.
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2.
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2.
Repr. 2: Reproductive toxicity, Hazard Category 2.
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3.
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2.
Asp. Tox. 1: Aspiration hazard, Hazard Category 1.
*** Data compared to the previous version altered**

Disclaimer:-