

Material Safety Data Sheet

According to 91/155 EC

Printing date 13.10.2003

Reviewed on 13.10.2003

1 Identification of substance:

- **Product details:**
- **Trade name:** Calibra Base Paste
- **Application:** Esthetic Resin Cement
- **Application of the substance / the preparation** Esthetic Resin Cement
- **Manufacturer/Supplier:**
DENTSPLY DeTrey GmbH
De-Trey-Str. 1
D-78467 Konstanz
GERMANY
Tel.: +49-7531-583-0
Fax: +49-7531-583-104
- **Further information obtainable from:**
 - Departement Analytical Research / Research & Development for technical information
 - Departement Marketing & Sales for distribution of the safety data sheets

2 Composition/Data on components:

- **Chemical characterization**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

methacrylate with the exception of those specified elsewhere in this Annex	Xi; R 36/37/38	25-50%
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- **Additional information** For the wording of the listed risk phrases refer to section 16.

3 Hazard identification

- **Hazard description:**
Xi Irritant
- **Information concerning to particular hazards to 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 36/37/38 Irritating to eyes, respiratory system and skin.
- **Classification system**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

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. If symptoms persist, consult a doctor.
- **After swallowing** If symptoms persist consult doctor.

5 Fire fighting measures

- **Suitable extinguishing agents**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards caused by the substance, its products of combustion or resulting gases:**
Formation of toxic gases is possible during heating or in case of fire.
- **Protective equipment:** Wear self-contained respiratory protective device

6 Accidental release measures

- **Person-related safety precautions:** Wear protective clothing.

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Trade name: Calibra Base Paste

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- **Measures for environmental protection:** No special measures required.
- **Measures for cleaning/collecting:**
 - Pick up mechanically.
 - Ensure adequate ventilation.

7 Handling and storage

- **Handling** Product is intended for dental use only.
- **Information for safe handling:** Observe normal care for working with chemicals.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage**
 - **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
 - **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 gear

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit 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 valid during the making 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.
 - Avoid contact with the eyes and skin.
 - **Respiratory protection:** Not required.
 - **Protection of hands:**
 - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
 - Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
 - 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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.
 - **Eye protection:** Safety glasses
 - **Body protection:** Protective work clothing.

9 Physical and chemical properties:

· General Information

Form:	Pasty
Colour:	According to product specification
Odour:	Characteristic

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Trade name: Calibra Base Paste

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- **Change in condition**
Melting point/Melting range: undetermined
Boiling point/Boiling range: undetermined
- **Flash point:** *Not applicable*
- **Self-igniting:** *Product is not selfigniting.*
- **Danger of explosion:** *Product does not present an explosion hazard.*
- **Density:** *Not determined*
- **Solubility in / Miscibility with Water:** *Not miscible or difficult to mix*

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*
- **Dangerous reactions** *No dangerous reactions known*
- **Dangerous decomposition products:** *No dangerous decomposition products known*

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** *The unpolymerized product may be irritant to the skin for susceptible persons.*
- **on the eye:** *Irritating effect.*
- **Sensitization:**
Repeated or prolonged contact with the not polymerized product may cause sensitization for acrylates / methacrylates.
- **Additional toxicological information:**
Irritant
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

12 Ecological information:

- **General notes:** *Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.*

13 Disposal considerations

- **Product:**
- **Recommendation**



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

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

14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -

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Trade name: *Calibra Base Paste*

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· **Maritime transport IMDG:**· **IMDG Class:** -· **Marine pollutant:** No· **Air transport ICAO-TI and IATA-DGR:**· **ICAO/IATA Class:** -

15 Regulations

· **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:***Xi Irritant*· **Risk phrases:**

36/37/38 Irritating to eyes, respiratory system and skin.

· **Safety phrases:**

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 water.

37 Wear suitable gloves.

· **National regulations**· **Technical instructions (air):**

Class	Share in %
I	30.0

· **Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

16 Other information:

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant R-phrases**

36/37/38 Irritating to eyes, respiratory system and skin.

