

1 Identification

- **Product identifier**
- **Trade name:** CLEARFIL Universal Bond Quick 2
- **Article number:** US255
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Dental materials
- **Details of the supplier of the safety data sheet**
- **Supplier**
Kuraray America, Inc.
32 Old Slip, 7th Floor, New York,
NY 10005 U.S.A.
Tel: 800-879-1676
Website: www.kuraraydental.com
- **Emergency telephone number:**
CHEMTREC; day and night, within USA and Canada
1-800-424-9300 CCN706984 or +1 703-527-3887 (collect calls accepted)

2 Hazard(s) identification

- **Classification of the substance or mixture**
Flammable Liquids 3 H226 Flammable liquid and vapor.
Sensitization - Skin 1 H317 May cause an allergic skin reaction.
- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Warning
- **Hazard-determining components of labeling:**
2-hydroxyethyl methacrylate
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide
- **Hazard statements**
H226 Flammable liquid and vapor.
H317 May cause an allergic skin reaction.
- **Precautionary statements**

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P363	Wash contaminated clothing before reuse.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

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· vPvB: Not applicable.

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3 Composition/information on ingredients· **Chemical characterization: Mixtures**· **Description:** Mixture of substances listed below with nonhazardous additions.· **Dangerous components:**

64-17-5	ethanol ⚠ Flammable Liquids 2, H225	10 - 25%
868-77-9	2-hydroxyethyl methacrylate ⚠ Skin Irritation 2, H315; Eye Irritation 2A, H319; Sensitization - Skin 1, H317	5 - 15%
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide ⚠ Sensitization - Skin 1A, H317; Aquatic Chronic 4, H413	< 1%

· **Other ingredients:**

Bisphenol A diglycidylmethacrylate
 Hydrophilic amide monomers
 Water
 10-Methacryloyloxydecyl dihydrogen phosphate
 Amorphous silica
 Urethane tetramethacrylate
 Accelerators
 dl-Camphorquinone

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.· **After swallowing:** If symptoms persist consult 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:**CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.· **Special hazards arising from the substance or mixture** No further relevant information available.· **Advice for firefighters**· **Protective equipment:** No special measures required.**6 Accidental release measures**· **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

See Section 8.

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- **Environmental precautions:**

Dilute with plenty of water.

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).

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

Contain spill, then place in a suitable container. Minimize dust generation. Do not flush to sewer or allow to enter waterways.

Vacuum or sweep material and place in a disposal container. Provide ventilation.

Use appropriate Personal Protective Equipment (PPE).

- **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

- **Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Avoid contact with skin and eyes, Do not swallow. Avoid generating dust. Do not breathe dust/fume/gas/mist/vapors /spray.

- **Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:** Store in a cool location (2-25°C).

- **Information about storage in one common storage facility:** Not required.

- **Further information about storage conditions:**

Keep receptacle tightly sealed.

Protect from heat and direct sunlight.

Store in cool, dry conditions in well sealed receptacles.

- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Control parameters**

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

64-17-5 ethanol

PEL Long-term value: 1900 mg/m³, 1000 ppm

REL Long-term value: 1900 mg/m³, 1000 ppm

TLV Short-term value: 1000 ppm

A3

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

- **Exposure controls**

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

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

- **Breathing equipment:** Suitable respiratory protective device recommended.

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· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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

· **Material of gloves**

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

· **Penetration time of glove material**

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

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

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

· **General Information**

· Physical state	Liquid
· Color:	Yellow
· Odor:	Alcohol-like
· Odor threshold:	Not determined.
· Melting point/Melting range:	Not determined.
· Boiling point/Boiling range:	78 °C (64-17-5 ethanol)
· Flammability (solid, gaseous):	Flammable.
· Explosion limits:	
· Lower:	3.5 Vol % (64-17-5 ethanol)
· Upper:	15 Vol % (64-17-5 ethanol)
· Flash point:	35 °C
· Auto ignition temperature:	256 °C (Hydrophilic amide monomer)
· Decomposition temperature:	Not applicable.
· pH-value at 20 °C:	2.4 ± 0.4
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic:	Not determined.
· Solubility in / Miscibility with	
· Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not applicable.
· Vapor pressure at 20 °C:	59 hPa (64-17-5 ethanol)
· Density:	Not determined.
· Relative density	Not determined.
· Relative vapor density	Not determined.

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- **Other information**
- **Important information on protection of health and environment, and on safety.**
- **Danger of explosion:**

Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

- **Evaporation rate**

Not determined.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** Carbon monoxide and carbon dioxide

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.

- **LD/LC50 values that are relevant for classification:**

868-77-9 2-hydroxyethyl methacrylate

Oral	LD50	4,680 mg/kg (guinea pig)
		3,275 mg/kg (mouse)
		5,050 mg/kg (rat)
Dermal	LD50	5,000 mg/kg (rabbit)

- **on the skin:** Based on available data, the classification criteria are not met.
- **on the eye:** Based on available data, the classification criteria are not met.
- **Sensitization:**
May cause an allergic skin reaction.
- **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.
- **Subacute to chronic toxicity:**

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **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.
- **Other adverse effects**
- **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.

13 Disposal considerations

- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|---|--|
| · UN-Number | UN1993 |
| · DOT, IMDG, IATA | |
| · UN proper shipping name | Flammable liquids, n.o.s. (Ethanol) |
| · DOT | FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL)) |
| · IMDG, IATA | |
| · Transport hazard class(es) | |
| · DOT | |
|  | |
| · Class | 3 Flammable liquids |
| · Label | 3 |
| · IMDG, IATA | |
|  | |
| · Class | 3 Flammable liquids |
| · Label | 3 |
| · Packing group | |
| · DOT, IMDG, IATA | III |
| · Environmental hazards: | Not applicable. |

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· Special precautions for user	Warning: Flammable liquids
· Hazard identification number (Kemler code): 30	
· EMS Number:	F-E, <u>S</u> -E
· Stowage Category	A
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· 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 1993 FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL)), 3, III

* 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· Section 355 (extremely hazardous substances):

None of the ingredient is listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

- SARA 311/312: See Section 2 for the information on physical and health hazards.

· TSCA (Toxic Substances Control Act):

64-17-5	ethanol	ACTIVE
868-77-9	2-hydroxyethyl methacrylate	ACTIVE
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	ACTIVE

· Hazardous Air Pollutants

None of the ingredients is listed.

· 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.

· Cancerogenity categories :

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value)

None of the ingredients is listed.

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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

- H225 Highly flammable liquid and vapor.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H413 May cause long lasting harmful effects to aquatic life.

· NFPA ratings (scale 0 - 4)

Health = 0
Fire = 3
Reactivity = 0

· HMIS-ratings (scale 0 - 4)

Health = 0
Fire = 3
Reactivity = 0

· Abbreviations and acronyms:

- DOT: US Department of Transportation
- ELINCS: European List of Notified Chemical Substances
- TLV: Threshold Limit Value
- PEL: Permissible Exposure Limit
- REL: Recommended Exposure Limit
- Flammable Liquids 2: Flammable liquids – Category 2
- Flammable Liquids 3: Flammable liquids – Category 3
- Skin Irritation 2: Skin corrosion/irritation – Category 2
- Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A
- Sensitization - Skin 1: Skin sensitisation – Category 1
- Sensitization - Skin 1A: Skin sensitisation – Category 1A
- 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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