

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2016

Version number 2

Revision: 19.01.2016

1.1 Product identifier

Trade name: **iBOND Total Etch**

1.2 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

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Heraeus Kulzer GmbH
Grüner Weg 11, D-63450 Hanau

Tel.: 0800 4372522

Informing department: E-Mail: msds@kulzer-dental.com

1.4 Emergency telephone number:

Emergency CONTACT (24-Hour-Number): GBK GmbH +49 (0)6132-84463

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flam. Liq. 3 H226 Flammable liquid and vapour.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Dam. 1 H318 Causes serious eye damage.

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS02 GHS05 GHS07 GHS08

Signal word Danger

Hazard-determining components of labelling:

2-hydroxyethyl methacrylate

glutaral

4-methacryloxyethyltrimellitic acid anhydride

Hazard statements

H226 Flammable liquid and vapour.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

Precautionary statements

P210

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

(Contd. on page 2)

GB

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2016

Version number 2

Revision: 19.01.2016

Trade name: iBOND Total Etch

P241 Use explosion-proof electrical/ventilating/lighting/equipment. (Contd. of page 1)
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.
Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact
lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P405 Store locked up.

2.3 Other hazards -**Results of PBT and vPvB assessment**

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

3.2 Chemical characterisation: Mixtures**Description: -****Dangerous components:**

CAS: 64-17-5 EINECS: 200-578-6 Reg.nr.: 2119457610-43-xxxx	ethanol Flam. Liq. 2, H225	25-50%
CAS: 868-77-9 EINECS: 212-782-2	2-hydroxyethyl methacrylate Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	10-25%
	Poly(methacrylic-oligo-acrylic acid) Eye Irrit. 2, H319	0-5%
CAS: 70293-55-9	4-methacryloxyethyltrimellitic acid anhydride Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	0-5%
CAS: 111-30-8 EINECS: 203-856-5	glutaral Acute Tox. 3, H301; Acute Tox. 3, H331; Resp. Sens. 1, H334; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Skin Sens. 1, H317	0-5%
CAS: 72869-86-4 EINECS: 276-957-5	diurethandimethacrylate Aquatic Chronic 3, H412	0-5%

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

4.1 Description of first aid measures

- **After inhalation** Supply fresh air; consult doctor in case of symptoms.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for several minutes under running water. Then consult doctor.
- **After swallowing**
Rinse out mouth and then drink plenty of water.
Instantly call for doctor.
In case of persistent symptoms consult doctor.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

(Contd. on page 3)

GB

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2016

Version number 2

Revision: 19.01.2016

Trade name: iBOND Total Etch

- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

(Contd. of page 2)

- **5.1 Extinguishing media**

- **Suitable extinguishing agents**
CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.

- **5.2 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.

- **5.3 Advice for firefighters**

- **Protective equipment:** Put on breathing apparatus.
- **Additional information -**

- **6.1 Personal precautions, protective equipment and emergency procedures**

- Wear protective equipment. Keep unprotected persons away.

- **6.2 Environmental precautions:**

- Do not allow to enter the ground/soil.
- No special measures required.

- **6.3 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 containers.

- **6.4 Reference to other sections**

- See Section 13 for information on disposal.
- See Section 8 for information on personal protection equipment.

- **7.1 Precautions for safe handling**

- Keep containers 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.

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

- **Storage**

- **Requirements to be met by storerooms and containers:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Store cool (not above 25 °C).

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

GB

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2016

Version number 2

Revision: 19.01.2016

Trade name: **iBOND Total Etch**

(Contd. of page 3)

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

8.1 Control parameters

Components with critical values that require monitoring at the workplace:

64-17-5 ethanol

WEL Long-term value: 1920 mg/m³, 1000 ppm

111-30-8 glutaral

WEL Short-term value: 0.2 mg/m³, 0.05 ppm

Long-term value: 0.2 mg/m³, 0.05 ppm

Additional information: The lists that were valid during the compilation were used as basis.

8.2 Exposure controls**Personal protective equipment****General protective and hygienic measures**

Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.

Breathing equipment: Breathing protection recommended.

