Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 06.10.2022 *Version number 1* *Revision: 06.10.2022*

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

· **Product identifier**

· **Trade name: PQ1™**

· **Article number:** SDS 26-001.13, 63311
· **Relevant identified uses of the substance or mixture and uses advised against**
Professional Dental Bonding Agent
· **Application of the substance / the mixture** Professional Dental Bonding Agent

· **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

EC Responsible Person
Ultradent Products GmbH
Am Westhover Berg 30
51149 Cologne Germany
Email: infoDE@ultradent.com
Emergency Phone: +49(0)2203-35-92-0

· **Further information obtainable from:** Customer Service
· **Emergency telephone number:**
CHEMTREC (NORTH AMERICA) :(800) 424-9300
(INTERNATIONAL) : +(703) 527-3887

2 Hazards identification

· **Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**


flame

Flam. Liq. 3 H226 Flammable liquid and vapour.


corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.

Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335 May cause respiratory irritation.

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· **Label elements**
· **Labelling according to Regulation (EC) No 1272/2008** Void
· **Hazard pictograms** GHS02, GHS05, GHS07
· **Signal word** Danger

· **Hazard-determining components of labelling:**
Trade Secret
2-Hydroxyethyl Methacrylate
Methacrylic Acid
Organophosphine Oxide
· **Hazard statements**
H226 Flammable liquid and vapour.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
· **Precautionary statements**

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or 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.
P310	Immediately call a POISON CENTER/doctor.
P321	Specific treatment (see on this label).
P362+P364	Take off contaminated clothing and wash it before reuse.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition/information on ingredients

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

· **Dangerous components:**

	Trade Secret Skin Corr. 1A, H314; Eye Dam. 1, H318	>10-<25%
CAS: 868-77-9 EINECS: 212-782-2	2-Hydroxyethyl Methacrylate Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	>10-<25%
CAS: 64-17-5 EINECS: 200-578-6	Ethyl Alcohol Flam. Liq. 2, H225	>1-<10%
CAS: 2530-85-0 EINECS: 219-785-8	Silane Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	>0.1-<10%
CAS: 79-41-4 EINECS: 201-204-4	Methacrylic Acid Acute Tox. 3, H331; Skin Corr. 1A, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H312 Specific concentration limit: STOT SE 3; H335: C ≥ 1 %	>1-<10%

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CAS: 162881-26-7 ELINCS: 423-340-5	Organophosphine Oxide Skin Sens. 1A, H317; Aquatic Chronic 4, H413	<1%
CAS: 128-37-0 EINECS: 204-881-4	Butylated Hydroxytoluene Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302	≥0.025-<0.25%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

· **Description of first aid measures**
· **General information:** Immediately remove any clothing soiled by the product.
· **After inhalation:**
Supply fresh air and to be sure call for a 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.
· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:**
Rinse mouth with water.
Drink plenty of water and provide fresh air. Call for a doctor immediately.
· **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 Firefighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:** Foam, dry chemical, carbon dioxide
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
· **Advice for firefighters:**
· **Protective equipment:**
Wear fully protective suit.
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 neutralising agent.
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.

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See Section 13 for disposal information.

7 Handling and storage

· ***Precautions for safe handling:***
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· ***Information about fire - and explosion protection:***
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.

· ***Conditions for safe storage, including any incompatibilities***
· ***Storage:***
· ***Requirements to be met by storerooms and receptacles:*** *No special requirements.*
· ***Information about storage in one common storage facility:*** *Not required.*
· ***Further information about storage conditions:***
See product labelling.
Keep container tightly sealed.
· ***Specific end use(s)*** *Professional Dental Bonding Agent*

8 Exposure controls/personal protection

· ***Control parameters***

· ***Ingredients with limit values that require monitoring at the workplace:***	
64-17-5 Ethyl Alcohol	
WEL	*Long-term value: 1920 mg/m³, 1000 ppm*
79-41-4 Methacrylic Acid	
WEL	*Short-term value: 143 mg/m³, 40 ppm* *Long-term value: 72 mg/m³, 20 ppm*
128-37-0 Butylated Hydroxytoluene	
WEL	*Long-term value: 10 mg/m³*

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

· ***Exposure controls***
· ***Appropriate engineering controls*** *No further data; see item 7.*
· ***Individual protection measures, such as personal protective equipment***
· ***General protective and hygienic measures:***
Ensure that washing facilities are available at the work place.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
· ***Respiratory protection:***
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.