· **Department issuing MSDS:** Analytical Research· **Contact:** HotLine for urgent technical support: +49-7531-583-333

Material Safety Data Sheet

According to 91/155 EC

Printing date 13.10.2003

Reviewed on 13.10.2003

1 Identification of substance:

- **Product details:**
- **Trade name:** Calibra Catalyst Paste
- **Application:** *Esthetic Resin Cement*
- **Application of the substance / the preparation** *Esthetic Resin Cement*
- **Manufacturer/Supplier:**
*DENTSPLY DeTrey GmbH
 De-Trey-Str. 1
 D-78467 Konstanz
 GERMANY
 Tel.: +49-7531-583-0
 Fax: +49-7531-583-104*
- **Further information obtainable from:**
 - *Departement Analytical Research / Research & Development for* *technical information*
 - *Departement Marketing & Sales for distribution of the safety data* *sheets*

2 Composition/Data on components:

- **Chemical characterization**
- **Description:** *Mixture of substances listed below with nonhazardous additions.*

- **Dangerous components:**

<i>methacrylate with the exception of those specified elsewhere in this Annex</i>	<i>Xi; R 36/37/38</i>	<i>25-50%</i>
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- **Additional information** *For the wording of the listed risk phrases refer to section 16.*

3 Hazard identification

- **Hazard description:**
Xi Irritant
- **Information concerning to particular hazards to 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 36/37/38 Irritating to eyes, respiratory system and skin.*
- **Classification system**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

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. If symptoms persist, 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, 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 substance, its products of combustion or resulting gases:**
Formation of toxic gases is possible during heating or in case of fire.

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Trade name: Calibra Catalyst Paste

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· **Protective equipment:** Wear self-contained respiratory protective device

6 Accidental release measures

- **Person-related safety precautions:** Wear protective clothing.
- **Measures for environmental protection:** Do not allow product to reach sewage system or any water course.
- **Measures for cleaning/collecting:**
 - Pick up mechanically.
 - Ensure adequate ventilation.

7 Handling and storage

- **Handling** Product is intended for dental use only.
- **Information for safe handling:** Observe normal care for working with chemicals.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage**
 - **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:**
 - Store in cool, dry conditions in well sealed receptacles.
 - Protect from exposure to the light.

8 Exposure controls and personal protection gear

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit 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 valid during the making were used as basis.
- **Personal protective equipment**
 - **General protective and hygienic measures**
 - Keep away from foodstuffs, beverages and feed.
 - Wash hands before breaks and at the end of work.
 - Avoid contact with the eyes and skin.
 - **Respiratory protection:** Not required.
 - **Protection of hands:**
 - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
 - Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
 - 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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing.

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Trade name: Calibra Catalyst Paste

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9 Physical and chemical properties:

· General Information

Form:	Pasty
Colour:	Whitish
Odour:	Characteristic

· Change in condition

Melting point/Melting range: undetermined
Boiling point/Boiling range: undetermined

· **Flash point:** Not applicable

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Density:** Not determined

· **Solubility in / Miscibility with Water:** Not miscible or difficult to mix

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known
- **Dangerous decomposition products:** No dangerous decomposition products known

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** The unpolymerized product may be irritant to the skin for susceptible persons.
- **on the eye:** Irritating effect.
- **Sensitization:**
Repeated or prolonged contact with the not polymerized product may cause sensitization for acrylates / methacrylates.
- **Additional toxicological information:**
Irritant
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

12 Ecological information:

- **General notes:** Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

13 Disposal considerations

- **Product:**
- **Recommendation**



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

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

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Trade name: Calibra Catalyst Paste

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14 Transport information

- Land transport ADR/RID (cross-border)

- ADR/RID class: -

- Maritime transport IMDG:

- IMDG Class: -

- Marine pollutant: No

- Air transport ICAO-TI and IATA-DGR:

- ICAO/IATA Class: -

15 Regulations

- 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:



Xi Irritant

- Risk phrases:

36/37/38 Irritating to eyes, respiratory system and skin.

- Safety phrases:

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 water.

37 Wear suitable gloves.

- Special labelling of certain preparations:

Contains dibenzoyl peroxide. May produce an allergic reaction.

- National regulations

- Technical instructions (air):

Class	Share in %
I	40.0

- Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

16 Other information:

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Relevant R-phrases

36/37/38 Irritating to eyes, respiratory system and skin.

