

SAFETY DATA SHEETS

This SDS packet was issued with item:

074491460

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

070441121 070441147

The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).

074491437 074491445 074491486 074491601 074491619 074565271

ACTIO MSDS ID: 997874

View Section : 12345678910111213141516

SECTION 1: CHEMICAL PRODUCT and COMPANY IDENTIFICATION (N/A)

Product Name:iBOND Total Etch

Distributor Name: Heraeus Kulzer GmbH
Revision Date:12/22/2008
Trade Names:iBOND Total Etch
Manufacturer Name:Heraeus Kulzer GmbH
Address:Grⁿner Weg 11,
D-63450 Hanau

Information department:
Dr. Hoffmann
Tel.: +49 6081 959-313
Fax: +49 6081 959-223

Emergency information: Call +49 30 19240 (24 hours).

General Use: Application of the substance/the preparation: Dental bonding material

Email: marcus.hoffmann@heraeus.com

Business Phone:0800 4372522
NFPA ratings for USA (scale 0-4)
HMIS-Ratings (Scale 0-4)
HMIS Health: *

Material Safety Data Sheet
acc. to ISO/DIS 11014
NFPA

3
20
0

HMIS

HEALTH2
FIRE3
REACTIVITY0
PPE

To Top of page

SECTION 2 : COMPOSITION, INFORMATION ON INGREDIENTS: (N/A)

Ingredient NameCAS#Ingredient Percent

Glutaral111-30-80 - 5%
EC Index Number:1
Hazard Symbols:T, N
Risk Phrases:R 23/25-34-42/43-50
Comments:Dangerous component

Ethanol64-17-525 - 50%
EC Index Number:1
Hazard Symbols:F
Risk Phrases:R 11
Comments:Dangerous component

2-hydroxyethyl methacrylate868-77-910 - 25%
EC Index Number:1
Hazard Symbols:Xi
Risk Phrases:R 36/38-43
Comments:Dangerous component

Poly(methacrylic-oligo-acrylic acid)0 - 5%
EC Index Number:1
Hazard Symbols:Xi
Risk Phrases:R 36
Comments:Dangerous component

4-methacryloxyethyltrimellitic acid anhydride70293-55-90 - 5%
EC Index Number:1
Hazard Symbols:Xn
Risk Phrases:R 22-36/38-43
Comments:Dangerous component

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

To Top of page

SECTION 3 : HAZARDS IDENTIFICATION: (N/A)

Hazard description: Xn Harmful

environment: Information pertaining to particular dangers for man and

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.

R 10 Flammable.

R 20/22 Harmful by inhalation and if swallowed.

R 37/38 Irritating to respiratory system and skin.

R 41 Risk of serious damage to eyes.

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

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 = 2

Fire = 3

Reactivity = 0

HMIS-Ratings (Scale 0-4):

Health = *2

Fire = 3

Reactivity = 0

To Top of page

SECTION 4 : FIRST AID MEASURES: (N/A)

Eye Contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

Skin Contact: Immediately wash with water and soap and rinse thoroughly.

Inhalation: Supply fresh air; consult doctor in case of complaints.

Ingestion: After swallowing: Immediately call a doctor.

To Top of page

SECTION 5 : FIRE FIGHTING MEASURES: (N/A)

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

Flash Point: 24 deg C (75 deg F)

Upper Flammable or Explosive Limit: 15.0 Vol %

Lower Flammable or Explosive Limit: 3.5 Vol %

Auto Ignition Temperature: 425 deg C (797 deg F)

Extinguishing Media: CO2, extinguishing powder or water spray.

Fight larger fires with water spray or alcohol resistant foam.

Unsuitable Media: For safety reasons unsuitable extinguishing agents: Water with full jet.

Hazardous Combustion Byproducts: 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: Mount respiratory protective device.

Auto igniting: Product is not selfigniting.

To Top of page

SECTION 6 : ACCIDENTAL RELEASE MEASURES: (N/A)

Personal Precautions: Person-related safety precautions: Wear protective equipment. Keep unprotected persons away.

Spill Cleanup Measures: Measures for cleaning/collecting:

Absorb with liquid binding material (diatomite, universal binders, for small amounts tissues).

Send for recovery or disposal in suitable receptacles.

Environmental Precautions: Measures for environmental protection:

Do not allow to penetrate the ground/soil.

No special measures required.

Additional information:

See Section 8 for information on personal protection

equipment.

See Section 13 for disposal information.

To Top of page

SECTION 7 : HANDLING and STORAGE: (N/A)

Handling: Information 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.
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 deg C).

Hygiene Practices: 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.

To Top of page

SECTION 8 : EXPOSURE CONTROLS, PERSONAL PROTECTION: (N/A)

Personal Protective Equipment

Routine Handling: 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.

