

SAFETY DATA SHEETS

This SDS packet was issued with item:

071017052

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

078273178

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).

071705284

DENTSPLY Milford
Safety Data Sheet

546899

1. Product and Company Identification

Product Name CAULK[®] 50% Tooth CONDITIONER LIQUID CAULK[®] 34% Tooth CONDITIONER GEL	MSDS Code Number 546899
Trade Name & Synonyms CAULK[®] 50% Tooth CONDITIONER LIQUID CAULK[®] 34% Tooth CONDITIONER GEL	Date of Last Revision 9/16/16
Manufacturer DENTSPLY Milford	Address 38 West Clarke Avenue Milford DE 19963-1805 http://www.dentsply.com
Grades or Minor Variant Identities Bottles and Syringes	Information Telephone Number (302) 422-4511 (8:00 AM – 4:30 PM Eastern Time)
Product Use (for Canada) Not Applicable	Emergency Telephone Number (302) 422-4511 (8:00 AM – 4:30 PM Eastern Time)

2. Hazard(s) Identification



Danger

Causes severe skin burns and eye damage

Do not breathe in dust or mist.

Wash hands thoroughly after handling.

Wear protective gloves.

If SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN: Remove immediately all contaminated clothing. Rinse skin with water.

If INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Immediately call a POISON Center or physician.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.

Store locked up.

Dispose of contents/container in accordance with local regulations.

3. Composition of Ingredients – Tooth Conditioner Liquid

Hazardous Components	C.A.S. Number	Exposure Limits	%
Phosphoric Acid	7664-38-2	1 mg/M ³	50

3. Composition of Ingredients – Tooth Conditioner Gel

Hazardous Components	C.A.S. Number	Exposure Limits	%
Phosphoric Acid	7664-38-2	1 mg/M ³	34

Other Information: Blue colorant is a fluorescent organic dye.

4. First Aid Measures

Routes of Exposure	First Aid Instructions	Immediate Medical Attention	Delayed Effects
Eye	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms persist consult physician.	Not Applicable	Not Applicable
Skin	IF ON SKIN: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If symptoms persist consult physician.	Not Applicable	Not Applicable
Inhalation	IF INHALED: Remove victim to fresh air and keep at a rest position comfortable for breathing.	Not Applicable	Not Applicable

	Immediately call a poison center or if symptoms persist, consult physician.		
Ingestion	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. If symptoms persist consult physician.	Not Applicable	Not Applicable
Other	Not Applicable	Not Applicable	Not Applicable
Note to Physicians (Treating, Testing and Monitoring): Treat symptomatically.			

5. Fire and Explosion Data

Flashpoint Method: Not Applicable	Flammable (Explosive) Limits in Air LEL: Not Established UEL: Not Established	Autoignition Temperature: Not Applicable	Other: Not Applicable
Flame Propagation or Burning Rate (for Solids): Not Applicable	Properties Contributing to Fire Intensity: Not Applicable	Flammability Classification: Not Applicable	
Extinguishing Media: Use extinguishing media suitable for surrounding area.		Extinguishing Media to Avoid: Water with full jet.	
Protection and Procedures for Firefighters: Firefighters should wear self-contained respiratory protective devices.			
Unusual Fire and Explosion Hazards: Formation of toxic gases is possible during heating or in case of fire.			

6. Accidental Release Measures

Containment Techniques: For Liquid: Absorb with liquid binding material (sand, vermiculite, diatomite, acid binders, universal binders or sawdust). For Gel, since material is a paste, scoop up bulk material and place in a suitable waste container.		
Spill/Leak Clean-up Procedures and Equipment: Absorb with liquid binding material (sand, vermiculite, diatomite, acid binders, universal binders or sawdust). Scoop up bulk material and place in a suitable waste container.		
Evacuation Procedures: Not Applicable	Special Instructions: Not Applicable	Reporting Requirements: Not Applicable

7. Handling and Storage

Handling Practices and Warnings: Product is intended for dental use only. Handling of this product should be by trained dental healthcare professionals only. Observe normal care for working with chemicals.
Storage Practices and Warnings: Store only in the original package. Keep package tightly sealed. Store in a dry area. Store away from food and beverages.

8. Exposure Control / Personal Protection



Ventilation: None required during normal intended use of this product		Other Engineering Controls: Not Applicable
Routes of Entry	Personal Protective Equipment (PPE) for Normal Use	PPE for Emergencies
Eye/Face	Safety Glasses	Not Applicable
Skin	The glove material has to be impermeable and resistant to the product.	Not Applicable
Inhalation	Not required for normal volumes used in Dental office.	Not Applicable
Body Protection	Protective work clothing	Not Applicable
General Hygiene Considerations and Work Practices: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at end of work. Avoid contact with the eyes and skin.		
Protective Measures During Repair and Maintenance of Contaminated Equipment: Not Applicable		
Other Protective Measures and Equipment: Not Applicable		

9. Physical and Chemical Characteristics

Appearance: Liquid is clear. Gel is blue colored paste.		Odor: Acid.
Normal Physical State: Liquid, Gel is a paste.		Melting Point: Not Applicable
Specific Gravity: 1.3 g/cm ³	Solubility in Water: Not Soluble	pH: < 2
Vapor Pressure (mm Hg): Not Established	Vapor Density (AIR=1): Not Applicable	Evaporation Rate (Butyl Acetate =1) Not Applicable

10. Stability and Reactivity Data

Incompatibility (Materials to Avoid): Not Applicable		
Hazardous Products Produced During Decomposition: Not Applicable.		
Hazardous Polymerization: <input type="checkbox"/> May Occur <input checked="" type="checkbox"/> May Not Occur		Conditions to Avoid: High Temperatures, ignition sources.
Stability? <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable		Conditions to Avoid: High Temperatures, ignition sources.