Protection of hands:

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

Solvent resistant gloves

Check protective gloves prior to each use for their proper condition.

recommended

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

Nitrile rubber, NBR

Eye protection: not absolutely necessary

Body protection: Light weight protective clothing

9.1 Information on basic physical and chemical properties**General Information****Appearance:**

Form:

Fluid

Colour:

Yellowish

(Contd. on page 5)

GB

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2016

Version number 2

Revision: 19.01.2016

Trade name: **iBOND Total Etch**

(Contd. of page 4)

· Smell:	Characteristic
· Odour threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
· Melting point/Melting range:	Not determined
· Boiling point/Boiling range:	Not determined
· Flash point:	24 °C
· Inflammability (solid, gaseous)	Not applicable.
· Ignition temperature:	425 °C
· Decomposition temperature:	Not determined.
· Self-inflammability:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures is possible.
· Critical values for explosion:	
· Lower:	3.5 Vol %
· Upper:	15.0 Vol %
· Steam pressure at 20 °C:	57 hPa
· Density	Not determined
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
· Water:	Not miscible or difficult to mix
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
· dynamic:	Not determined.
· kinematic:	Not determined.
· 9.2 Other information	No further relevant information available.

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Conditions to be avoided:** No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** None
- **Additional information:** -

GB
(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2016

Version number 2

Revision: 19.01.2016

Trade name: **iBOND Total Etch**

(Contd. of page 5)

11.1 Information on toxicological effects

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

- **Primary irritant effect:**

- **Skin corrosion/irritation**

- Causes skin irritation.

- **Serious eye damage/irritation**

- Causes serious eye damage.

- **Respiratory or skin sensitisation**

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

- May cause an allergic skin reaction.

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

- **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.

- **STOT-single exposure**

- May cause respiratory irritation.

- **STOT-repeated exposure** Based on available data, the classification criteria are not met.

- **Aspiration hazard** Based on available data, the classification criteria are not met.

12.1 Toxicity

- **Aquatic toxicity:** No further relevant information available.

- **12.2 Persistence and degradability** No further relevant information available.

- **12.3 Bioaccumulative potential** No further relevant information available.

- **12.4 Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:** Avoid transfer into the environment.

- **12.5 Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **12.6 Other adverse effects** No further relevant information available.

13.1 Waste treatment methods

- **Recommendation**

- Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**

18 01 06	chemicals consisting of or containing dangerous substances
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- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

GB
(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31



Printing date 20.01.2016

Version number 2

Revision: 19.01.2016

Trade name: **iBOND Total Etch**

(Contd. of page 6)

14.1 UN-Number	
· ADR, IMDG, IATA	1170
14.2 UN proper shipping name	
· ADR	1170 ETHANOL SOLUTION
· IMDG, IATA	ETHANOL SOLUTION
14.3 Transport hazard class(es)	
· ADR	
	
· Class	3 (F1) Flammable liquids.
· Label	3
· IMDG, IATA	
	
· Class	3 Flammable liquids.
· Label	3
14.4 Packing group	
· ADR, IMDG, IATA	III
14.5 Environmental hazards:	
· Marine pollutant:	No
14.6 Special precautions for user	
· Kemler Number:	Warning: Flammable liquids.
· EMS Number:	30
	F-E, S-D
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	
	Not applicable.
Transport/Additional information:	
	-
UN "Model Regulation":	
	UN1170, ETHANOL (ETHYL ALCOHOL), 3, III

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture	
No further relevant information available.	
15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.	

GB

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2016

Version number 2

Revision: 19.01.2016

Trade name: **iBOND Total Etch**

(Contd. of page 7)

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

- H225 Highly flammable liquid and vapour.
- H301 Toxic if swallowed.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H400 Very toxic to aquatic life.
- H412 Harmful to aquatic life with long lasting effects.

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
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- 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)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Liq. 2: Flammable liquids, Hazard Category 2
- Flam. Liq. 3: Flammable liquids, Hazard Category 3
- Acute Tox. 3: Acute toxicity, Hazard Category 3
- Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
- Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
- Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
- Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
- Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1
- Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
- STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
- Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1
- Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

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

GB

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2016


Version number 2

Revision: 19.01.2016

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
 - Trade name: **Venus Bulk Fill**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
 - No further relevant information available.
 - **Application of the substance / the mixture** Dental filling material
- **1.3 Details of the supplier of the safety data sheet**
 - **Manufacturer/Supplier:**
Heraeus Kulzer GmbH
Grüner Weg 11, D-63450 Hanau
 - Tel.: 0800 4372522
 - **Informing department:** E-Mail: msds@kulzer-dental.com
- **1.4 Emergency telephone number:**
Emergency CONTACT (24-Hour-Number): GBK GmbH +49 (0)6132-84463

SECTION 2: Hazards

- **2.1 Classification of the substance or mixture**
 - **Classification according to Regulation (EC) No 1272/2008**
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
- **2.2 Label elements**
 - **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
 - **Hazard pictograms**

GHS07
 - **Signal word** Warning
 - **Hazard statements**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
 - **Precautionary statements**
P280 Wear protective gloves/protective clothing/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.
P321 Specific treatment (see on this label).
P362 Take off contaminated clothing and wash before reuse.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
 - **Additional information:**
Contains triethylenglycoldimethacrylate. May produce an allergic reaction.
- **2.3 Other hazards -**
 - **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.

