

Material Safety Data Sheet acc. to OSHA HCS

Printing date 01/10/2014

Reviewed on 01/10/2014

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 preparation** 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

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Xn; Harmful

R20/22: Harmful by inhalation and if swallowed.

Xi; Irritant

R37/38-41-42/43: Irritating to respiratory system and skin. Risk of serious damage to eyes.
May cause sensitization by inhalation and skin contact.

R10: Flammable.

· Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

· Classification system:

The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

· Label elements

· Labelling according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

· Code letter and hazard designation of product:



Xn Harmful

· Hazard-determining components of labeling:

2-hydroxyethyl methacrylate
glutaral
4-methacryloxyethyltrimellitic acid anhydride

· Risk phrases:

10 Flammable.
20/22 Harmful by inhalation and if swallowed.
37/38 Irritating to respiratory system and skin.
41 Risk of serious damage to eyes.

(Contd. on page 2)

USA

Material Safety Data Sheet acc. to OSHA HCS

Printing date 01/10/2014

Reviewed on 01/10/2014

Trade name: **iBOND Total Etch**

(Contd. of page 1)

42/43 May cause sensitization by inhalation and skin contact.

Safety phrases:

7/9 Keep container tightly closed and in a well-ventilated place.

23 Do not breathe vapour.

24 Avoid contact with skin.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

37/39 Wear suitable gloves and eye/face protection.

45 In case of accident or if you feel unwell, seek medical advice immediately.

Classification system

NFPA ratings for USA (scale 0-4)



Health = 2

Fire = 3

Reactivity = 0

HMIS-Ratings (Scale 0-4)



Health = *2

Fire = 3

Reactivity = 0

Other hazards -

3 Composition/information on ingredients

Chemical characterization: Mixtures

Description: -

Dangerous components:

64-17-5	ethanol F R11	25-50%
868-77-9	2-hydroxyethyl methacrylate Xi R36/38-43	10-25%
	Poly(methacrylic-oligo-acrylic acid) Xi R36	0-5%
70293-55-9	4-methacryloxyethyltrimellitic acid anhydride Xn R22; Xi R36/38-43	0-5%
111-30-8	glutaral T R23/25; C R34; Xi R42/43; N R50	0-5%

Additional information For the wording of the listed risk phrases refer to section 16.

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.

Information for doctor

Most important symptoms and effects, both acute and delayed

No further relevant information available.

(Contd. on page 3)

USA

Material Safety Data Sheet acc. to OSHA HCS

Printing date 01/10/2014

Reviewed on 01/10/2014

Trade name: iBOND Total Etch

(Contd. of page 2)

- **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.
 - **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

- **Handling**
 - **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.

(Contd. on page 4)

USA

Material Safety Data Sheet acc. to OSHA HCS

Printing date 01/10/2014

Reviewed on 01/10/2014

Trade name: iBOND Total Etch

(Contd. of page 3)

Control parameters

Components with limit values that require monitoring at the workplace:

64-17-5 ethanol

PEL 1900 mg/m³, 1000 ppm

REL 1900 mg/m³, 1000 ppm

TLV 1880 mg/m³, 1000 ppm

111-30-8 glutaral

REL Short-term value: C 0.8 mg/m³, C 0.2 ppm

TLV Short-term value: C 0.2 mg/m³, C 0.05 ppm
SEN

112926-00-8 amorphous silica

PEL Short-term value: 80 mg/m³
as % SiO₂

REL 6 mg/m³

TLV 10 mg/m³
(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

USA

(Contd. on page 5)

Material Safety Data Sheet
acc. to OSHA HCS

Printing date 01/10/2014

Reviewed on 01/10/2014

Trade name: **iBOND Total Etch**

(Contd. of page 4)

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.· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.· **Explosion limits:**

· Lower:	3.5 Vol %
· Upper:	15.0 Vol %

· **Vapor pressure at 20 °C (68 °F):** 57 hPa (43 mm Hg)· **Density:** Not determined· **Solubility in / Miscibility with**· **Water:** Not miscible or difficult to mix· **Other information** 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**· **IARC (International Agency for Research on Cancer)**

112926-00-8 amorphous silica

3

(Contd. on page 6)

USA

Material Safety Data Sheet acc. to OSHA HCS

Printing date 01/10/2014

Reviewed on 01/10/2014

Trade name: iBOND Total Etch

(Contd. of page 5)

· 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.
- **Behavior in environmental systems:**
 - **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.
- **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

(Contd. on page 7)

USA


Material Safety Data Sheet acc. to OSHA HCS

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Trade name: iBOND Total Etch

(Contd. of page 6)

· 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
· Danger code (Kemler):	30
· EMS Number:	F-E, S-D
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	-

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.

· Cancerogenity categories

· TLV (Threshold Limit Value established by ACGIH)

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

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

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.

· Relevant phrases

- R11 Highly flammable.
- R22 Harmful if swallowed.
- R23/25 Toxic by inhalation and if swallowed.
- R34 Causes burns.
- R36 Irritating to eyes.
- R36/38 Irritating to eyes and skin.
- R42/43 May cause sensitization by inhalation and skin contact.
- R43 May cause sensitization by skin contact.
- R50 Very toxic to aquatic organisms.

· * Data compared to the previous version altered.

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