11. Toxicological Information

Toxicity Data, Epidemiology Studies, Carcinogenicity, Neurological Effects, Genetic Effects, Reproductive Effects, or Structure Activity Data: Material is a corrosive acid and as such is irritating to skin and mucous membranes.					
Emergency Overview: Material is corrosive.					
Routes of Exposure	Signs and Symptoms	Single, Repeated, or Lifetime Exposure	Severity (Mild, Moderate, Severe)	Acute and Chronic Health Effect(s)	Target Organ(s)
Eye	Material is corrosive and	Single & Repeated	Severe	Irritation and possible corneal damage due	Not Applicable

	may cause irritation.			to the corrosive nature of product.	
Skin	Material is corrosive and may cause irritation.	Single & Repeated	Moderate to severe depending on contact time.	Irritation due to the corrosive nature of the product.	Not Applicable
Inhalation	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Ingestion	Material is corrosive and may cause irritation.	Not Applicable	Moderate	Irritation due to the corrosive nature of the product.	Not Applicable
Other	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Medical Conditions Aggravated by Exposure: Open sores and wounds of the skin.					
Carcinogenicity NTP?: Not listed IARC monographs?: Not listed OSHA regulated?: No All components of this product are in compliance with the inventory listing Requirements of the U. S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.					
Potential Environmental Effects Do not allow to enter sewers/ surface or ground water.					
NFPA Hazard Classification Ratings (Scale 0-4), Health = 3, Fire = 0, Reactivity = 0 Specific Hazard = Corrosive / Acid					

12. Ecological Information

Toxicity Data, Environmental Fate, Physical/Chemical Data, or other Data Supporting Environmental Hazard Statements: Water Hazard class1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water streams or sewage system. Toxic to fish. Also poisonous for fish and plankton in water bodies. Toxic for aquatic organisms.

13. Disposal Considerations

Regulations: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Dispose of material as solid waste in a closed container. Dispose of in accordance with Federal, State and Local regulations
Properties (Physical/Chemical) Affecting Disposal: Dispose of material as solid waste in a closed container.



14. Transport Information

Regulated for Shipping: Yes	DOT Shipping Name: Corrosive Liquid, n.o.s. (contains Phosphoric Acid)	Packing Group: II
Do Changes in Quantities, packaging, or shipment method change product classification? Yes	Hazard Class: 8	UN Identification Number: 1760

15. Regulatory Information

This product has been classified in accordance with the hazard criteria of the Globally Harmonized System of Classification and Labeling of Chemicals and the SDS contains all of the information required by the Canadian Controlled Products Regulations.
U.S. Federal Regulations: CERCLA 103 Reportable Quantity: CAS# 7664-38-2 Phosphoric Acid 5000 pounds (2268Kg) Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations
Section 313 Toxic Chemicals: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): None
Section 302 Extremely Hazardous Substances (TPQ): None
EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.
U.S. State Regulations California Proposition 65: This product does not contain any chemicals, which are on the California Proposition 65 list.
Canada WHMIS, Workplace Hazardous Materials Information System: This product is not a controlled product.
International Regulations: Canadian Environmental Protection Act: This product is a medical device and not subject to chemical notification requirements.
European Community Labeling: Not a dangerous preparation. These R and S phrases apply to base and catalyst: R36/38 Irritating to eyes and skin. R51/53 Toxic to aquatic organisms, may cause long-term effects in the environment. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28 After contact with skin, wash immediately with plenty of water. S37 Wear suitable gloves. S57 Use appropriate container to avoid environmental contamination. S60 This material and its container must be disposed of as hazardous waste. These R and S phrases apply to catalyst: R41 Risk of serious damage to eyes. R50/53 Very toxic to aquatic organisms, may cause long-term effects in the environment. S24 Avoid contact with skin.
European Inventory of New and Existing Chemicals Substances (EINECS): This product is a medical device and not subject to chemical notification requirements. Phosphoric Acid is known as EINECS #: 231-633-2 and CAS# 7664-38-2.
Other: Not Applicable.

16. Other Information

To the best of our knowledge this product does not contain gluten, wheat grains, flaxseed, natural rubber, or natural latex.
All components are synthetically produced; none are derived from animal products.
This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific products features and shall not establish a legally valid contractual relationship.
The attached safety data sheet covers the dangers and measures to be taken when large quantities of material are released, for example due to accidents during transport or storage by the dealer. For quantities of material typically used in clinical practice, information necessary for safe use and storage of the product is given in the DFU.

DENTSPLY Milford
Safety Data Sheet

593899

1. Product and Company Identification

Product Name XP BOND® Universal Total-Etch Adhesive	SDS Code Number 593899
Trade Name & Synonyms XP BOND® Universal Total-Etch Adhesive XP BOND® Unidose - Universal Total-Etch Adhesive	Date of Last Revision 11/04/16
Manufacturer Address DENTSPLY/DeTrey GmbH DeTrey-Str.1 78467 Konstanz, Germany	Distributor Address DENTSPLY/Caulk 38 West Clarke Avenue Milford DE 19963-1805 http://www.dentsply.com
Grades or Minor Variant Identities Not Applicable	Information Telephone Number (302) 422-4511 (8:00 AM – 4:30 PM Eastern Time)
Product Use (for Canada) Dental Bonding Agent	Emergency Telephone Number (302) 422-4511 (8:00 AM – 4:30 PM Eastern Time)

2. Hazard(s) Identification



Warning
Highly Flammable Liquid and Vapour



Warning
Causes Skin Irritation

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

Keep container tightly closed.

Wear protective gloves/eye protection/face protection.

Ground / Bond container and receiving equipment.

Use explosion-proof electrical lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

IF ON SKIN or Hair: Remove / take off immediately all contaminated clothing. Rinse skin with water / shower.

In case of fire: Use CO₂ sand or extinguishing powder.

Wash hands thoroughly after handling.

Wear protective gloves

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation occurs: Get Medical Advice/attention.

Take off contaminated clothing and wash before reuse.