(Contd. on page 2)

GB

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2016

Version number 2

Revision: 19.01.2016

Trade name: Venus Bulk Fill· **vPvB:** Not applicable.

(Contd. of page 1)

SECTION 3: Composition of mixtures**3.2 Chemical characterisation: Mixtures****Description: -****Dangerous components:**

CAS: 13760-80-0 EINECS: 237-354-2	ytterbium trifluoride Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	10-25%
CAS: 109-16-0 EINECS: 203-652-6 Reg.nr.: 01-2119969287-21-0000	triethylenglycoldimethacrylate Skin Sens. 1B, H317	< 1%

SECTION 4: First aid measures**4.1 Description of first aid measures**· **General information** No special measures required.· **After inhalation** Supply fresh air; consult doctor in case of symptoms.· **After skin contact** Instantly wash with water and soap and rinse thoroughly.· **After eye contact** Rinse opened eye for several minutes under running water.· **After swallowing**

Rinse out mouth and then drink plenty of water.

In case of persistent symptoms consult doctor.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures**5.1 Extinguishing media**· **Suitable extinguishing agents**CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

Use fire fighting measures that suit the environment.

5.2 Special hazards arising from the substance or mixture No further relevant information available.**5.3 Advice for firefighters**· **Protective equipment:** No special measures required.· **Additional information -****SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures** Not required.**6.2 Environmental precautions:** No special measures required.**6.3 Methods and material for containment and cleaning up:** Collect mechanically.**6.4 Reference to other sections**

See Section 13 for information on disposal.

See Section 8 for information on personal protection equipment.

(Contd. on page 3)

GB

**Safety data sheet
according to 1907/2006/EC, Article 31**

Printing date 20.01.2016

Version number 2

Revision: 19.01.2016

Trade name: Venus Bulk Fill

(Contd. of page 2)

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
 - **Storage**
 - **Requirements to be met by storerooms and containers:** No special requirements.
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:**
 - Store under dry conditions.
 - Store cool (not above 25 °C).
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls and personal protection

- **8.1 Control parameters**
 - **Components with critical 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 compilation were used as basis.
- **8.2 Exposure controls**
 - **Personal protective equipment**
 - **General protective and hygienic measures**
 - Wash hands during breaks and at the end of the work.
 - **Breathing equipment:** Not required.
 - **Protection of hands:**
 - 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
 - Check protective gloves prior to each use for their proper condition.
 - recommended
 - **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
 - Nitrile rubber, NBR
 - **Eye protection:** Safety glasses

(Contd. on page 4)

GB

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2016

Version number 2

Revision: 19.01.2016

Trade name: **Venus Bulk Fill**

· **Body protection:** Light weight protective clothing

(Contd. of page 3)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form:

Pasty

Colour:

White

Yellowish

Smell:

Odourless

Odour threshold:

Not determined.

pH-value:

Not determined.

Change in condition

Melting point/Melting range:

Not determined

Boiling point/Boiling range:

Not determined

Flash point:

> 100 °C

Inflammability (solid, gaseous)

Not applicable.

Ignition temperature:

Decomposition temperature:

Not determined.

Self-inflammability:

Product is not selfigniting.

Danger of explosion:

Product is not explosive.

Critical values for explosion:

Lower:

Not determined.

Upper:

Not determined.

Steam pressure:

Not determined.

Density at 20 °C

1.9 g/cm³

Relative density

Not determined.

Vapour density

Not determined.

Evaporation rate

Not determined.

Solubility in / Miscibility with

Water:

Not miscible or difficult to mix

Partition coefficient (n-octanol/water):

Not determined.

Viscosity:

dynamic:

Not determined.

kinematic:

Not determined.

9.2 Other information

No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

10.2 Chemical stability

· **Conditions to be avoided:** No decomposition if used and stored according to specifications.