- Department issuing MSDS: Analytical Research

- Contact: HotLine for urgent technical support: +49-7531-583-333

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Printing date 13.10.2003

Reviewed on 13.10.2003

1 Identification of substance:

· **Product details:**

· **Trade name:** Calibra Try-In Paste

· **Application:** Esthetic Resin Cement

· **Application of the substance / the preparation** Esthetic Resin Cement

· **Manufacturer/Supplier:**

DENTSPLY DeTrey GmbH

De-Trey-Str. 1

D-78467 Konstanz

GERMANY

Tel.:

+49-7531-583-0

Fax:

+49-7531-583-104

· **Further information obtainable from:**

- Departement Analytical Research / Research & Development for technical information

- Departement Marketing & Sales for distribution of the safety data sheets

2 Composition/Data on components:

· **Chemical characterization**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 56-81-5	glycerol	50-100%
EINECS: 200-289-5		

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

3 Hazard identification

· **Hazard description:** not applicable

· **Information concerning to particular hazards to man and environment**

The product does not have 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 is according to the latest editions of the EU-lists, and extended by company and literature data.

4 First aid measures

· **General information** No special measures required.

· **After inhalation** Not applicable

· **After skin contact**

Rinse with warm water.

Generally the product does not irritate the skin.

· **After eye contact** Rinse opened eye for several minutes under running water.

· **After swallowing**

Rinse out mouth and then drink plenty of water.

If symptoms persist consult doctor.

5 Fire fighting measures

· **Suitable extinguishing agents** Use fire extinguishing methods suitable to surrounding conditions.

· **For safety reasons unsuitable extinguishing agents** Water with full jet.

· **Protective equipment:** No special measures required.

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Trade name: Calibra Try-In Paste

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6 Accidental release measures

- **Person-related safety precautions:** Not required.
- **Measures for environmental protection:** Dilute with plenty of water.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Additional information:** No dangerous substances are released.

7 Handling and storage

- **Handling** Product is intended for dental use only.
- **Information for safe handling:** Observe normal care for working with chemicals.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.

8 Exposure controls and personal protection gear

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

- **Ingredients with limit values that require monitoring at the workplace:**

56-81-5 glycerol

OEL | 10 mg/m³

- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures**
The usual precautionary measures are to be adhered to when handling chemicals.
- **Respiratory protection:** Not required.
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Goggles recommended during refilling.
- **Body protection:** Protective work clothing.

9 Physical and chemical properties:

- **General Information**

Form:	Viscous
Colour:	Colourless
Odour:	Odourless

- **Change in condition**
Melting point/Melting range: 18.2°C
Boiling point/Boiling range: undetermined

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Trade name: Calibra Try-In Paste

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· Flash point:	160°C
· Ignition temperature:	400°C
· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	0.9 Vol %
· Vapour pressure at 20°C:	0.1 hPa
· Density:	Not determined
· Solubility in / Miscibility with	
Water:	Partly soluble

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known
- **Dangerous decomposition products:** No dangerous decomposition products known

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.
When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

12 Ecological information:

- **General notes:** Generally not hazardous for water.

13 Disposal considerations

- **Product:**
- **Recommendation**
Can be disposed of with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -

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Trade name: Calibra Try-In Paste

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- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -

15 Regulations

- **Labelling according to EU guidelines:**
Observe the general safety regulations when handling chemicals
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).
- **National regulations**
- **Technical instructions (air):**

Class	Share in %
NK	85.0
- **Waterhazard class:** Generally not hazardous for water.

16 Other information:

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing MSDS:** Analytical Research
- **Contact:** HotLine for urgent technical support: +49-7531-583-333

Material Safety Data Sheet

According to 91/155 EC

Printing date 13.10.2003

Reviewed on 18.08.2003

1 Identification of substance:

· **Product details:**

· **Trade name:** *Calibra Silane Coupling Agent*

· **Application of the substance / the preparation** *Silane Coupling Agent*

· **Manufacturer/Supplier:**

DENTSPLY DeTrey GmbH

De-Trey-Str. 1

D-78467 Konstanz

GERMANY

Tel.:

+49-7531-583-0

Fax:

+49-7531-583-104

· **Further information obtainable from:**

- *Departement Analytical Research / Research & Development for technical information*
- *Departement Marketing & Sales for distribution of the safety data sheets*

2 Composition/Data on components:

· **Chemical characterization**

· **Description:** *Mixture of substances listed below with nonhazardous additions.*

· **Dangerous components:**

<i>CAS: 64-17-5</i>	<i>ethanol</i>	<i>F; R 11</i>	<i>50-100%</i>
<i>EINECS: 200-578-6</i>			
<i>CAS: 67-64-1</i>	<i>acetone</i>	<i>Xi, F; R 11-36-66-67</i>	<i>2.5-10%</i>
<i>EINECS: 200-662-2</i>			

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

3 Hazard identification

· **Hazard description:**

F Highly flammable

· **Information concerning to particular hazards to 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 11 Highly flammable.