3. Composition/Information on Ingredients

Hazardous Components	C.A.S. Number	Exposure Limits	%
Methacrylates	Proprietary	Not Applicable	25 – 50
Tert-butyl alcohol	75-65-0	100 ppm	10 – 25
Acrylates	Proprietary	Not Applicable	10 – 25

4. First Aid Measures

Routes of Exposure	First Aid Instructions	Immediate Medical Attention	Delayed Effects
Eye	Rinse opened eye for several minutes under running water. If symptoms persist consult physician.	Not Applicable	Not Applicable
Skin	Immediately wash with soap and water and rinse thoroughly	Not Applicable	Not Applicable
Inhalation	Supply fresh air	Not Applicable	Not Applicable
Ingestion	If symptoms persist consult physician	Not Applicable	Not Applicable
Other	Not Applicable	Not Applicable	Not Applicable
Note to Physicians (Treating, Testing and Monitoring): Treat symptomatically.			

5. Fire and Explosion Data

Flashpoint Method: 19°C (66°F) Tag Closed Cup	Flammable (Explosive) Limits in Air LEL: 2.4 vol % UEL: 8 vol %	Autoignition Temperature: Not Applicable	Other: Not Applicable
Flame Propagation or Burning Rate (for Solids): Not Applicable	Properties Contributing to Fire Intensity: Not Applicable	Flammability Classification: 3	
Extinguishing Media: CO ₂ , sand or extinguishing powder.		Extinguishing Media to Avoid: Do not use water or water with full jet.	
Protection and Procedures for Firefighters: Firefighters should wear self-contained respiratory protective devices.			
Unusual Fire and Explosion Hazards: Formation of toxic gases is possible during heating or in case of fire.			

6. Accidental Release Measures

Containment Techniques: Wear protective clothing. Absorb with liquid binding material (sand, vermiculite, diatomite, acid binders, universal binders or sawdust). Scoop up bulk material and place in a labeled plastic or metal container.		
Spill/Leak Clean-up Procedures and Equipment: Wear protective clothing. Absorb with liquid binding material (sand, vermiculite, diatomite, acid binders, universal binders or sawdust). Scoop up bulk material and place in a labeled plastic or metal container. Avoid gross skin contact to minimize the possibility of contact dermatitis to susceptible persons. Ensure adequate ventilation.		
Evacuation Procedures: Not Applicable	Special Instructions: Not Applicable	Reporting Requirements: Not Applicable

7. Handling and Storage

Handling Practices and Warnings: Handling of this product should be by trained dental healthcare professionals only. Observe normal care for working with chemicals.
Storage Practices and Warnings: Store in a well-ventilated place. Keep cool. Store only in the original package. Keep package tightly sealed. Protect from exposure to direct light. Store away from food and beverages.

8. Exposure Control / Personal Protection



Ventilation: None required during normal intended use of this product		Other Engineering Controls: Not Applicable
Routes of Entry	Personal Protective Equipment (PPE) for Normal Use	PPE for Emergencies
Eye/Face	Safety Glasses	Not Applicable
Skin	The glove material has to be impermeable and resistant to the product.	Not Applicable
Inhalation	Not required for normal volumes used in Dental office.	Not Applicable
Body Protection	Protective work clothing	Not Applicable
General Hygiene Considerations and Work Practices: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at end of work. Avoid contact with the eyes and skin.		
Protective Measures During Repair and Maintenance of Contaminated Equipment: Not Applicable		
Other Protective Measures and Equipment: Not Applicable		

9. Physical and Chemical Characteristics

Appearance: Clear liquid.	Odor: Sweet acrylic ester odor.	
Normal Physical State: Liquid	Boiling Point: Not Established.	
Specific Gravity: ~0.9 g/cm ³	pH: 2.5	pH: Not Applicable
Vapor Pressure (mm Hg): Not Established	Evaporation Rate (Butyl Acetate =1) Not Applicable	Evaporation Rate (Butyl Acetate =1) Not Applicable

10. Stability and Reactivity Data

Incompatibility (Materials to Avoid): Visible light, high temperatures, strong acids, strong oxidizing agents. Keep away from sparks and sources of ignition.		
Hazardous Products Produced During Decomposition: Methacrylates, acrylates, carbon dioxide, carbon monoxide, and irritating gases.		
Hazardous Polymerization: <input type="checkbox"/> May Occur <input checked="" type="checkbox"/> May Not Occur	Conditions to Avoid: High Temperatures, ignition sources.	
Stability? <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable	Conditions to Avoid: High Temperatures, ignition sources.	

11. Toxicological Information

Emergency Overview: Material is flammable. Material is irritating to eyes, respiratory system and skin.					
Toxicity Data, Epidemiology Studies, Carcinogenicity, Neurological Effects, Genetic Effects, Reproductive Effects, or Structure Activity Data: Product is an irritant to skin and mucous membranes. The unpolymerized product may be an irritant to the skin in susceptible persons. On the eye the product has an irritating effect. Sensitization: Repeated or prolonged contact with the unpolymerized material may cause sensitization for persons allergic to acrylates and methacrylates. This product shows the following dangers according to internally approved calculation methods for composite materials: Irritant.					
Routes of Exposure	Signs and Symptoms	Single, Repeated, or Lifetime Exposure	Severity (Mild, Moderate, Severe)	Acute and Chronic Health Effect(s)	Target Organ(s)
Eye	Material can cause irritation.	Single	Moderate	Irritation and possible corneal damage	Yes
Skin	Material may be an irritant and may be absorbed through the skin.	Single & Repeated	Moderate	Irritation or possible allergic response. Severe allergic response may result in breathing difficulties.	Yes
Inhalation	Inhalation of high concentrations	Repeated	Moderate	Chronic inhalation may cause effects similar to	Yes

	may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma.			those of acute inhalation. Causes respiratory tract irritation. May cause motor incoordination and speech abnormalities.	
Ingestion	May cause irritation of the digestive tract.	Single & Repeated	Mild	Not Applicable	No
Other: Central nervous system	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Medical Conditions Aggravated by Exposure: Open sores and wounds of the skin. Individuals with known sensitivity to methacrylates, acrylates, or urethane dimethacrylate resin used in Dental restorative products.					
Carcinogenicity NTP?: Not listed IARC monographs?: Not listed OSHA regulated?: No. All components of this product are in compliance with the inventory listing Requirements of the U. S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.					
Potential Environmental Effects Do not allow to enter sewers/ surface or ground water.					
NFPA Hazard Classification Ratings (Scale 0-4) Health = 2, Fire = 3, Reactivity = 1 Specific Hazard = None					

12. Ecological Information

Toxicity Data, Environmental Fate, Physical/Chemical Data, or other Data Supporting Environmental Hazard Statements: Harmful to fish. Harmful to aquatic organisms.

