

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**



Flam. Liq. 3 H226 Flammable liquid and vapour.



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

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

· **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/m ³ , 1000 ppm
79-41-4 Methacrylic Acid	
WEL	Short-term value: 143 mg/m ³ , 40 ppm Long-term value: 72 mg/m ³ , 20 ppm
128-37-0 Butylated Hydroxytoluene	
WEL	Long-term value: 10 mg/m ³

- **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/cm ³
· 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)
Dermal	LC50 Fish	>100 mg/l (Fish)
	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)
Inhalative	LC50 Fish	>10,000 mg/l (Fish)
	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)
Dermal	LC50 Fish	86 mg/l (Fish)
	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)
Dermal	LC50 Fish	>0.09 mg/l (Fish) (Toxicity to fish)
	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)
Dermal	LC50 Fish	5.3 mg/l (Fish)
	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 AcidEC50 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 · IMDG, IATA	1987 ALCOHOLS, N.O.S. (METHACRYLIC ACID, STABILIZED, Ethyl Alcohol) ALCOHOLS, N.O.S. (METHACRYLIC ACID, STABILIZED, Ethyl Alcohol)
· Transport hazard class(es) · ADR, IMDG, IATA	
· Class · Label	3 Flammable liquids. 3
· Packing group · ADR, IMDG, IATA	III
· Environmental hazards:	Not applicable.
· Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category	Warning: Flammable liquids. 30 F-E,S-D B
· Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ) · Transport category · Tunnel restriction code	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml 3 D/E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	5L 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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