

Material Safety Data Sheet acc. to ISO/DIS 11014

Printing date 07/10/2007

Reviewed on 07/10/2007

1 Identification of substance:

· **Product details:**

· **Trade name:** **iBond Self Etch**

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

· **Manufacturer/Supplier:**

Heraeus Kulzer GmbH
Grüner Weg 11, D-63450 Hanau

Tel.: 0800 4372522

· **Information department:**

Dr. Barbara Bräu
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· **Emergency information:** Call +49 30 19240 (24 hours).

2 Composition/Data on components:

· **Chemical characterization**

· **Description:** Composition based on methacrylates

· **Dangerous components:**

67-64-1	acetone	Xi, F; R 11-36-66-67	25-50%
70293-55-9	4-methacryloxyethyltrimellitic acid anhydride	Xn; R 22-36/38-43	10-25%

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

3 Hazards identification

· **Hazard description:**



Xi Irritant
F Highly flammable

· **Information pertaining to particular dangers for man 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.

Has a narcotizing effect.

R 11 Highly flammable.

R 36 Irritating to eyes.

R 43 May cause sensitization by skin contact.

R 67 Vapours may cause drowsiness and dizziness

· **Classification system**

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

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



Health = 3
Fire = 3
Reactivity = 0

· **HMIS-Ratings (Scale 0-4)**



HEALTH 3 Health = 3
FIRE 3 Fire = 3
REACTIVITY 0 Reactivity = 0

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4 First aid measures

- **After inhalation** Supply fresh air and to be sure call for a doctor.
- **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 out mouth and then drink plenty of water.
If symptoms persist consult doctor.

5 Fire fighting measures

- **Suitable extinguishing agents**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards caused by the material, its products of combustion or resulting gases:**
Can form explosive gas-air mixtures.
Formation of toxic gases is possible during heating or in case of fire.
- **Protective equipment:** Do not inhale explosion gases or combustion gases.
- **Additional information -**

6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:**
Prevent seepage into sewage system, workpits and cellars.
- **Measures for cleaning/collecting:**
Absorb with liquid binding material (diatomite, universal binders, for small amounts tissues).
Ensure adequate ventilation.
Send for recovery or disposal in suitable receptacles.
- **Additional information:**
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling**
 - **Information for safe handling:**
Keep receptacles tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
 - **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Storage**
 - **Requirements to be met by storerooms and receptacles:** Store in a cool location.
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:**
Keep receptacle tightly sealed.
Protect from exposure to the light.

8 Exposure controls and personal protection

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

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· Components with limit values that require monitoring at the workplace:

67-64-1 acetone

PEL	2400 mg/m ³ , 1000 ppm
REL	590 mg/m ³ , 250 ppm
TLV	Short-term value: 1782 mg/m ³ , 750 ppm Long-term value: 1188 mg/m ³ , 500 ppm
BEI	

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

· 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.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable:

PVC or PE gloves

- **Eye protection:** Safety glasses
- **Body protection:** Light weight protective clothing

9 Physical and chemical properties:

· General Information

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

· Change in condition

- **Melting point/Melting range:** undetermined
- **Boiling point/Boiling range:** 55°C (131°F)

· **Flash point:** -19°C (-2°F)

· **Ignition temperature:** 465°C (869°F)

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

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· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
· Lower:	2.6 Vol %
· Upper:	13.0 Vol %
· Vapor pressure at 20°C (68°F):	247 hPa (185 mm Hg)
· Density at 20°C (68°F):	1.000 g/cm ³
· Solubility in / Miscibility with	
· Water:	Fully miscible
· Viscosity:	
· dynamic at 20°C (68°F):	1 mPas

10 Stability and reactivity

- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of decomposition:** none

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
 - **on the skin:** No irritant effect.
 - **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:** Irritant

12 Ecological information:

- **General notes:** Do not allow product to reach ground water, water course or sewage system.

13 Disposal considerations

- **Product:**
 - **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Disposal must be made according to official regulations.
- **Uncleaned packagings:**
 - **Recommendation:** Disposal must be made according to official regulations.
 - **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **DOT regulations:**



- **Hazard class:** 3

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· **Identification number:** UN1090
 · **Packing group:** II
 · **Proper shipping name (technical name):** ACETONE, solution
 · **Label** 3

· **Land transport ADR/RID (cross-border)**



· **ADR/RID class:** 3 (F1) Flammable liquids
 · **Danger code (Kemler):** 33
 · **UN-Number:** 1090
 · **Packaging group:** II
 · **Label** 3
 · **Description of goods:** 1090 ACETONE, solution

· **Maritime transport IMDG:**



· **IMDG Class:** 3
 · **UN Number:** 1090
 · **Label** 3
 · **Packaging group:** II
 · **EMS Number:** F-E,S-E
 · **Marine pollutant:** No
 · **Propper shipping name:** ACETONE, solution

· **Air transport ICAO-TI and IATA-DGR:**



· **ICAO/IATA Class:** 3
 · **UN/ID Number:** 1090
 · **Label** 3
 · **Packaging group:** II
 · **Propper shipping name:** ACETONE, solution

15 Regulations

· **SARA Section 355 (extremely hazardous substances)**

None of the ingredients is listed.

· **SARA Section 313 (specific toxic chemical listings)**

7664-38-2 orthophosphoric acid

123-91-1 1,4-dioxane

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

67-64-1 acetone

41137-60-4 diurethandimethacrylate

7732-18-5 water, distilled, conductivity or of similar purity

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10373-78-1	2,3-Bornandion
868-77-9	2-hydroxyethyl methacrylate
67362-76-9	2-(n-Butoxy)ethyl-4-dimethylaminobenzoat
	Butyl-hydroxy-toluol
7664-38-2	orthophosphoric acid
123-91-1	1,4-dioxane

· Prop 65 - Chemicals known to cause cancer

123-91-1	1,4-dioxane
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· Cancerogenity categories

· EPA (Environmental Protection Agency)

67-64-1	acetone	D
123-91-1	1,4-dioxane	B2

· IARC (International Agency for Research on Cancer)

	Butyl-hydroxy-toluol	3
123-91-1	1,4-dioxane	2B

· NTP (National Toxicology Program)

123-91-1	1,4-dioxane	R
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· TLV (Threshold Limit Value established by ACGIH)

67-64-1	acetone	A4
	Butyl-hydroxy-toluol	A4
123-91-1	1,4-dioxane	A3

· NIOSH-Ca (National Institute for Occupational Safety and Health)

123-91-1	1,4-dioxane
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· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

· Markings 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:

Xi Irritant
F Highly flammable

· Hazard-determining components of labelling:

4-methacryloxyethyltrimellitic acid anhydride
acetone

· Risk phrases:

11 Highly flammable.
36 Irritating to eyes.
43 May cause sensitization by skin contact.
67 Vapours may cause drowsiness and dizziness

· Safety phrases:

16 Keep away from sources of ignition - No smoking.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
28 After contact with skin, wash immediately with plenty of soap and water
36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

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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 R-phrases

- 11 Highly flammable.
- 22 Harmful if swallowed.
- 36 Irritating to eyes.
- 36/38 Irritating to eyes and skin.
- 43 May cause sensitization by skin contact.
- 66 Repeated exposure may cause skin dryness or cracking
- 67 Vapours may cause drowsiness and dizziness

· Department issuing MSDS: Safety department**· Contact:**

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· * Data compared to the previous version altered.

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