

F377

**DENTSPLY/International
DENTSPLY/Caulk
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 11/11/10
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 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	Not Applicable	Not Applicable

	comfortable for breathing. 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.			

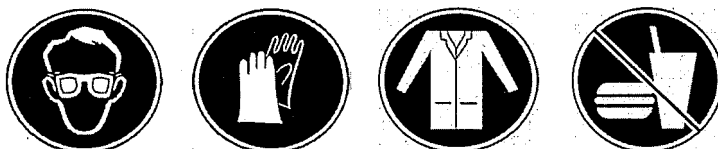
6. Accidental Release Measures

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: Acrid.
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: ☐ May Occur ☒ May Not Occur	Conditions to Avoid: High Temperatures, ignition sources.
Stability? ☒ Stable ☐ 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 may cause irritation.	Single & Repeated	Severe	Irritation and possible corneal damage due to the corrosive nature of product.	Not Applicable
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 class I (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/International
DENTSPLY/Caulk
Safety Data Sheet**

534398

1. Product and Company Identification

Product Name PRIME & BOND[®]NT[™] Nano – Technology Dental Adhesive	SDS Code Number 534398
Trade Name & Synonyms PRIME & BOND[®]NT[™] Nano – Technology Dental Adhesive	Date of Last Revision 02/02/11
Manufacturer: DENTSPLY Caulk	Address 38 West Clarke Avenue Milford DE 19963-1805 http://www.caulk.com
Grades or Minor Variant Identities Unit Dose Package	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	%
Acetone	67-64-1	500 ppm	< 70
Urethane dimethacrylate resin	105883-40-7	Not Established	< 20
Dipentaerythritol pentaacrylate phosphate	87699-25-0	Not Established	< 10
Polymerizable dimethacrylate resins	2358-84-1	Not Established	< 10
Polymerizable trimethacrylate resins	3290-92-4	Not Established	< 10

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 (-2°F) Pensky-Marten Closed Cup	Flammable (Explosive) Limits in Air LEL: 2.5 vol. % UEL: 12.8 vol. %	Autoignition Temperature: 465°C (869°F)	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.			

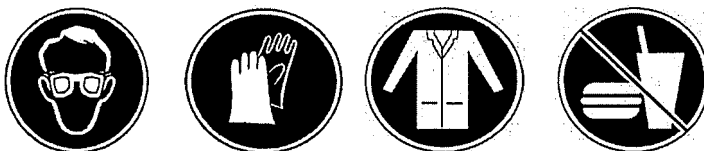
6. Accidental Release Measures

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: Light yellow liquid.		Odor: Acetone odor.	
Normal Physical State: Low viscosity liquid		Melting Point: Not Determined Boiling Point: 54.2°C (129.6°F)	
Specific Gravity: ~0.9 g/cm³		Solubility in Water: Partially	
Vapor Pressure (mm Hg): 233 mbar @ 20°C	Vapor Density (AIR=1): Not Applicable	Vapor Pressure (mm Hg): 233 mbar @ 20°C	
Other: Not Applicable			

10. Stability and Reactivity Data

Incompatibility (Materials to Avoid): Visible light, high temperatures, strong acids, strong oxidizing agents.	
Hazardous Products Produced During Decomposition: Methacrylates, acrylates, carbon dioxide, carbon monoxide, peroxides and irritating gases.	
Hazardous Polymerization: ☐ May Occur ☒ May Not Occur	Conditions to Avoid: High Temperatures, ignition sources.
Stability? ☒ Stable ☐ 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	Yes

Inhalation	Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma.	Repeated	Moderate	in breathing difficulties. Chronic inhalation may cause effects similar to those of acute inhalation. Causes respiratory tract irritation. May cause motor incoordination and speech abnormalities.	Yes
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 = 1, Fire = 3, Reactivity = 0 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. 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.

