

**Safety Data Sheet  
acc. to OSHA HCS**

Printing date 05/12/2015

Reviewed on 05/12/2015

**1 Identification**

· **Product identifier**

· **Trade name: iBOND Total Etch**

· **Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

· **Application of the substance / the mixture** Dental bonding material

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Heraeus Kulzer GmbH  
Grüner Weg 11, D-63450 Hanau

Tel.: 0800 4372522

· **Information department:**

Marc Henn  
Tel. +1 (574) 2995444 / Fax: +1 (574) 2912542  
e-mail: marc.henn@kulzer-dental.com

· **Emergency telephone number:**

Emergency CONTACT (24-Hour-Number)  
GBK/Infotrac ID 105860: (domestic) 1 800 535 5053 or international (001) 352 323 3500

**2 Hazard(s) identification**

· **Classification of the substance or mixture**

Flam. Liq. 3 H226 Flammable liquid and vapour.  
Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Carc. 1A H350 May cause cancer.  
Eye Dam. 1 H318 Causes serious eye damage.  
Skin Irrit. 2 H315 Causes skin irritation.  
Skin Sens. 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 GHS05 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**

ethanol  
2-hydroxyethyl methacrylate  
glutaral  
4-methacryloxyethyltrimellitic acid anhydride

· **Hazard statements**

Flammable liquid and vapour.  
Causes skin irritation.  
Causes serious eye damage.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.  
May cause cancer.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Use explosion-proof electrical/ventilating/lighting/equipment.

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**IF ON SKIN (or hair):** Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

**IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system**

- **NFPA ratings for USA (scale 0-4)**



Health = 2  
Fire = 3  
Reactivity = 0

- **HMS-Ratings (Scale 0-4)**



Health = \*2  
Fire = 3  
Reactivity = 0

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

**3 Composition/information on ingredients**

- **Chemical characterization: Mixtures**

- **Description:** -

- **Dangerous components:**

64-17-5	ethanol	25-50%
868-77-9	2-hydroxyethyl methacrylate	10-25%
	Poly(methacrylic-oligo-acrylic acid)	0-5%
70293-55-9	4-methacryloxyethyltrimellitic acid anhydride	0-5%
111-30-8	glutaral	0-5%

**4 First-aid measures**

- **Description of first aid measures**

- **After inhalation** Supply fresh air; consult doctor in case of complaints.

- **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** Immediately call a 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**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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- **For safety reasons unsuitable extinguishing agents** Water with full jet.
- **Special hazards arising from the substance or mixture**  
Can form explosive gas-air mixtures.  
Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
  - **Protective equipment:** Mount respiratory protective device.
  - **Additional information** -

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Do not allow to penetrate the ground/soil.  
No special measures required.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid binding material (diatomite, universal binders, for small amounts tissues).  
Send for recovery or disposal in suitable receptacles.
- **Reference to other sections**  
See Section 13 for disposal information.  
See Section 8 for information on personal protection equipment.

**7 Handling and storage**

- **Precautions for safe handling**  
Keep receptacles tightly sealed.  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
  - **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:** No special requirements.
    - **Information about storage in one common storage facility:** Not required.
    - **Further information about storage conditions:** Keep cool, if possible (not above 25 °C).
- **Specific end use(s)** No further relevant information available.

**8 Exposure controls/personal protection**

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

· <b>Components with limit values that require monitoring at the workplace:</b>	
<b>64-17-5 ethanol</b>	
PEL	1900 mg/m <sup>3</sup> , 1000 ppm
REL	1900 mg/m <sup>3</sup> , 1000 ppm
TLV	1880 mg/m <sup>3</sup> , 1000 ppm
<b>111-30-8 glutaral</b>	
REL	Short-term value: C 0.8 mg/m <sup>3</sup> , C 0.2 ppm
TLV	Short-term value: C 0.2 mg/m <sup>3</sup> , C 0.05 ppm
	SEN

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**112926-00-8 amorphous silica**

PEL	Short-term value: 80 mg/m <sup>3</sup> as % SiO <sub>2</sub>
REL	6 mg/m <sup>3</sup>
TLV	10 mg/m <sup>3</sup> (e)

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

· **Exposure controls**

· **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.
- Do not inhale gases / fumes / aerosols.
- Avoid contact with the eyes and skin.