13. Disposal Considerations

Regulations: Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Absorb any spilled material with liquid binding material (sand, vermiculite, diatomite, acid binders, universal binders or sawdust). Scoop up bulk material and place in a labeled plastic or metal container. Dispose of contents / container in accordance with Federal, State and Local regulations.

Properties (Physical/Chemical) Affecting Disposal: Dispose of material as solid waste in a closed container.

RCRA P-Series: None Listed, RCRA U-Series: Waste Number D001 (Ignitable Waste)

14. Transport Information

Regulated for Shipping: Yes	Proper Shipping Name: Flammable Liquid N.O.S. (2-Methylpropanol-2, Acrylate, mixture)	Packing Group: II
Do Changes in Quantities, packaging, or shipment method change product classification? Yes	Hazard Class: 3	UN Identification Number: 1993
Other: Not Applicable		



Flammable Liquid

15. Regulatory Information

This product has been classified in accordance with the hazard criteria of the Globally Harmonized System of Classification and Labeling of Chemicals and the SDS contains all of the information required by the Canadian Controlled Products Regulations.

U.S. Federal Regulations: CERCLA 103 Reportable Quantity: No chemicals have a reportable quantity. Report spills required under federal, state and local regulations. Many states have more stringent release reporting requirements.

RCRA U-Series Hazardous Waste Code Not Applicable.

Section 313 Toxic Chemicals: This product contains CAS#75-65-0 tert-butyl alcohol, which is subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372).

Section 302 Extremely Hazardous Substances (TPQ): None

EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.

U.S. State Regulations California Proposition 65: This product does not contain any chemicals, which are on the California Proposition 65 list.

Federal Regulations: The product has been classified and marked in accordance with directives on hazardous materials. Hazard Symbol: Flammable Water Hazard class1 (Self-assessment): slightly hazardous for water.

International Regulations: Hazard Symbol: Flammable X1 F Risk Phrases: R11 Highly Flammable, R36/37/38 Irritating to eyes, respiratory system and skin. R52/53 Harmful to aquatic organisms may cause long-term adverse effects in the aquatic environment. Safety Phrases: S9 Keep container in a well – ventilated place. S16 Keep away from sources of ignition – No Smoking, S23 Do not breathe gas/fumes/vapor/spray (appropriate wording to be specified by the manufacturer. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice, S28 After contact with skin, wash immediately with plenty of water. S33 Take precautionary measures against static discharges.

16. Other Information

To the best of our knowledge this product does not contain gluten, wheat grains, flaxseed, natural rubber, or natural latex.

All components are synthetically produced; none are derived from animal products.

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

The attached safety data sheet covers the dangers and measures to be taken when large quantities of material are released, for example due to accidents during transport or storage by the dealer. For quantities of material typically used in clinical practice, information necessary for safe use and storage of the product is given in the DFU.

**DENTSPLY/International
DENTSPLY/Caulk
Safety Data Sheet**

507805

1. Identification

Product Name CALIBRA® Veneer Try-In Paste	SDS Code Number 507805
Substance Identity CALIBRA® Veneer Esthetic Resin Cement Try-In Paste	Date of Last Revision 06/19/14
Manufacturer: DENTSPLY Caulk	Address 38 West Clarke Avenue Milford DE 19963-1805 http://www.caulk.com http://www.dentsply.com
Grades or Minor Variant Identities Not Applicable	Information Telephone Number (302) 422-4511 (8:00 AM – 4:30 PM Eastern Time)
Product Use (for Canada) Not Applicable	Emergency Telephone Number (302) 422-4511 (8:00 AM – 4:30 PM Eastern Time)

2. Hazard(s) Identification

**WARNING
CAUSES MILD SKIN IRRITATION
If irritation occurs: Get medical advice/attention**

3. Composition/Information on Ingredients

Hazardous Components	C.A.S. Number	Exposure Limits	%
Glycerine	56-81-5	10 mg/M ³	> than 70
Amorphous Fumed Silica	7631-86-9	2 mg/M ³	< than 20
Titanium Dioxide	13463-67-7	10 mg/M ³	< than 2

Other Information: Colorants are inorganic iron oxides.

3. Hazard Identification

Emergency Overview: Material may be irritating to eyes. No significant hazards for emergency responses are known.					
Routes of Exposure	Signs and Symptoms	Single, Repeated, or Lifetime Exposure	Severity (Mild, Moderate, Severe)	Acute and Chronic Health Effect(s)	Target Organ(s)
Eye	Material may cause slight transient (temporary) irritation.	Single & Repeated	Moderate	Irritation and possible corneal damage due to the fillers used in the product.	Not Applicable
Skin	Material may be an irritant after repeated and prolonged exposure.	Repeated	Mild	Irritation or possible allergic response.	Not Applicable
Inhalation	Vapors are minimal due to physical properties.	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Ingestion	Material is probably not harmful if swallowed	Not Applicable	Mild	Not Applicable	Not Applicable
Other	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Medical Conditions Aggravated by Exposure Open sores and wounds of the skin.					
Carcinogenicity NTP?: Not listed IARC monographs?: Not listed OSHA regulated?: No All components of this product are in compliance with the inventory listing Requirements of the U. S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.					
Potential Environmental Effects Do not allow to enter sewers/ surface or ground water.					
NFPA Hazard Classification Ratings (Scale 0-4), Health = 1, Fire = 0, Reactivity = 0					

4. First Aid Measures

Routes of Exposure	First Aid Instructions	Immediate Medical Attention	Delayed Effects
Eye	Rinse opened eye for several minutes under running water. If symptoms persist consult physician	Not Applicable	Not Applicable
Skin	Immediately wash with soap and water and rinse thoroughly.	Not Applicable	Not Applicable
Inhalation	Supply fresh air, consult physician if symptoms persist.	Not Applicable	Not Applicable
Ingestion	If symptoms persist consult physician. Do not induce vomiting unless instructed to do so by medical personnel.	Not Applicable	Not Applicable
Other	Not Applicable	Not Applicable	Not Applicable
Note to Physicians (Treating, Testing and Monitoring): Treat symptomatically.			