· **Classification system**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

4 First aid measures

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

· **After skin contact** *Immediately rinse with water*

· **After eye contact** *Rinse opened eye for several minutes under running water. Then consult a doctor.*

· **After swallowing** *If symptoms persist consult doctor.*

5 Fire fighting measures

· **Suitable extinguishing agents**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

6 Accidental release measures

· **Person-related safety precautions:** *Wear protective equipment. Keep unprotected persons away.*

· **Measures for environmental protection:**

Dilute with plenty of water.

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Trade name: Calibra Silane Coupling Agent

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Do not allow to enter sewers/ surface or ground water.

· **Measures for cleaning/collecting:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Ensure adequate ventilation.

7 Handling and storage

· **Handling** Product is intended for dental use only.

· **Information for safe handling:**

Observe normal care for working with chemicals.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

· **Information about fire - and explosion protection:**



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.

Store in cool, dry conditions in well sealed receptacles.

8 Exposure controls and personal protection gear

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

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

64-17-5 ethanol

OEL 1920 mg/m³, 1000 ppm

67-64-1 acetone

OEL Short-term value: 3620 mg/m³, 1500 ppm
Long-term value: 1810 mg/m³, 750 ppm

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

· **Personal protective equipment**

· **General protective and hygienic measures** Wash hands before breaks and at the end of work.

· **Respiratory protection:** Use suitable respiratory protective device in case of insufficient ventilation.

· **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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Trade name: Calibra Silane Coupling Agent

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· **Eye protection:**



Tightly sealed goggles.

· **Body protection:** Protective work clothing.

9 Physical and chemical properties:

· **General Information**

Form: Fluid
Colour: Colourless
Odour: Alcohol-like

· **Change in condition**

Melting point/Melting range: undetermined
Boiling point/Boiling range: 55°C

· **Flash point:** -19°C

· **Ignition temperature:** 425°C

· **Self-igniting:** Product is not selfigniting.

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

· **Explosion limits:**

Lower: 3.5 Vol %
Upper: 15.0 Vol %

· **Vapour pressure at 20°C:** 59 hPa

· **Density:** Not determined

· **Solubility in / Miscibility with**

Water: Partly miscible

· **Solvent content:**

Organic solvents: 95.0 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known
- **Dangerous decomposition products:** No dangerous decomposition products known

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

12 Ecological information:

- **General notes:** Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

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Material Safety Data Sheet

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Trade name: Calibra Silane Coupling Agent

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13 Disposal considerations

- **Product:**
- **Recommendation**



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

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

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



- **ADR/RID class:** 3 (F1) Flammable liquids.
- **Danger code (Kemler):** 33
- **UN-Number:** 1993
- **Packaging group:** II
- **Hazard label** 3
- **Description of goods:** 1993 FLAMMABLE LIQUID, N.O.S., (Ethanol, Acetone, mixture)(vapor pressure at 50°C at most 110 kPa)

- **Maritime transport IMDG:**



- **IMDG Class:** 3
- **UN Number:** 1993
- **Label** 3
- **Packaging group:** II
- **EMS Number:** F-E,S-D
- **Marine pollutant:** No
- **Proper shipping name:** FLAMMABLE LIQUID, N.O.S., (Ethanol, Acetone, mixture)

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



- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1993
- **Label** 3
- **Packaging group:** II
- **Proper shipping name:** FLAMMABLE LIQUID, N.O.S., (Ethanol, Acetone, mixture)

15 Regulations

- **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

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· Code letter and hazard designation of product:

F Highly flammable
· Risk phrases:
11 Highly flammable.
· Safety phrases:
7/9 Keep container tightly closed and in a well-ventilated place.
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.
· National regulations
· Technical instructions (air):

Class	Share in %
III	95.0

· Waterhazard class: *Water hazard class 1 (Self-assessment): slightly hazardous for water.*
16 Other information:

This information is based on our present knowledge. However, this 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.
36 Irritating to eyes.
66 Repeated exposure may cause skin dryness or cracking.
67 Vapours may cause drowsiness and dizziness.
· Department issuing MSDS: *Analytical Research*
· Contact: *HotLine for urgent technical support: +49-7531-583-333*

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