Hand Protection Description: 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/Face Protection: Tightly sealed goggles.

Protective Clothing/Body Protection: Body protection: Light weight protective clothing

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

Exposure Limits: Chemical Name: amorphes Siliziumdioxid

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

REL: 6 mg/m³

TLV: 10 mg/m3 (e)

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

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

Ingredient Guidelines

Ingredient: Ethanol

Guideline Type:OSHA PEL-TWA

Guideline Information:1900 mg/m3, 1000 ppm

Guideline Type:NIOSH REL-TWA

Guideline Information:1900 mg/m3, 1000 ppm

Guideline Type:ACGIH TLV-TWA

Guideline Information:1880 mg/m3, 1000 ppm

Ingredient: Glutaral

Guideline Type:NIOSH REL-STEL

Guideline Information:Short-term value: C 0.8 mg/m3, C 0.2 ppm (SEN)

Guideline Type:ACGIH TLV-TWA

Guideline Information:Short-term value: C 0.2 mg/m3, C 0.05 ppm (SEN)

To Top of page

SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES: (N/A)

Physical State/Appearance:Form: Fluid

Color:Yellowish

Odor:Characteristic

Vapor Pressure:At 20 deg C (68 deg F): 57 hPa (43 mm Hg)

Flash Point:24 deg C (75 deg F)

Auto Ignition Temperature:425 deg C (797 deg F)

Upper Explosive Limit:15.0 Vol %

Lower Explosive Limit:3.5 Vol %

Boiling Point:Undetermined

Melting Point:Undetermined

Solubility:In/Miscibility with Water: Not miscible or difficult to mix

Density:Not determined

Auto igniting: Product is not selfigniting.

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

To Top of page

SECTION 10 : STABILITY and REACTIVITY: (N/A)

Reactivity:Dangerous reactions: No dangerous reactions known
Hazardous Decomposition Products: Dangerous products of decomposition: None

To Top of page

SECTION 11 : TOXICOLOGICAL INFORMATION: (N/A)

Applies to All Ingredients :
Sensitization:Sensitization possible through inhalation.
Sensitization possible through skin contact.
Irritation:Primary irritant effect:
On the skin: Irritant to skin and mucous membranes.
On the eye: Strong irritant with the danger of severe eye
injury.
Other Toxicological Information:Additional toxicological
information: Harmful

To Top of page

SECTION 12 : ECOLOGICAL INFORMATION: (N/A)

General notes: Avoid transfer into the environment.

To Top of page

SECTION 13 : DISPOSAL CONSIDERATIONS: (N/A)

Waste Disposal:Product:
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.

To Top of page

SECTION 14 : TRANSPORT INFORMATION: (N/A)

DOT Shipping Name:ETHANOL SOLUTION
DOT UN Number:UN1170
DOT Hazard Class:3
DOT Packing Group:III
DOT Hazard Technical Name:ETHANOL SOLUTION

DOT Subpart E Labeling Requirement:3
IATA Shipping Name:ETHANOL SOLUTION
IATA Hazard Class:3
IATA UN Number:1170
IATA Packing Group:III
IATA Class:3
RID/ADR:Packaging group: III
RID/ADR Shipping Name:Description of goods: 1170 ETHANOL SOLUTION
RID/ADR Dangerous Goods Code:(Kemler): 30
RID/ADR UN Number:1170
RID/ADR Class:3 (F1) Flammable liquids
RID/ADR Warning Sign/Label:3
CGVS/GGVE/IMDG Technical Name:Propper shipping name: ETHANOL SOLUTION
CGVS/GGVE/IMDG UN or NA Identification Number:1170
CGVS/GGVE/IMDG Class:3
CGVS/GGVE/IMDG Packaging Group:III
CGVS/GGVE/IMDG Subsidiary Risk Label:3
EMS Number:F-E,S-D
Maritime Pollutant:NO
Air transport ICAO-TI:Propper shipping name: ETHANOL SOLUTION
ICAO Class: 3
UN/ID Number: 1170
Label: 3
Packaging group: III

To Top of page

SECTION 15 : REGULATORY INFORMATION: (N/A)

Applies to All Ingredients :
TSCA 8(b): Inventory Status:Medical devices are exempted from TSCA.
Section 302:SARA Section 355 (extremely hazardous substances):
None of the ingredients is listed.
Section 313 Toxic Release Form:SARA Section 313 (specific toxic chemical listings):
None of the ingredients is listed.
State:Prop 65 - Chemicals known to cause cancer:
None of the ingredients is listed.
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.
42/43 May cause sensitization by inhalation and skin contact.
Safety Phrase:7/9 Keep container tightly closed and in a well-ventilated place.
23 Do not breathe fumes
24 Avoid contact with skin.
26 In case of contact with eyes, rinse immediately with pler 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.