RCRA P-Series: None Listed, RCRA U-Series CAS#67-64-1: Waste Number U002 (Ignitable Waste)

14. Transport Information

Regulated for Shipping: Yes	Proper Shipping Name: Acetone Solution	Packing Group: II
Do Changes in Quantities, packaging, or shipment method change product classification? Yes	Hazard Class: 3	UN Identification Number: 1090
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: RQ is 5,000 pounds (2268Kg) for CAS# 67-64-1 Acetone. Report spills required under federal, state and local regulations. Many states have more stringent release reporting requirements.
RCRA U-Series Hazardous Waste Code for CAS# 67-64-1 Acetone: U002
Section 313 Toxic Chemicals: This product does not contain any chemicals 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 class I (Self-assessment): slightly hazardous for water. SARA Codes: CAS # 67-64-1 Acute, chronic, flammable.
International Regulations: Hazard Symbol: Flammable Xi 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. R67 Vapors may cause drowsiness and dizziness. Safety Phrases: S9 Keep container in well-ventilated place. S16 Keep away from sources of ignition – No Smoking. 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. S61 Avoid release to the environment.
Other: Canada WHMIS for the acetone, classification of B2, D2B. Acetone CAS#67-64-1 is on the Canadian Ingredient Disclosure List.

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**

530699

1. Identification

Product Name Esthet•X® HD	SDS Code Number 530699
Substance Identity Esthet•X® HD High Definition Micro Matrix Restorative	Date of Last Revision 05/16/13
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) Light Curing Composite/Dental Filling Material	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

Hazardous Components	C.A.S. Number	Exposure Limits	%
Hydrophobic Amorphous Fumed Silica	68611-44-9	10 mg/m ³	< than 5
Silica (Amorphous)	67762-90-7	3 mg/m ³	< than 5
Barium boron fluoro alumino silicate glass	65997-18-4	10 mg/m ³	< than 30
Barium boron alumino silicate glass	65997-17-3	10 mg/m ³	< than 50
Urethane modified Bis-GMA dimethacrylate	126646-17-1	Not Established	< than 10
Polymerizable dimethacrylate resins	24448-20-2/109-16-0	Not Established	< than 20

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.			

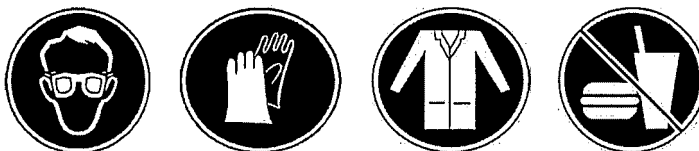
6. Accidental Release Measures

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: Various shades of viscous paste.		Odor: Characteristic sweet acrylic ester odor.
Normal Physical State: Very High Viscosity Liquid (Paste)		Melting Point: Not Applicable
Specific Gravity: 2.1 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: ☐ May Occur ☒ May Not Occur	Conditions to Avoid: None known	
Stability? ☒ Stable ☐ 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

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**

548899

1. Identification

Product Name Esthet•X® flow Liquid Micro Hybrid Restorative	SDS Code Number 548899
Substance Identity Esthet•X® flow Liquid Micro Hybrid Restorative	Date of Last Revision 05/16/13
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) Light Curing Composite/Dental Filling Material	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

Hazardous Components	C.A.S. Number	Exposure Limits	%
Silica (Amorphous)	67762-90-7	3 mg/m ³	< than 5
Barium boron fluoro alumino silicate glass	65997-18-4	10 mg/m ³	< than 70
Urethane modified Bis-GMA dimethacrylate	126646-17-1	N.E.	< than 10
Bis-GMA	1565-94-2	N.E.	< than 20
Polymerizable dimethacrylate resins	24448-20-2/109-16-0	N.E.	< than 25

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: Various shades of viscous paste.		Odor: Characteristic sweet acrylic ester odor.
Normal Physical State: Very 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: ☐ May Occur ☒ May Not Occur	Conditions to Avoid: None known	
Stability? ☒ Stable ☐ 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
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<u>International Regulations: Canadian Environmental Protection Act</u> : This product is a medical device and not subject to chemical notification requirements.
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<u>European Inventory of New and Existing Chemicals Substances (EINECS)</u> : This product is a medical device and not subject to chemical notification requirements.
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