5. Fire and Explosion Data

Flashpoint Method: 390°F (199°C) for Glycerine. Pensky-Martin Closed Cup	Flammable (Explosive) Limits in Air LEL: Not Applicable UEL: Not Applicable	Autoignition Temperature: 698°F (370°C)	Other: Not Applicable
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Flame Propagation or Burning Rate (for Solids) Not Applicable	Properties Contributing to Fire Intensity: Not Applicable	Flammability Classification: Not Applicable	
Extinguishing Media: CO ₂ , Water fog or fine spray, foam, carbon dioxide or alcohol resistant foams (ATC Type).		Extinguishing Media to Avoid: Water with full jet.	
Protection and Procedures for Firefighters: Firefighters should wear self-contained respiratory protective devices.			
Unusual Fire and Explosion Hazards: During a fire, smoke may contain glycerine in addition to unidentified toxic and/or irritating compounds. Hazardous combustion products may include but not limited to aldehydes, carbon monoxide and carbon dioxide.			

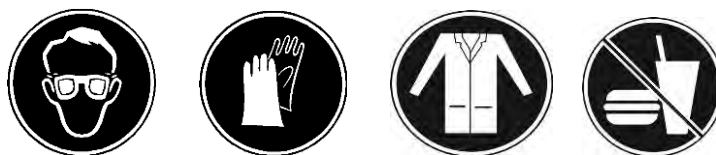
6. Accidental Release Measures

Containment Techniques: Material is a high viscosity paste, but will flow somewhat.		
Spill/Leak Clean-up Procedures and Equipment: Wear protective clothing and scoop up bulk material and place in a labeled plastic or metal container.		
Evacuation Procedures: Not Applicable	Special Instructions: Not Applicable	Reporting Requirements: Not Applicable

7. Handling and Storage

Handling Practices and Warnings: Product is intended for dental use only. Handling of this product should be by trained dental healthcare professionals only. Observe normal care for working with chemicals.
Storage Practices and Warnings: Store only in the original package. Keep package tightly sealed. Store in a dry area. Store away from food and beverages. Glycerine freezes at 64°F (18°C). Product should be kept above 64°F (18°C) but less than 130°F (54°C).

8. Exposure Control / Personal Protection



Individual Protection Measures	Personal Protective Equipment for Normal Use	Personal Protective Equipment for Emergencies
Eye/Face	Safety Glasses	Not Applicable
Skin	The glove material has to be impermeable and resistant to the product.	Not Applicable
Inhalation	Not Required	Not Applicable
Body Protection	Protective work clothing	Not Applicable
Occupational Exposure Limits: Not Applicable		Engineering Controls: Not Applicable

9. Physical and Chemical Characteristics

Appearance: Creamy viscous paste. Multiple shades.		Odor: Mild odor.
Normal Physical State: High Viscosity Liquid (Paste)		Melting Point: Not Applicable
Specific Gravity: 1.4 g/cm ³	Solubility in Water: Partially soluble.	pH: Not Applicable
Vapor Pressure (mm Hg): Not Applicable	Vapor Density (AIR=1): Not Applicable	Evaporation Rate (Butyl Acetate =1): N A
Flashpoint Method: Not Applicable	Flammable (Explosive) Limits in Air LEL: Not Applicable UEL: Not Applicable	Autoignition Temperature: Not Applicable
Other: Not Applicable		

10. Stability and Reactivity Data

Incompatibility (Materials to Avoid): Strong Oxidizing materials such as Sodium Hypochlorite or Hypochlorous Acid		
Hazardous Products Produced During Decomposition: Acrolein.		
Hazardous Polymerization: <input type="checkbox"/> May Occur <input checked="" type="checkbox"/> May Not Occur	Conditions to Avoid: None known	
Stability? <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable	Conditions to Avoid: None known	

11. Toxicological Information

Toxicity Data, Epidemiology Studies, Carcinogenicity, Neurological Effects, Genetic Effects, Reproductive Effects, or Structure Activity Data: For ingestion, the LD ₅₀ for glycerine in Rats is 17,000 – 27,000 mg/Kg.					
Emergency Overview: Material may be mildly irritating to eyes.					
Routes of Exposure	Signs and Symptoms	Single, Repeated, or Lifetime Exposure	Severity (Mild, Moderate, Severe)	Acute and Chronic Health Effect(s)	Target Organ(s)
Eye	Material may cause slight transient (temporary) irritation.	Single & Repeated	Moderate	Irritation and possible corneal damage due to the fillers used in the product.	Not Applicable
Skin	Material may be an irritant after repeated and prolonged exposure.	Repeated	Mild	Irritation or possible allergic response.	Not Applicable
Inhalation	Vapors are minimal due to physical properties.	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Ingestion	Material is probably not harmful if swallowed	Not Applicable	Mild	Not Applicable	Not Applicable
Other	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Medical Conditions Aggravated by Exposure Open sores and wounds of the skin.					
Carcinogenicity NTP?: Not listed IARC monographs?: Not listed OSHA regulated?: No All components of this product are in compliance with the inventory listing Requirements of the U. S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.					
Potential Environmental Effects: Potential Environmental Effects Do not allow to enter sewers/ surface or ground water.					

12. Ecological Information

Toxicity Data, Environmental Fate, Physical/Chemical Data, or other Data Supporting Environmental Hazard Statements: Water Hazard class1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water streams or sewage system.

13. Disposal Considerations

Regulations: Must not be disposed of together with household garbage. Dispose of material as solid waste in a closed container.

Dispose of in accordance with Federal, State and Local regulations

Properties (Physical/Chemical) Affecting Disposal: Dispose of material as solid waste in a closed container.