(Contd. on page 5)

GB

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2016

Version number 2

Revision: 19.01.2016

Trade name: Venus Bulk Fill

- **10.3 Possibility of hazardous reactions** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** None
- **Additional information:** -

(Contd. of page 4)

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
 - **Acute toxicity** Based on available data, the classification criteria are not met.
 - **Primary irritant effect:**
 - **Skin corrosion/irritation** Causes skin irritation.
 - **Serious eye damage/irritation** Causes serious eye irritation.
 - **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
 - **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
 - **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.
 - **STOT-single exposure** Based on available data, the classification criteria are not met.
 - **STOT-repeated exposure** Based on available data, the classification criteria are not met.
 - **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
 - **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
 - **Additional ecological information:**
 - **General notes:** Avoid transfer into the environment.
- **12.5 Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal information

- **13.1 Waste treatment methods**
 - **Recommendation** Smaller quantities can be disposed with household garbage.
- **Uncleaned packagings:**
 - **Recommendation:** Disposal must be made according to official regulations.

GB
(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2016

Version number 2

Revision: 19.01.2016

Trade name: **Venus Bulk Fill**

(Contd. of page 5)

SECTION 14: TRANSPORT INFORMATION

- | | |
|---|-----------------|
| · 14.1 UN-Number | |
| · ADR, ADN, IMDG, IATA | Void |
| · 14.2 UN proper shipping name | |
| · ADR, ADN, IMDG, IATA | Void |
| · 14.3 Transport hazard class(es) | |
| · ADR, ADN, IMDG, IATA | |
| · Class | Void |
| · 14.4 Packing group | |
| · ADR, IMDG, IATA | Void |
| · 14.5 Environmental hazards: | |
| · Marine pollutant: | No |
| · 14.6 Special precautions for user | Not applicable. |
| · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| · Transport/Additional information: | - |
| · UN "Model Regulation": | Void |

SECTION 15: REGULATORY INFORMATION

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
No further relevant information available.
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 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**

- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.

· **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
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 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)
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
 Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
 Skin Sens. 1B: Sensitisation - Skin, Hazard Category 1B

(Contd. on page 7)

GB

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2016

Version number 2

Revision: 19.01.2016

Trade name: Venus Bulk Fill

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
* **Data compared to the previous version altered.**

(Contd. of page 6)

GB

**Safety data sheet
according to 1907/2006/EC, Article 31**

Printing date 20.01.2016

Version number 2

Revision: 19.01.2016

SECTION 1: Identification of the substance/mixture and of the company undertaking**1.1 Product identifier****Trade name: Venus Diamond****1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.**Application of the substance / the mixture** Dental filling material**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**Heraeus Kulzer GmbH
Grüner Weg 11, D-63450 Hanau

Tel.: 0800 4372522

Informing department: E-Mail: msds@kulzer-dental.com**1.4 Emergency telephone number:**

Emergency CONTACT (24-Hour-Number): GBK GmbH +49 (0)6132-84463

SECTION 2: Hazard identification**2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

Skin Sens. 1 H317 May cause an allergic skin reaction.

2.2 Label elements**Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS07

Signal word Warning**Hazard-determining components of labelling:**2-Propenoic acid, (octahydro-4,7-methano-1H-indene-5-diyl)bis(methyleneiminocarbonyloxy-2,1-ethanediyl) ester
triethylenglycoldimethacrylate**Hazard statements**

H317 May cause an allergic skin reaction.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P321 Specific treatment (see on this label).

P363 Wash contaminated clothing before reuse.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P302+P352 IF ON SKIN: Wash with plenty of water.

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

GB

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2016

Version number 2

Revision: 19.01.2016

Trade name: Venus Diamond

(Contd. of page 1)

SECTION 3: Composition information**3.2 Chemical characterisation: Mixtures****Description: -****Dangerous components:**

CAS: 861437-11-8	2-Propenoic acid, (octahydro-4,7-methano-1H-indene-5 - diyl)bis(methyleneiminocarbonyloxy-2,1-ethanediyl) ester Skin Sens. 1, H317; Aquatic Chronic 3, H412	10-25%
CAS: 109-16-0 EINECS: 203-652-6 Reg.nr.: 01-2119969287-21-0000	triethylenglycoldimethacrylate Skin Sens. 1B, H317	0-5%

Additional information For the wording of the listed hazard phrases refer to section 16.**SECTION 4: First aid measures****4.1 Description of first aid measures**

- **After inhalation** Supply fresh air; consult doctor in case of symptoms.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing**
Rinse out mouth and then drink plenty of water.
In case of persistent symptoms consult doctor.
Seek immediate medical advice.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Fire-fighting measures**5.1 Extinguishing media****Suitable extinguishing agents**CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
Use fire fighting measures that suit the environment.**5.2 Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.