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· ***Hand protection***

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***
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/face protection***

Tightly sealed goggles

· ***Body protection:*** *Protective work clothing*

9 Physical and chemical properties

· ***Information on basic physical and chemical properties***	
· ***General Information***	
· ***Physical state***	*Fluid*
· ***Colour:***	*Yellow*
· ***Odour:***	*Acrylic*
· ***Odour threshold:***	*Not determined.*
· ***Melting point/freezing point:***	*Undetermined.*
· ***Boiling point or initial boiling point and boiling range***	*Undetermined.*
· ***Flammability***	*Flammable.*
· ***Lower and upper explosion limit***	
· ***Lower:***	*Not determined.*
· ***Upper:***	*Not determined.*
· ***Flash point:***	*36 °C*
· ***Decomposition temperature:***	*Not determined.*
· ***pH***	*Not applicable (non-aqueous)*
· ***Viscosity:***	
· ***Kinematic viscosity***	*Not determined.*
· ***Dynamic:***	*Not determined.*
· ***Solubility***	
· ***water:***	*Not miscible or difficult to mix.*
· ***Partition coefficient n-octanol/water (log value)***	*Not determined.*
· ***Vapour pressure:***	*Not determined.*
· ***Density and/or relative density***	
· ***Density at 20 °C:***	*1.39 g/cm³*
· ***Relative density***	*Not determined.*
· ***Vapour density***	*Not determined.*

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· ***Other information***	
· ***Appearance:***	
· ***Form:***	*Liquid*
· ***Important information on protection of health and environment, and on safety.***	
· ***Auto-ignition temperature:***	*Product is not selfigniting.*
· ***Explosive properties:***	*Product is not explosive. However, formation of explosive air/vapour mixtures are possible.*
· ***Change in condition***	
· ***Evaporation rate***	*Not determined.*

· ***Information with regard to physical hazard classes***	
· ***Explosives***	*Void*
· ***Flammable gases***	*Void*
· ***Aerosols***	*Void*
· ***Oxidising gases***	*Void*
· ***Gases under pressure***	*Void*
· ***Flammable liquids***	*Flammable liquid and vapour.*
· ***Flammable solids***	*Void*
· ***Self-reactive substances and mixtures***	*Void*
· ***Pyrophoric liquids***	*Void*
· ***Pyrophoric solids***	*Void*
· ***Self-heating substances and mixtures***	*Void*
· ***Substances and mixtures, which emit flammable gases in contact with water***	*Void*
· ***Oxidising liquids***	*Void*
· ***Oxidising solids***	*Void*
· ***Organic peroxides***	*Void*
· ***Corrosive to metals***	*Void*
· ***Desensitised explosives***	*Void*

10 Stability and reactivity

· ***Reactivity*** *Stable*
· ***Chemical stability*** *Stable under recommended 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:***
Light
Sparks
Flames
Heat
· ***Incompatible materials:*** *No further relevant information available.*
· ***Hazardous decomposition products:*** *No dangerous decomposition products known.*

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11 Toxicological information

· ***Information on hazard classes as defined in Regulation (EC) No 1272/2008***
· ***Acute toxicity***

· ***LD/LC50 values relevant for classification:***		
ATE (Acute Toxicity Estimates)		
Oral	*LD50*	*17,667 mg/kg*
Dermal	*LD50*	*8,333 mg/kg (rabbit)*
Inhalative	*LC50/4 h*	*118 mg/l*

