



Safety Data Sheet

acc. to OSHA HCS

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Printing date 07/16/2025

Reviewed on 07/16/2025

*

1 Identification

- **Product identifier**
- **Trade name:** Ultra-Etch™ & Opal™ Etch
- **Article number:** SDS 7-001.21R01, 10947, 10944, 10946, 10991, 383, 500090, 5004, 685, 685-CE
- **Application of the substance / the mixture** Professional dental acid etching solution
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Ultradent Products Inc.
505 W. Ultradent Drive (10200 S)
South Jordan, UT 84095-3942
USA
onlineordersupport@ultradent.com
(800) 552-5512
- **Information department:** Customer Service
- **Emergency telephone number:**
CHEMTREC (NORTH AMERICA) : +1 (800) 424-9300
(INTERNATIONAL) : +(703) 527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Toxic to Reproduction 2 H361 Suspected of damaging fertility or the unborn child.



GHS05 Corrosion

Skin Corrosion 1A H314 Causes severe skin burns and eye damage.



GHS07

Acute Toxicity - Inhalation 4 H332 Harmful if inhaled.

- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** GHS05, GHS07, GHS08
- **Signal word** Danger
- **Health Hazard-determining components of labeling:**
Phosphoric Acid
Dimethicone
- **Hazard statements**
H332 Harmful if inhaled.
H314 Causes severe skin burns and eye damage.
H361 Suspected of damaging fertility or the unborn child.

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Precautionary statements

- P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P260 Do not breathe dusts or mists.
 P264 Wash thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.
 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/doctor.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P321 Specific treatment (see on this label).
 P363 Wash contaminated clothing before reuse.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:

NFPA ratings (scale 0 - 4)



HMIS-ratings (scale 0 - 4)

HEALTH	*3	Health = *3
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

3 Composition/information on ingredients

Chemical characterization: Mixtures

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

Dangerous components:

7664-38-2	Phosphoric Acid	≥25-<40%
25322-68-3	Polyethylene Glycol	1-10%
	Trade Secret	1-10%
	Dimethicone	≥0.1-<1%

Additional information:

The specific chemical identity of composition is being withheld as a trade secret. The specific chemical identity is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of paragraph §1910.1200.

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4 First-aid measures

- **Description of first aid measures**

- **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- **After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

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

- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

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

- **After swallowing:**

If swallowed in large quantities seek medical attention.

Drink copious amounts of water and provide fresh air. Immediately call a doctor.

- **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**

No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:**

Dry Chemical

Carbon dioxide

Alcohol resistant foam

Water spray

Use fire fighting measures that suit the environment.

- **Special hazards arising from the substance or mixture**

Phosphine, oxides of phosphorous, hydrogen gas

During heating or in case of fire poisonous gases are produced.

- **Advice for firefighters**

General: Evacuate all personnel.

Use fire extinguishing methods suitable to surrounding conditions.

- **Protective equipment:**

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Mount respiratory protective device.

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:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralizing agent.

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

- **Reference to other sections**

See Section 7 for information on safe handling.

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See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- **Handling:**

- **Precautions for safe handling**

Safety glasses should be used by the patient and doctor. Use equipment for eye protection tested and approved under appropriate standards such as ANSI Z87.1

Avoid contact with eyes, skin, and clothing.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

- **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.

Provide ventilation for receptacles.

- **Information about storage in one common storage facility:**

Store away from water.

Store away from metals.

- **Further information about storage conditions:**

Store in a cool place.

See product labelling.

Keep receptacle tightly sealed.

- **Specific end use(s)** Professional Dental Acid Etching Solution

8 Exposure controls/personal protection

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

- **Control parameters**

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

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

At this time, the remaining constituent has no known exposure limits.

7664-38-2 Phosphoric Acid

PEL Long-term value: 1 mg/m³

REL Short-term value: 3 mg/m³

Long-term value: 1 mg/m³

TLV Short-term value: 3 mg/m³

Long-term value: 1 mg/m³

25322-68-3 Polyethylene Glycol

WEEL Long-term value: 10 mg/m³

(H); MW>200

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TWA Short-term value: 0.8 mg/m³

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

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- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Do not eat or drink while working.

When using do not smoke.

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.

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 is based on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of 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 breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**

Safety glasses should be used and by the patient and doctor. Use equipment for eye protection tested and approved under appropriate standards such as ANSI Z87.1



Tightly sealed goggles

- **Body protection:** Protective work clothing

9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

Form: Gel

Color: Blue

· **Odor:** Odorless

· **Odor threshold:** Not determined.