5.3 Advice for firefighters**Protective equipment:** No special measures required.**Additional information -****SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures** Not required.**6.2 Environmental precautions:** Dilute with much water.**6.3 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 containers.**6.4 Reference to other sections**

See Section 7 for information on safe handling

(Contd. on page 3)

GB

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2016

Version number 2

Revision: 19.01.2016

Trade name: Venus Diamond

See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

(Contd. of page 2)

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Please observe the additional instructions in the product's instructions for use.
 - **Information about protection against explosions and fires:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
 - **Storage**
 - **Requirements to be met by storerooms and containers:** No special requirements.
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:** None.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 Control parameters**
 - **Components with critical 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 compilation were used as basis.
- **8.2 Exposure controls**
 - **Personal protective equipment**
 - **General protective and hygienic measures**
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
 - **Breathing equipment:** Not required.
 - **Protection of hands:**
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.
If skin contact cannot be avoided, protective gloves are recommended to avoid possible sensitization.
Check protective gloves prior to each use for their proper condition.
recommended
 - **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

(Contd. on page 4)

GB

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2016

Version number 2

Revision: 19.01.2016

Trade name: Venus Diamond

Nitrile rubber, NBR

(Contd. of page 3)

· **Eye protection:** Safety glasses· **Body protection:** Light weight protective clothing**SECTION 9: Physical and chemical properties**· **9.1 Information on basic physical and chemical properties**· **General Information**· **Appearance:**· **Form:**

Pasty

· **Colour:**

White

Yellowish

· **Smell:**

Odourless

· **Odour threshold:**

Not determined.

· **pH-value:**

Not determined.

· **Change in condition**· **Melting point/Melting range:**

Not determined

· **Boiling point/Boiling range:**

Not determined

· **Flash point:**

> 165 °C

· **Inflammability (solid, gaseous)**

Not applicable.

· **Ignition temperature:**· **Decomposition temperature:**

Not determined.

· **Self-inflammability:**

Product is not selfigniting.

· **Danger of explosion:**

Product is not explosive.

· **Critical values for explosion:**· **Lower:**

Not determined.

· **Upper:**

Not determined.

· **Steam pressure:**

Not determined.

· **Density at 20 °C**2.23 g/cm³· **Relative density**

Not determined.

· **Vapour density**

Not determined.

· **Evaporation rate**

Not determined.

· **Solubility in / Miscibility with**· **Water:**

Not miscible or difficult to mix

· **Partition coefficient (n-octanol/water):** Not determined.· **Viscosity:**· **dynamic:**

Not determined.

· **kinematic:**

Not determined.

· **9.2 Other information**

No further relevant information available.

SECTION 10: Stability and reactivity· **10.1 Reactivity** No further relevant information available.

(Contd. on page 5)

GB

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2016

Version number 2

Revision: 19.01.2016

Trade name: Venus Diamond

(Contd. of page 4)

- **10.2 Chemical stability**
 - **Conditions to be avoided:** No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** None
- **Additional information:** -

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
 - **Acute toxicity** Based on available data, the classification criteria are not met.
 - **Primary irritant effect:**
 - **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
 - **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
 - **Respiratory or skin sensitisation**
 - May cause an allergic skin reaction.
 - **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
 - **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.
 - **STOT-single exposure** Based on available data, the classification criteria are not met.
 - **STOT-repeated exposure** Based on available data, the classification criteria are not met.
 - **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
 - **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
 - **Additional ecological information:**
 - **General notes:**
 - Do not allow product to reach ground water, water bodies or sewage system.
 - Danger to drinking water if even small quantities leak into soil.
- **12.5 Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
 - **Recommendation**
 - Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

(Contd. on page 6)

GB

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2016

Version number 2

Revision: 19.01.2016

Trade name: Venus Diamond

(Contd. of page 5)

Uncleaned packagings:**Recommendation:** Disposal must be made according to official regulations.**SECTION 14: Transport information**

14.1 UN-Number	
ADR, ADN, IMDG, IATA	Void
14.2 UN proper shipping name	
ADR, ADN, IMDG, IATA	Void
14.3 Transport hazard class(es)	
ADR, ADN, IMDG, IATA	
Class	Void
14.4 Packing group	
ADR, IMDG, IATA	Void
14.5 Environmental hazards:	
Marine pollutant:	No
14.6 Special precautions for user	Not applicable.
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
Transport/Additional information:	-
UN "Model Regulation":	Void

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

No further relevant information available.

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

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

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

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

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)

PBT: Persistent, Bioaccumulative and Toxic

(Contd. on page 7)

GB

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 20.01.2016

Version number 2

Revision: 19.01.2016

Trade name: Venus Diamond

vPvB: very Persistent and very Bioaccumulative
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Skin Sens. 1B: Sensitisation - Skin, Hazard Category 1B
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3
* **Data compared to the previous version altered.**

(Contd. of page 6)

GB