868-77-9 2-Hydroxyethyl Methacrylate		
Oral	*LD50*	*3,275 mg/kg (mouse)*
		>5,000 mg/kg (rat)
	LC50 Fish	*>100 mg/l (Fish)*
Dermal	*LD50*	*>3,000 mg/kg (rabbit)*
	LC50(Daphnia magna)	*24.1 mg/l (daphnia)*

64-17-5 Ethyl Alcohol		
Oral	*LD50*	*5,600 mg/kg (Guinea pig)*
		3,400 mg/kg (mouse)
		7,060 mg/kg (rat)
	LC50 Fish	*>10,000 mg/l (Fish)*
Inhalative	*LC50/4 h*	*39 mg/l (mouse)*
		20,000 mg/l (rat)

79-41-4 Methacrylic Acid		
Oral	*LD50*	*1,250 mg/kg (mouse)*
		1,060 mg/kg (rat)
		1,200 mg/kg (rabbit)
	LC50 Fish	*86 mg/l (Fish)*
Dermal	*LD50*	*1,000 mg/kg (Guinea pig)*
		500 mg/kg (rabbit)
Inhalative	*LC50/4 h*	*7.1 mg/l (rat)*

162881-26-7 Organophosphine Oxide		
Oral	*LD50*	*>2,000 mg/kg (rat)*
	LC50 Fish	*>0.09 mg/l (Fish) (Toxicity to fish)*
Dermal	*LD50*	*>2,000 mg/kg (rat)*

128-37-0 Butylated Hydroxytoluene		
Oral	*LD50*	*10,700 mg/kg (Guinea pig)*
		1,040 mg/kg (mouse)
		890 mg/kg (rat)
	LC50 Fish	*5.3 mg/l (Fish)*
Dermal	*LD50*	*>2,000 mg/kg (rat)*

· ***Skin corrosion/irritation*** *Causes severe skin burns and eye damage.*
· ***Serious eye damage/irritation*** *Causes serious eye damage.*
· ***Respiratory or skin sensitisation*** *May cause an allergic skin reaction.*
· ***STOT-single exposure*** *May cause respiratory irritation.*

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· **Information on other hazards**

· **Endocrine disrupting properties**		
128-37-0	Butylated Hydroxytoluene	List II

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**	
868-77-9 2-Hydroxyethyl Methacrylate	
EC50	345 mg/kg (Algae)
64-17-5 Ethyl Alcohol	
Algae Toxicity	1,000 mg/l (Algae)
79-41-4 Methacrylic Acid	
EC50	17,000 mg/kg (Algae) <180 mg/kg (daphnia) (Toxicity to aquatic invertebrates)
162881-26-7 Organophosphine Oxide	
EC50 (static)	>1.175 mg/kg (daphnia) (Toxicity to aquatic invertebrates)
Aqua toxicity	≥0.008 mg/l (daphnia) (Daphnia Magna Reproduction Test)
Toxicity to Aquatic Plants (static)	>0.26 mg/l (Plant) (Toxicity to algae)
128-37-0 Butylated Hydroxytoluene	
Aqua toxicity (static)	0.48 mg/l (daphnia) (Toxicity to aquatic invertebrates)

· **Persistence and degradability** No further relevant information available.
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Endocrine disrupting properties** For information on endocrine disrupting properties see section 11.
· **Other adverse effects**
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (German Regulation) (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 sewage water or drainage ditch undiluted or unneutralised.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation**
Dispose of contents/container in accordance with international, federal, state, and local regulations.