Agency): Cancerogenity categories:EPA (Environmental Protection

None of the ingredients is listed.

IARC (International Agency for Research on Cancer):
amorphes Siliziumdioxid 3

NTP (National Toxicology Program):
None of the ingredients is listed.

NIOSH-Ca (National Institute for Occupational Safety and Health):
None of the ingredients is listed.

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:
Xn Harmful

Hazard-determining components of labelling:
2-hydroxyethyl methacrylate
Glutaral
4-methacryloxyethyltrimellitic acid anhydride
Ethanol :

Cancerogenity categories:TLV (Threshold Limit Value
established by ACGIH):
Chemical Name: Ethanol
CAS: 64-17-5
A4

Glutaral :
Cancerogenity categories:TLV (Threshold Limit Value
established by ACGIH):
Chemical Name: Glutaral
CAS: 111-30-8
A4

To Top of page

SECTION 16 : ADDITIONAL INFORMATION: (N/A)

HMIS:
Health Hazard:2
Fire Hazard:3
Reactivity:0

NFPA:
Health:2
Fire Hazard:3
Reactivity:0

MSDS Revision Date:12/22/2008

* Data compared to the previous version altered.
MSDS Author: Department issuing MSDS: Safety department
Contact: Dr. Thiele
Tel.: (+49) 6181 35-3012
Email: ruediger.thiele@heraeus.com
NFPA ratings for USA (scale 0-4)
HMIS-Ratings (Scale 0-4)
HMIS Health: *

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.
- 23/25 Toxic by inhalation and if swallowed.
- 34 Causes burns.
- 36 Irritating to eyes.
- 36/38 Irritating to eyes and skin.
- 42/43 May cause sensitization by inhalation and skin contact.
- 43 May cause sensitization by skin contact.
- 50 Very toxic to aquatic organisms.

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To Top of page

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 08/24/2010

Reviewed on 08/23/2010

1 Identification of substance:

· **Product details:**

· **Trade name:** iBOND Total 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. Hoffmann
Tel.: +49 6081 959-313
Fax: +49 6081 959-223
email: marcus.hoffmann@heraeus.com

· **Emergency information:**

Call "Poisoning Emergency Center Berlin": +49 30 30686 790 (24 hours, support in english and german language)

2 Hazards identification

· **Hazard description:**



Xn Harmful

· **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.

- R 10 Flammable.
- R 20/22 Harmful by inhalation and if swallowed.
- R 37/38 Irritating to respiratory system and skin.
- R 41 Risk of serious damage to eyes.
- R 42/43 May cause sensitization by inhalation and skin contact.

· **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 = 2
Fire = 3
Reactivity = 0

· **HMIS-Ratings (Scale 0-4)**



Health = 2
Fire = 3
Reactivity = 0

3 Composition/Data on components:

· **Chemical characterization**

· **Description:** -

· **Dangerous components:**

| | | | |
|----------|-----------------------------|----------------|--------|
| 64-17-5 | ethanol | F; R 11 | 25-50% |
| 868-77-9 | 2-hydroxyethyl methacrylate | Xi; R 36/38-43 | 10-25% |

(Contd. on page 2)
USA

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 08/24/2010

Reviewed on 08/23/2010

Trade name: iBOND Total Etch

| | | | |
|------------|---|------------------------------|----------------------------|
| | Poly(methacrylic-oligo-acrylic acid) | Xi; R 36 | (Contd. of page 1) 0-5% |
| 70293-55-9 | 4-methacryloxyethyltrimellitic acid anhydride | Xn, Xi; R 22-36/38-43 | 0-5% |
| 111-30-8 | glutaral | T, C, N; R 23/25-34-42/43-50 | 0-5% |

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

4 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.

5 Fire fighting measures

- 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 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: Mount respiratory protective device.
- Additional Information -

6 Accidental release measures

- Person-related safety precautions: Wear protective equipment. Keep unprotected persons away.
- Measures for environmental protection:
Do not allow to penetrate the ground/soil.
No special measures required.
- Measures for cleaning/collecting:
Absorb with liquid binding material (diatomite, universal binders, for small amounts tissues).
Send for recovery or disposal in suitable receptacles.
- Additional information:
See Section 13 for disposal information.
See Section 8 for information on personal protection equipment.

7 Handling and storage

- Handling
 - Information 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.
- Storage
 - Requirements to be met by storerooms and receptacles: No special requirements.
 - Information about storage in one common storage facility: Not required.

