

1 Identification

- **Product identifier**
- **Trade name:** CLEARFIL LINER BOND 2V ; BOND B
- **Article number:** US061-BB
- **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**
Skin Irritation 2 H315 Causes skin irritation.
Eye Irritation 2A H319 Causes serious eye irritation.
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**



GHS07

- **Signal word** Warning
- **Hazard-determining components of labeling:**
2-hydroxyethyl methacrylate
benzoyl peroxide
- **Hazard statements**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
- **Precautionary statements**
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P264 Wash thoroughly after handling.
P280 Wear protective gloves / eye protection / face protection.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P362+P364 Take off contaminated clothing and wash it before reuse.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P321 Specific treatment (see on this label).
P337+P313 If eye irritation persists: Get medical advice/attention.
P363 Wash contaminated clothing before reuse.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

Dangerous components:

868-77-9	2-hydroxyethyl methacrylate ⚠ Skin Irritation 2, H315; Eye Irritation 2A, H319; Sensitization - Skin 1, H317	20 - 40%
94-36-0	benzoyl peroxide ⚠ Organic Peroxides - Type B, H241; ⚠ Eye Irritation 2A, H319; Sensitization - Skin 1, H317	< 3%

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. If symptoms persist, consult a doctor.
- **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.
Use fire fighting measures that suit the environment.
- **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** See Section 8.
- **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).

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- **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:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a refrigerator (2-8°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:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **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:**
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.
- **Breathing equipment:** Suitable respiratory protective device recommended.
- **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.

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- **Penetration time of glove material**
The exact break trough 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:** Transparent
- **Odor:** Odorless
- **Odor threshold:** Not determined.
- **Melting point/Melting range:** Not determined.
- **Boiling point/Boiling range:** 213 °C (868-77-9 2-hydroxyethyl methacrylate)
- **Flammability:** Not determined.
- **Explosion limits:**
- **Lower:** Not determined.
- **Upper:** Not determined.
- **Flash point:** 106 °C (868-77-9 2-hydroxyethyl methacrylate)
- **Auto ignition temperature:** 375 °C (868-77-9 2-hydroxyethyl methacrylate)
- **Decomposition temperature:** Not applicable.
- **pH-value:** Not determined.
- **Viscosity:**
- **Kinematic viscosity** Not determined.
- **Dynamic:** Not determined.
- **Solubility in / Miscibility with**
- **Water:** Not miscible or difficult to mix.
- **Partition coefficient (n-octanol/water):** Not applicable.
- **Vapor pressure at 68 °C:** 1.3 hPa (868-77-9 2-hydroxyethyl methacrylate)
- **Density at 20 °C:** 1.1 g/cm³
- **Relative density** Not determined.
- **Relative vapor density** Not determined.

· **Other information**

· **Important information on protection of health and environment, and on safety.**

- **Danger of explosion:** Product does not present an explosion hazard.
- **Evaporation rate** Not determined.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability** No hazardous reaction when handled and stored according to provisions.
- **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

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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)
94-36-0 benzoyl peroxide		
Oral	LD50	5,700 mg/kg (mouse) 7,710 mg/kg (rat)
	LD50	250 mg/kg (mouse - intraperitoneal)

- **on the skin:**
Causes skin irritation.
- **on the eye:**
Causes serious eye irritation.
- **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.

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

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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:** Dispose of packaging according to regulations on the disposal of packagings.

14 Transport information

· UN-Number	
· DOT, IMDG, IATA	Void
· UN proper shipping name	
· DOT, IMDG, IATA	Void
· Transport hazard class(es)	
· DOT, IMDG, IATA	
· Class	Void
· Packing group	
· DOT, IMDG, IATA	Void
· Environmental hazards:	Not applicable.
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	Void

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):**
94-36-0 benzoyl peroxide

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

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

868-77-9	2-hydroxyethyl methacrylate	ACTIVE
94-36-0	benzoyl peroxide	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.

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· **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.

· **Carcinogenicity categories :**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value)**

None of the ingredients is listed.

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**

H241 Heating may cause a fire or explosion.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

· **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 1

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 2

Fire = 1

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

Organic Peroxides - Type B: Organic peroxides – Type B

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

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