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

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14 Transport information

· **UN number or ID number**	
· **ADR, IMDG, IATA**	UN1987
· **UN proper shipping name**	
· **ADR**	1987 ALCOHOLS, N.O.S. (METHACRYLIC ACID, STABILIZED, Ethyl Alcohol)
· **IMDG, IATA**	ALCOHOLS, N.O.S. (METHACRYLIC ACID, STABILIZED, Ethyl Alcohol)
· **Transport hazard class(es)**	
· **ADR, IMDG, IATA**	
· **Class**	3 Flammable liquids.
· **Label**	3
· **Packing group**	
· **ADR, IMDG, IATA**	III
· **Environmental hazards:**	Not applicable.
· **Special precautions for user**	Warning: Flammable liquids.
· **Hazard identification number (Kemler code):**	30
· **EMS Number:**	F-E,S-D
· **Stowage Category**	B
· **Maritime transport in bulk according to IMO instruments**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **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
· **Transport category**	3
· **Tunnel restriction code**	D/E
· **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 1987 ALCOHOLS, N.O.S. (METHACRYLIC ACID, STABILIZED, ETHYL ALCOHOL), 3, III

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15 Regulatory information

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

· ***Directive 2012/18/EU***
· ***Named dangerous substances - ANNEX I*** *None of the ingredients is listed.*
· ***Seveso category*** *P5c FLAMMABLE LIQUIDS*
· ***Qualifying quantity (tonnes) for the application of lower-tier requirements*** *5,000 t*
· ***Qualifying quantity (tonnes) for the application of upper-tier requirements*** *50,000 t*
· ***Chemical safety assessment:***
Device is biocompatible when used as directed by dental professionals per ISO 10993-1

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.

· ***Relevant phrases from Section 3***
H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H413 May cause long lasting harmful effects to aquatic life.

· ***Department issuing SDS:*** *Environmental, Health, and Safety*
· ***Contact:*** *Customer Service*
· ***Abbreviations and acronyms:***
ADR: Accord relatif au transport international 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
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 3: Acute toxicity – Category 3
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Skin Sens. 1A: Skin sensitisation – Category 1A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

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Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4

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

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

· **Product identifier**

· **Trade name: Ultra-Etch™ & Opal™ Etch**

· **Article number:** 10947
· **Index number:** SDS 7-001.20
· **Relevant identified uses of the substance or mixture and uses advised against**
Professional Dental Acid Etching Solution
· **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

EC Responsible Person
Ultradent Products GmbH
Am Westhover Berg 30
51149 Cologne Germany
Email: infoDE@ultradent.com
Emergency Phone: +49(0)2203-35-92-0

· **Further information obtainable from:** Customer Service
· **Emergency telephone number:**
CHEMTREC (NORTH AMERICA) :(800) 424-9300
(INTERNATIONAL) : +(703) 527-3887

2 Hazards identification

· **Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**

GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

GHS07

Acute Tox. 4 H332 Harmful if inhaled.

· **Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The Regulation EC 1272/2008 on classification, labeling and packaging of substances and mixtures (CLP) shall not apply to a medical device in the finished state used in direct physical contact with the human body according to Art. 1.5 (d). Therefore, the product is exempted from the CLP labeling requirements, and no SDS is required by Regulation 1907/2006, Art. 2 (6c), REACH. Therefore, all given data, classification, and information on this SDS are provided solely on a voluntary basis.
· **Hazard pictograms** GHS05, GHS07
· **Signal word** Danger

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Trade name: Ultra-Etch™ & Opal™ Etch

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· **Hazard-determining components of labelling:**
Phosphoric Acid
· **Hazard statements**
H332 Harmful if inhaled.
H314 Causes severe skin burns and eye damage.
· **Precautionary statements**

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
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 [or 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.
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.

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterisation: Mixtures**
· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 7664-38-2 EINECS: 231-633-2	Phosphoric Acid Acute Tox. 1, H330; Met. Corr.1, H290; Skin Corr. 1B, H314; Eye Dam. 1, H318; Acute Tox. 4, H302	<40%
	Dimethicone Repr. 2, H361f; STOT RE 2, H373	<1%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

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.