14. Transport Information

Regulated for Shipping: No. Not Regulated	DOT Shipping Name: Not Regulated	Packing Group: Not Applicable
Do Changes in Quantities, packaging, or shipment method change product classification? No	DOT Hazard Class: Not Applicable	UN Number: Not Applicable

15. Regulatory Information

This product has been classified in accordance with the hazard criteria of the Globally Harmonized System of Classification and Labeling of Chemicals and the SDS contains all of the information required by the Canadian Controlled Products Regulations.

U.S. Federal Regulations: CERCLA 103 Reportable Quantity: This product is not subject to CERCLA reporting requirements. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations

Section 313 Toxic Chemicals: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): None

Section 302 Extremely Hazardous Substances (TPQ): None

EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.

U.S. State Regulations California Proposition 65: This product does not contain any chemicals, which are on the California Proposition 65 list.

International Regulations: Canadian Environmental Protection Act:

This product is a medical device and not subject to chemical notification requirements.

European Community Labeling: Not a dangerous preparation.

European Inventory of New and Existing Chemicals Substances (EINECS):

This product is a medical device and not subject to chemical notification requirements.

Other: Not Applicable

16. Other Information

To the best of our knowledge this product does not contain gluten, wheat grains, flaxseed, natural rubber, or natural latex. All components are synthetically produced; none are derived from animal products.

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

The attached safety data sheet covers the dangers and measures to be taken when large quantities of material are released, for example due to accidents during transport or storage by the dealer. For quantities of material typically used in clinical practice, information necessary for safe use and storage of the product is given in the DFU.

**DENTSPLY/International
DENTSPLY/Caulk
Safety Data Sheet**

507803

1. Identification

Product Name CALIBRA[®] Veneer Esthetic Resin Cement	SDS Code Number 507803
Substance Identity CALIBRA[®] Veneer Esthetic Resin Cement	Date of Last Revision 06/19/14
Manufacturer: DENTSPLY Caulk	Address 38 West Clarke Avenue Milford DE 19963-1805 http://www.caulk.com http://www.dentsply.com
Grades or Minor Variant Identities Not Applicable	Information Telephone Number (302) 422-4511 (8:00 AM – 4:30 PM Eastern Time)
Product Use (for Canada) Visible Light Curing Dental Veneer Cement	Emergency Telephone Number (302) 422-4511 (8:00 AM – 4:30 PM Eastern Time)

2. Hazard(s) Identification



WARNING

CAUSES SKIN IRRITATION

Wash hands thoroughly after handling.

Wear protective gloves.

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation occurs: Get Medical Advice/attention.

Take off contaminated clothing and wash before reuse.

3. Composition/Information on Ingredients – Base Shade

Hazardous Components	C.A.S. Number	Exposure Limits	%
Barium boron fluoro alumino silicate glass	65997-18-4	10 mg/m ³	< than 70
Bis-GMA	1565-94-2	Not Established	< than 20
Polymerizable dimethacrylate resins	24448-20-2/109-16-0	Not Established	< than 15
Hydrophobic Amorphous Silica	67762-90-7	3 mg/m ³	< than 5

Other Information: Colorants are inorganic iron oxides and titanium dioxide.

4. First Aid Measures

Routes of Exposure	First Aid Instructions	Immediate Medical Attention	Delayed Effects
Eye	Rinse opened eye for several minutes under running water. If symptoms persist consult physician	Not Applicable	Not Applicable
Skin	Immediately wash with soap and water and rinse thoroughly	Not Applicable	Not Applicable
Inhalation	Not Applicable	Not Applicable	Not Applicable
Ingestion	Not Applicable	Not Applicable	Not Applicable
Mucosa	Rinse tissue for several minutes under running water. If symptoms persist consult physician	Not Applicable	Not Applicable

Note to Physicians (Treating, Testing and Monitoring): Treat symptomatically.

5. Fire Fighting Measures

Flame Propagation or Burning Rate (for Solids) Not Applicable	Properties Contributing to Fire Intensity Not Applicable	Flammability Classification: Not Applicable	Other: Not Applicable
Extinguishing Media: CO ₂ , extinguishing powder, foam carbon dioxide or water spray. Fight larger fires with water spray or alcohol resistant foam.		Extinguishing Media to Avoid: Water with full jet.	
Protection and Procedures for Firefighters: Firefighters should wear self-contained respiratory protective devices.			
Unusual Fire and Explosion Hazards: Formation of toxic, irritating gases is possible from the decomposition of the dimethacrylate resins. Product does not present an explosion hazard.			

6. Accidental Release Measures

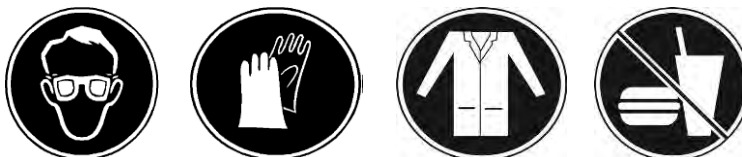
Containment Techniques: Material is a paste and as such will not flow.
--

Spill/Leak Clean-up Procedures and Equipment: Wear protective clothing and scoop up bulk material and place in a labeled plastic or metal container. Avoid gross skin contact to minimize the possibility of contact dermatitis to susceptible persons. Ensure adequate ventilation.		
Evacuation Procedures: Not Applicable	Special Instructions: Not Applicable	Reporting Requirements: Not Applicable

7. Handling and Storage

Handling Practices and Warnings: Product is intended for dental use only. Handling of this product should be by trained dental healthcare professionals only. Observe normal care for working with chemicals.
Storage Practices and Warnings: Store only in the original package. Keep package tightly sealed. Store in a dry area. Protect from exposure to direct light. Store away from food and beverages.