· **Breathing equipment:**

Not necessary with efficient local exhaust. If exposition to vapours is possible, use breathing protective mask (filter A).

· **Protection of hands:**

If skin contact cannot be avoided, protective gloves are recommended to avoid possible sensitization.  
Solvent resistant gloves

· **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.

· **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

Butyl rubber, BR

- **Eye protection:** Tightly sealed goggles.
- **Body protection:** Light weight protective clothing

**9 Physical and chemical properties**

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

· **General Information**

· **Appearance:**

- **Form:** Fluid
- **Color:** Yellowish
- **Odor:** Characteristic

· **Change in condition**

- **Melting point/Melting range:** undetermined
- **Boiling point/Boiling range:** undetermined

· **Flash point:** 24 °C (75 °F)

· **Ignition temperature:** 425 °C (797 °F)

· **Auto igniting:** Product is not selfigniting.

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· <b>Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· <b>Explosion limits:</b>	
· Lower:	3.5 Vol %
· Upper:	15.0 Vol %
· <b>Vapor pressure at 20 °C (68 °F):</b>	57 hPa (43 mm Hg)
· <b>Density:</b>	Not determined
· <b>Solubility in / Miscibility with</b>	
· Water:	Not miscible or difficult to mix
· <b>Other information</b>	No further relevant information available.

**10 Stability and reactivity**

- **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:** none
- **Additional information:** -

**11 Toxicological information**

- **Information on toxicological effects**
  - **Acute toxicity:**
    - **Primary irritant effect:**
      - **on the skin:** Irritant to skin and mucous membranes.
      - **on the eye:** Strong irritant with the danger of severe eye injury.
    - **Sensitization:**
      - Sensitization possible through inhalation.
      - Sensitization possible through skin contact.
  - **Additional toxicological information:** Harmful
  - **Carcinogenic categories**

· <b>IARC (International Agency for Research on Cancer)</b>	
112926-00-8	amorphous silica
	3
· <b>NTP (National Toxicology Program)</b>	
None of the ingredients is listed.	
· <b>OSHA-Ca (Occupational Safety &amp; Health Administration)</b>	
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.
  - **Additional ecological information:**
    - **General notes:** Avoid transfer into the environment.
- **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.

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- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

**13 Disposal considerations**


- **Waste treatment methods**
  - **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**
    - **DOT** UN1170
    - **ADR, IMDG, IATA** 1170
  - **UN proper shipping name**
    - **ADR** 1170 ETHANOL SOLUTION
    - **IMDG, IATA** ETHANOL SOLUTION
  - **Transport hazard class(es)**
    - **DOT**



      - **Class** 3 Flammable liquids
      - **Label** 3
  - **ADR**



    - **Class** 3 (F1) Flammable liquids
    - **Label** 3
  - **IMDG, IATA**



    - **Class** 3 Flammable liquids
    - **Label** 3
- **Packing group**
  - **DOT, ADR, IMDG, IATA** III
- **Environmental hazards:**
  - **Marine pollutant:** No
- **Special precautions for user** Warning: Flammable liquids

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· <b>Danger code (Kemler):</b>	30
· <b>EMS Number:</b>	F-E, S-D
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	-
· <b>UN "Model Regulation":</b>	UN1170, 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 ingredients is listed.

· **TSCA (Toxic Substances Control Act)** Medical devices are exempted from TSCA.

· **Carcinogenicity categories**

· **TLV (Threshold Limit Value established by ACGIH)**

64-17-5	ethanol	A4
111-30-8	glutaral	A4

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02 GHS05 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**

ethanol

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glutaral

4-methacryloxyethyltrimellitic acid anhydride

· **Hazard statements**

Flammable liquid and vapour.

Causes skin irritation.

Causes serious eye damage.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

May cause cancer.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Use explosion-proof electrical/ventilating/lighting/equipment.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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Dispose of contents/container in accordance with local/regional/national/international regulations.

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· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**16 Other information**

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of preparation / last revision** 05/12/2015 / -

· **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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Carc. 1A: Carcinogenicity, Hazard Category 1A

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

USA