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· ***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 plenty of water and provide fresh air. Call for a doctor immediately.
· ***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 Firefighting measures

· ***Extinguishing media***
· ***Suitable extinguishing agents:***
Dry Chemical
Carbon dioxide
Alcohol resistant foam
Water spray
Use fire extinguishing methods suitable to surrounding conditions.
· ***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 neutralising agent.
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:***
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

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Avoid contact with eyes, skin, and clothing.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· ***Information about fire - and explosion protection:***
Keep ignition sources away - Do not smoke.
Keep respiratory protective device available.

· ***Conditions for safe storage, including any incompatibilities***
· ***Storage:***
· ***Requirements to be met by storerooms and receptacles:***
Store in a cool location.
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:***
Protect from heat and direct sunlight.
Store in a cool place.
See product labelling.
Keep container tightly sealed.
· ***Specific end use(s)*** *Professional Dental Acid Etching Solution*

8 Exposure controls/personal protection

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

· ***Control parameters***

· ***Ingredients with limit values that require monitoring at the workplace:***	
7664-38-2 Phosphoric Acid	
WEL (Great Britain)	*Short-term value: 2 mg/m³* *Long-term value: 1 mg/m³*

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

· ***Exposure controls***
· ***Personal protective equipment:***
· ***General protective and hygienic measures:***
Do not inhale gases / fumes / aerosols.
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.
Avoid contact with the eyes and skin.
· ***Respiratory protection:***
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.
· ***Protection of hands:***

Protective gloves

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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**
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
Colour:	Blue
· **Odour:**	Odourless
· **Odour threshold:**	Not determined.
· **pH-value at 20 °C:**	<1
· **Change in condition**	
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	100 °C
· **Flash point:**	Not applicable.
· **Flammability (solid, gas):**	Not applicable.
· **Decomposition temperature:**	Not determined.
· **Auto-ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapour pressure:**	Not determined.
· **Density at 20 °C:**	1.3 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not determined.

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· **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.
· **Solvent content:**	
Water:	<60 %
VOC (EC)	0.00 %
Solids content:	<20.0 %
· **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, hyrogen gas
· **Additional information:**
Reacts with bases to form phosphate salts and is corrosive (especially when hot) to many metals and alloys. Liberates exposive 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

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity**
Harmful if inhaled.

· **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	4,358 mg/kg (rat)
Inhalative	LC50/4 h	0.92 mg/l

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)

· **Primary irritant effect:**
· **Skin corrosion/irritation**
Causes severe skin burns and eye damage.

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· **Serious eye damage/irritation**
Causes severe skin burns and eye damage.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **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.
· **STOT-single exposure** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behaviour 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 (German Regulation) (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 sewage water or drainage ditch undiluted or unneutralised.
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**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**	
HP6	Acute Toxicity
HP8	Corrosive

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

14 Transport information

· **UN-Number**
· **ADR, IMDG, IATA** UN1805

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· **UN proper shipping name**	
· **ADR**	1805 PHOSPHORIC ACID, SOLUTION mixture
· **IMDG, IATA**	PHOSPHORIC ACID, SOLUTION mixture
· **Transport hazard class(es)**	
· **ADR, IMDG, IATA**	
· **Class**	8 Corrosive substances.
· **Label**	8
· **Packing group**	
· **ADR, 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**	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 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **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
· **Transport category**	3
· **Tunnel restriction code**	E
· **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 MIXTURE, 8, III

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

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· ***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.

· ***Relevant phrases***
H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H330 Fatal if inhaled.
H361f Suspected of damaging fertility.
H373 May cause damage to organs through prolonged or repeated exposure.

· ***Department issuing SDS:*** *Regulatory Affairs*
· ***Contact:*** *Customer Service*
· ***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)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Met. Corr.1: Corrosive to metals – Category 1
Acute Tox. 4: Acute toxicity - oral – Category 4
Acute Tox. 1: Acute toxicity - inhalation – Category 1
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Repr. 2: Reproductive toxicity – Category 2
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2