8. Exposure Control / Personal Protection



Occupational Exposure Limits: Not Applicable		
Engineering Controls: Not Applicable		
Individual Protection Measures	Personal Protective Equipment for Normal Use	Personal Protective Equipment for Emergencies
Eye/Face	Safety Glasses	Not Applicable
Skin	The glove material has to be impermeable and resistant to the product.	Not Applicable
Inhalation	Not Required	Not Applicable
Body Protection	Protective work clothing	Not Applicable

9. Physical and Chemical Characteristics

Appearance: Creamy viscous paste. Multiple shades.		Odor: Characteristic sweet acrylic ester odor.
Normal Physical State: High Viscosity Liquid (Paste)		Melting Point: Not Applicable
Specific Gravity: 1.8 g/cm ³	Solubility in Water: Not soluble	pH: Not Applicable
Vapor Pressure (mm Hg): Not Applicable	Vapor Density (AIR=1): Not Applicable	Evaporation Rate (Butyl Acetate =1): Not Applicable
Flashpoint Method: Not Applicable	Flammable (Explosive) Limits in Air LEL: Not Applicable UEL: Not Applicable	Autoignition Temperature: Not Applicable, Product will not autoignite.
Other: Not Applicable		

10. Stability and Reactivity Data

Incompatibility (Materials to Avoid): Strong Oxidizing materials.		
Hazardous Products Produced During Decomposition: No dangerous decomposition products known if used according to Directions for Use.		
Hazardous Polymerization: <input type="checkbox"/> May Occur <input checked="" type="checkbox"/> May Not Occur	Conditions to Avoid: None known	
Stability? <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable	Conditions to Avoid: None known	

11. Toxicological Information

Toxicity Data, Epidemiology Studies, Carcinogenicity, Neurological Effects, Genetic Effects, Reproductive Effects, or Structure Activity Data: Product is an irritant to the skin and mucous membranes. The unpolymerized product may be an irritant to the skin in susceptible persons. On the eye the product has an irritating effect. Sensitization: Repeated or prolonged contact with the unpolymerized material may cause sensitization for persons allergic to acrylates and methacrylates. This product shows the following dangers according to internally approved calculation methods for composite materials: Irritant.					
Emergency Overview Material is irritating to eyes, respiratory system and skin.					
Routes of Exposure	Signs and Symptoms	Single, Repeated, or Lifetime Exposure	Severity (Mild, Moderate, Severe)	Acute and Chronic Health Effect(s)	Target Organ(s)
Eye	Material can cause irritation.	Single	Moderate	Irritation and possible corneal damage	Not Applicable
Skin	Material may be an irritant	Single & Repeated	Moderate	Irritation or possible allergic response. Severe allergic response may result in breathing difficulties.	Not Applicable
Inhalation	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Ingestion	Material is not harmful if swallowed using clinically relevant quantities	Not Applicable	Mild	Not Applicable	Not Applicable
Mucosa	Material can cause irritation.	Single	Mild	Inflammation of the mucosa	Not Applicable
Medical Conditions Aggravated by Exposure Open sores and wounds of the skin. Individuals with known sensitivity to methacrylates, acrylates, or urethane dimethacrylate resin used in Dental restorative products.					
Carcinogenicity NTP?: Not listed IARC monographs?: Not listed OSHA regulated?: No All components of this product are in compliance with the inventory listing Requirements of the U. S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.					
Potential Environmental Effects Do not allow to enter sewers/ surface or ground water.					
NFPA Hazard Classification Ratings (Scale 0-4), Health = 1, Fire = 1, Reactivity = 0					

12. Ecological Information

Toxicity Data, Environmental Fate, Physical/Chemical Data, or other Data Supporting Environmental Hazard Statements: Water Hazard class1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water streams or sewage system.

13. Disposal Considerations

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

Dispose of material as solid waste in a closed container. Dispose of in accordance with Federal, State and Local regulations

Properties (Physical/Chemical) Affecting Disposal: Dispose of material as solid waste in a closed container.

14. Transport Information

Regulated for Shipping: No. Not Regulated	DOT Shipping Name: Not Regulated	Packing Group: Not Applicable
Do Changes in Quantities, packaging, or shipment method change product classification? No	DOT Hazard Class: Not Applicable	UN Number: Not Applicable

15. Regulatory Information

This product has been classified in accordance with the hazard criteria of the Globally Harmonized System of Classification and Labeling of Chemicals and the SDS contains all of the information required by the Canadian Controlled Products Regulations.

U.S. Federal Regulations: CERCLA 103 Reportable Quantity: This product is not subject to CERCLA reporting requirements. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations

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U.S. State Regulations California Proposition 65: This product does not contain any chemicals, which are on the California Proposition 65 list.

International Regulations: Canadian Environmental Protection Act:

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European Community Labeling: Not a dangerous preparation.

European Inventory of New and Existing Chemicals Substances (EINECS):

This product is a medical device and not subject to chemical notification requirements.

Other: Not Applicable

16. Other Information

To the best of our knowledge this product does not contain gluten, wheat grains, flaxseed, natural rubber, or natural latex.

All components are synthetically produced; none are derived from animal products.

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

The attached safety data sheet covers the dangers and measures to be taken when large quantities of material are released, for example due to accidents during transport or storage by the dealer. For quantities of material typically used in clinical practice, information necessary for safe use and storage of the product is given in the DFU.

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.03.2015


Version number 5

Revision: 19.03.2015

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

- **1.1 Product identifier**
- **Trade name:** *Calibra Silane Coupling Agent*
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the mixture** *Silane Coupling Agent*
- **Uses advised against** *No further relevant information available.*
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
DENTSPLY DeTrey GmbH
De-Trey-Str. 1
D-78467 Konstanz
GERMANY
Tel.: +49-(0)7531-583-0
Fax: +49-(0)7531-583-104
email: KonstanzDEU.info-sdb@dentsply.com
- **Further information obtainable from:**
 - *Departement Analytical Research / Research & Development for technical information*
 - *Departement Marketing & Sales for distribution of the safety data sheets*
- **1.4 Emergency telephone number:** *+49-(0)7531-583-0 8:00 - 17:00 (GMT + 1:00)*

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Flam. Liq. 2 H225 Highly flammable liquid and vapour.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
As this product is a medical device in the meaning of Directive 93/42/EEC and intended for use by the end consumer and is applied in an invasive manner or body contact, it is exempt from the labelling requirements according to regulation 1272/2008.
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**
- 