· **pH-value at 20 °C:** <1

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· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C
· Flash point:	Not applicable
· Flammability:	Not applicable.
· Decomposition temperature:	Not determined.
· Ignition temperature:	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:	1.3 g/cm ³
· Relative density	Not determined
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined
· Other information	Refractive Index 34-37 Brix

10 Stability and reactivity

- **Reactivity Stable**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid**
Water, Moist Air
Extreme heat and open flames.
- **Incompatible materials:** Strong caustics, most metals
- **Hazardous decomposition products:** Phosphine, oxides of phosphorous, hydrogen gas
- **Additional information:**
Reacts with bases to form phosphate salts and is corrosive (especially when hot) to many metals and alloys. Liberates explosive hydrogen gas when reacting with chlorides and stainless steel, and reacts violently with sodium tetrahydroborate. Forms flammable gases with sulfides, mercaptans, cyanides and aldehydes. Also forms toxic fumes with cyanides, sulfides, fluorides, organic peroxides and halogenated organics

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11 Toxicological information

· **Information on toxicological effects**· **Acute toxicity:**· **LD/LC50 values that are relevant for classification:****ATE (Acute Toxicity Estimate)**

Oral	LD50	4,358 mg/kg (rat)
------	------	-------------------

7664-38-2 Phosphoric Acid

Oral	LD50	1,530 mg/kg (rat)
Dermal	LD50	2,740 mg/kg (rabbit)
Inhalative	LC50/4 h	0.42225 mg/l (rabbit)

25322-68-3 Polyethylene Glycol

Oral	LD50	19,600 mg/kg (guinea pig)
		17,300 mg/kg (mouse)
		>10,000 mg/kg (rat)
	LC50 Fish	>100 mg/l (Fish)
	LD50	>20,000 mg/kg (rabbit)
Dermal	LC50(Daphnia magna)	>10,000 mg/l (Water Flea) (Toxicity to aquatic invertebrates)

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Oral	LD50	>15,000 mg/kg (mouse)
		>3,300 mg/kg (rat)
		>10,000 mg/l (Fish) (Toxicity to fish)
Dermal	LD50	>5,000 mg/kg (rabbit)
	Inhalative LC50/4 h	0.139 mg/l (rat)

· **Primary irritant effect:**· **on the skin:** Strong caustic effect on skin and mucous membranes.· **on the eye:** Strong caustic effect.· **Sensitization:** No sensitizing effects known.· **Additional toxicological information:**

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

Harmful

Corrosive

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

· **Carcinogenic categories**· **IARC (International Agency for Research on Cancer)**

1345-16-0	Dark Blue Pigment	2B
68186-87-8	Cobalt Zinc Aluminate Blue Spinel	2B
68186-85-6	Cobalt Titanate Green Spinel	2B

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

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12 Ecological information

· Toxicity

· Aquatic toxicity:

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EC50 >1,000 mg/kg (daphnia)

· **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.

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

· **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:**

Dispose of contents/container in accordance with international, federal, state, and local regulations.

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

14 Transport information

· **UN-Number**· **DOT, IMDG, IATA**

UN1805

· **UN proper shipping name**· **DOT**· **IMDG, IATA**

Phosphoric acid solution

PHOSPHORIC ACID, SOLUTION

· **Transport hazard class(es)**· **DOT**· **Class**

8 Corrosive substances

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· Label	8
· IMDG, IATA	
	
· Class	8 Corrosive substances
· Label	8
· Packing group	
· DOT, IMDG, IATA	III
· Environmental hazards:	Not Applicable.
· Special precautions for user	Warning: Corrosive substances
· Hazard identification number (Kemler code):	80
· EMS Number:	F-A,S-B
· Segregation groups	(SGG1) Acids
· Stowage Category	A
· Segregation Code	SG36 Stow "separated from" SGG18-alkalis. SG49 Stow "separated from" SGG6-cyanides
· Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not Applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 1805 PHOSPHORIC ACID SOLUTION, 8, III

15 Regulatory information

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

No further relevant information available.

· **Sara**

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

None of the ingredients is listed.

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

7664-38-2 Phosphoric Acid

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1345-16-0 Dark Blue Pigment

68186-87-8 Cobalt Zinc Aluminate Blue Spinel

68186-85-6 Cobalt Titanate Green Spinel

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

7664-38-2	Phosphoric Acid	ACTIVE
25322-68-3	Polyethylene Glycol	ACTIVE

· **Hazardous Air Pollutants**

1345-16-0	Dark Blue Pigment
68186-87-8	Cobalt Zinc Aluminate Blue Spinel
68186-85-6	Cobalt Titanate Green Spinel

· **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.

· **ACGIH Carcinogenicity (American Conference of Governmental Industrial Hygienists)**

Trade Secret

A4

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

None of the ingredients is listed.

· **Chemical safety assessment:**

Device is a strong acid and is extremely toxic. It is to be used only as directed with PPE, and only by licensed dental professionals.

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.

· **Department issuing SDS:** Environmental, Health, and Safety· **Contact:** Customer Service· **Date of preparation / last revision** 07/16/2025 / -· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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

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*PEL: Permissible Exposure Limit**REL: Recommended Exposure Limit**Acute Toxicity - Inhalation 4: Acute toxicity – Category 4**Skin Corrosion 1A: Skin corrosion/irritation – Category 1A**Toxic to Reproduction 2: Reproductive toxicity – Category 2**· * Data compared to the previous version altered.*

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