(Contd. on page 3)

USA

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 08/24/2010

Reviewed on 08/23/2010

Trade name: iBOND Total Etch

(Contd. of page 2)

· **Further information about storage conditions: Keep cool, if possible (not above 25 °C).**

8 Exposure controls and personal protection

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

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

| |
|---|
| 64-17-5 ethanol |
| PEL 1900 mg/m ³ , 1000 ppm REL 1900 mg/m ³ , 1000 ppm TLV 1880 mg/m ³ , 1000 ppm |
| 111-30-8 glutaral |
| REL Short-term value: C 0.8 mg/m ³ , C 0.2 ppm TLV Short-term value: C 0.2 mg/m ³ , C 0.05 ppm SEN |
| amorphes Siliziumdioxid |
| PEL Short-term value: 80 mg/m ³ as % SiO ₂ REL 6 mg/m ³ TLV 10 mg/m ³ (e) |

· **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.
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 trough 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 4)

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 08/24/2010

Reviewed on 08/23/2010

Trade name: **IBOND Total Etch**

(Contd. of page 3)

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: | 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 |
|---|----------------------------------|

10 Stability and reactivity

- Dangerous reactions: No dangerous reactions known
- Dangerous products of decomposition: none
- Additional information: -

11 Toxicological information

- 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

12 Ecological information:

- General notes: Avoid transfer into the environment.

13 Disposal considerations

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

(Contd. on page 5)

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 08/24/2010

Reviewed on 08/23/2010

Trade name: **iBOND Total Etch**

(Contd. of page 4)

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

14 Transport information

· DOT regulations:



- Hazard class: 3
- Identification number: UN1170
- Packing group: III
- Proper shipping name (technical name): ETHANOL SOLUTION
- Label: 3

· Land transport ADR/RID (cross-border)



- ADR/RID class: 3 (F1) Flammable liquids
- Danger code (Kemler): 30
- UN-Number: 1170
- Packaging group: III
- Label: 3
- Description of goods: 1170 ETHANOL SOLUTION

· Maritime transport IMDG:



- IMDG Class: 3
- UN Number: 1170
- Label: 3
- Packaging group: III
- EMS Number: F-E,S-D
- Marine pollutant: No
- Proper shipping name: ETHANOL SOLUTION

· Air transport ICAO-TI and IATA-DGR:



- ICAO/IATA Class: 3
- UN/ID Number: 1170
- Label: 3
- Packaging group: III
- Proper shipping name: ETHANOL SOLUTION

(Contd. on page 6)

USA

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 08/24/2010

Reviewed on 08/23/2010

Trade name: iBOND Total Etch

(Contd. of page 5)

Transport/Additional information: -

| | | |
|--|----------|--------------------|
| 15 Regulations | | |
| · SARA Section 355 (extremely hazardous substances) | | |
| None of the ingredients is listed. | | |
| · SARA Section 313 (specific toxic chemical listings) | | |
| None of the ingredients is listed. | | |
| · TSCA (Toxic Substances Control Act) Medical devices are exempted from TSCA. | | |
| · Prop 65 - Chemicals known to cause cancer | | |
| None of the ingredients is listed. | | |
| · Carcinogenity categories | | |
| · EPA (Environmental Protection Agency) | | |
| None of the ingredients is listed. | | |
| · IARC (International Agency for Research on Cancer) | | |
| amorphes Siliziumdioxid | | 3 |
| · NTP (National Toxicology Program) | | |
| None of the ingredients is listed. | | |
| · TLV (Threshold Limit Value established by ACGIH) | | |
| 64-17-5 | ethanol | A4 |
| 111-30-8 | glutaral | A4 |
| · NIOSH-Ca (National Institute for Occupational Safety and Health) | | |
| None of the ingredients is listed. | | |
| · 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: | | |
| Xn Harmful | | |
| · Hazard-determining components of labelling: | | |
| 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. | | |
| 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 fumes | | |
| 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. | | |
| | | (Contd. on page 7) |

USA

Material Safety Data Sheet acc. to ISO/DIS 11014

Printing date 08/24/2010

Reviewed on 08/23/2010

Trade name: iBOND Total Etch**45** In case of accident or if you feel unwell, seek medical advice immediately.

(Contd. of page 6)

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.
- 23/25 Toxic by inhalation and if swallowed.
- 34 Causes burns.
- 36 Irritating to eyes.
- 36/38 Irritating to eyes and skin.
- 42/43 May cause sensitization by inhalation and skin contact.
- 43 May cause sensitization by skin contact.
- 50 Very toxic to aquatic organisms.

Department issuing MSDS: Safety department**Contact:****Dr. Thiele Tel.: (+49) 6181 35-3012****email: ruediger.thiele@heraeus.com***** Data compared to the previous version altered.**

USA