GHS02
- **Signal word** *Danger*
- **Hazard statements**
H225 Highly flammable liquid and vapour.
- **Precautionary statements**

<i>P210</i>	<i>Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</i>
<i>P241</i>	<i>Use explosion-proof electrical/ventilating/lighting/equipment.</i>
<i>P280</i>	<i>Wear protective gloves/protective clothing/eye protection/face protection.</i>
<i>P303+P361+P353</i>	<i>IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.</i>
<i>P403+P235</i>	<i>Store in a well-ventilated place. Keep cool.</i>
<i>P501</i>	<i>Dispose of contents/container in accordance with local/regional/national/international regulations.</i>
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** *Not applicable.*
- **vPvB:** *Not applicable.*

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Trade name: Calibra Silane Coupling Agent

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SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 64-17-5	ethanol	50-100%
EINECS: 200-578-6	 Flam. Liq. 2, H225	
CAS: 67-64-1	acetone	2.5-10%
EINECS: 200-662-2	 Flam. Liq. 2, H225;  Eye Irrit. 2, H319; STOT SE 3, H336	

- **Additional information** For the wording of the listed risk 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 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** Rinse out mouth and then drink plenty of water.
- **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, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents** Water with full jet.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** Self-contained respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Observe normal care for working with chemicals.
- **Handling** Product is intended for dental use only.

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Trade name: Calibra Silane Coupling Agent

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



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 receptacles:** Store in a cool location.

· **Information about storage in one common storage facility:** Store away from oxidising agents.

· **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.

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

SECTION 8: Exposure controls/personal protection

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

· **8.1 Control parameters**

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

64-17-5 ethanol

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

67-64-1 acetone

WEL Short-term value: 3620 mg/m³, 1500 ppm

Long-term value: 1210 mg/m³, 500 ppm

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

· **8.2 Exposure controls**

· **Personal protective equipment**

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

· **Respiratory protection:** Not necessary if room is well-ventilated.

· **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**

Butyl rubber, BR

Recommended thickness of the material: ≥ 0.7 mm

Permeation: Level ≥ 6

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:**



Tightly sealed goggles.

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Trade name: Calibra Silane Coupling Agent

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

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Liquid
Colour:	Clear
Odour:	Alcohol-like
Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/Melting range:	undetermined
Boiling point/Boiling range:	78 °C

· Flash point: 6 °C (c.c. Abel)

· Flammability (solid, gaseous) Not applicable.

· Ignition temperature: 425 °C

· Decomposition temperature: Not determined.

· 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 at 20 °C: 0.8 g/cm³

· Relative density Not determined.

· Vapour density Not determined.

· Evaporation rate Not determined.

· Solubility in / Miscibility with

Water: Partly miscible

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

· Viscosity:

dynamic:	Not determined.
kinematic:	Not determined.

· Solvent content:

Organic solvents: 98.0 %

· 9.2 Other information No further relevant information available.

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.

· 10.2 Chemical stability

· Thermal decomposition / conditions to be avoided: No decomposition if used 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.

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Trade name: Calibra Silane Coupling Agent

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· 10.6 Hazardous decomposition products: No dangerous decomposition products known

SECTION 11: Toxicological information

· 11.1 Information on toxicological effects

· Acute toxicity:

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Inhalative	LC50/4 h	95.7 mg/l
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64-17-5 ethanol

Oral	LD50	6200 mg/kg (rat)
------	------	------------------

Inhalative	LC50/4 h	95.6 mg/l (rat)
------------	----------	-----------------

67-64-1 acetone

Oral	LD50	5800 mg/kg (rat)
------	------	------------------

Dermal	LD50	20000 mg/kg (rabbit)
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Inhalative	LC50/4 h	76 mg/l (rat)
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· Primary irritant effect:

· on the skin: No irritant effect.

· on the eye: No irritating effect.

· Sensitisation: No sensitising effects known.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

64-17-5 ethanol

EC50/48h	9268 mg/L (daphnia magna)
----------	---------------------------

LC50/48h	8140 mg/l (Fish acute toxicity study)
----------	---------------------------------------

67-64-1 acetone

EC50/48h	6100 mg/L (daphnia magna)
----------	---------------------------

LC50/96h	5540 mg/l (Fish acute toxicity study)
----------	---------------------------------------

· 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 undiluted product or large quantities of it to reach ground water, water course or sewage system.

· 12.5 Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

· 12.6 Other adverse effects No further relevant information available.

GB

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Trade name: Calibra Silane Coupling Agent

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SECTION 13: Disposal considerations

- 13.1 Waste treatment methods
- Recommendation





Must not be disposed 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 packaging:
- Recommendation: Disposal must be made according to official regulations.
- Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· 14.1 UN-Number	UN1993
· ADR, IMDG, IATA	
· 14.2 UN proper shipping name	1993 FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETONE)
· ADR	
· IMDG	FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETONE)
· IATA	FLAMMABLE LIQUID, N.O.S. (ETHANOL, ACETONE)
· 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	II
· ADR, IMDG, IATA	
· 14.5 Environmental hazards:	
· Marine pollutant:	No
· 14.6 Special precautions for user	Warning: Flammable liquids.
· Danger code (Kemler):	33
· EMS Number:	F-E, S-E
· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

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Revision: 19.03.2015

Trade name: Calibra Silane Coupling Agent

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· Transport/Additional information:**· ADR****· Limited quantities (LQ)**

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· Transport category

2

· Tunnel restriction code

D/E

· IMDG**· Limited quantities (LQ)**

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation":

UN1993, FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL), ACETONE), 3, II

SECTION 15: Regulatory information**· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****· National regulations****· Information about limitation of use:** Employment restrictions concerning juveniles must be observed.**· 15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**SECTION 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.

The attached safety data sheet covers the dangers and measures to be taken when large quantities of material are released, for example due to accidents during transport or storage by the dealer.

For quantities of material typically used in clinical practice, information necessary for safe use and storage of the product is given in the DFU.

· Relevant phrases

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

· Department issuing MSDS: Analytical Research**· Contact:** HotLine for urgent technical support: +49-7531-583-350**· 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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

· * Data compared to the previous version altered.

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