

DENTSPLY/International
DENTSPLY/Caulk
Material Safety Data Sheet

546899

1. Product and Company Identification

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| 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 04/16/07 |
| Chemical Name Not Applicable | Manufacturer DENTSPLY/Caulk |
| C.A.S. Number Not Applicable | Address 38 West Clarke Avenue Milford DE 19963-1805 http://www.caulk.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. Composition Of Ingredients – Tooth Conditioner Liquid

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

2. 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.

3. Hazard Identification

| Emergency Overview: Material is a 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 | | | | | |

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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. Consult a physician immediately. | Not Applicable | Not Applicable |
| Skin | Immediately wash with soap and water and rinse thoroughly. | Not Applicable | Not Applicable |
| Inhalation | Supply fresh air. If symptoms persist consult physician. | Not Applicable | Not Applicable |
| Ingestion | Drink plenty of water and provide fresh air. Do not induce vomiting. Consult a physician immediately. | 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 Applicable UEL: Not Applicable | 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

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|---|
| 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 | 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 Applicable | Vapor Density (AIR=1): Not Applicable | Evaporation Rate (Butyl Acetate =1): Not Applicable |
| Other: 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: None known |
| Stability? <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable | Conditions to Avoid: None known |

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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.

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: Phosphoric Acid Solution | Packing Group: II |
| Do Changes in Quantities, packaging, or shipment method change product classification? Yes | DOT Hazard Class: 8 | UN Number: 1805 |

15.Regulatory Information

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 Incase 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.

Caulk

1. Product and Company Identification

| | |
|---|---|
| Product Name Esthet•X[®] flow Liquid Micro Hybrid Restorative | MSDS Code Number 548899 |
| Trade Name & Synonyms Esthet•X[®] flow Liquid Micro Hybrid Restorative | Date of Last Revision 08/15/06 |
| Chemical Name Dimethacrylate Resins | Manufacturer DENTSPLY/Caulk |
| C.A.S. Number N.A. | Address 38 West Clarke Avenue Milford DE 19963-1805 http://www.caulk.com |
| Grades or Minor Variant Identities N.A. | 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. Composition Of 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.

3. Hazard Identification

| 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 | N. A. |
| Skin | Material may be an irritant | Single & Repeated | Moderate | Irritation or possible allergic response. Severe allergic response may result in breathing difficulties. | N. A. |
| Inhalation | N. A. | N. A. | N. A. | N. A. | N. A. |
| Ingestion | Material is probably not harmful if swallowed | N. A. | Mild | N. A. | N. A. |
| Other | N. A. | N. A. | N. A. | N. A. | N. A. |
| 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 = 0, Reactivity = 0 | | | | | |

Caulk

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 | N. A. | N. A. |
| Skin | Immediately wash with soap and water and rinse thoroughly | N. A. | N. A. |
| Inhalation | Supply fresh air, consult physician if symptoms persist | N. A. | |
| Ingestion | If symptoms persist consult physician | N. A. | N. A. |
| Other | N. A. | N. A. | N. A. |
| Note to Physicians (Treating, Testing and Monitoring) N. A. | | | |

5. Fire and Explosion Data

| | | | |
|--|---|---|--------------|
| Flashpoint Method: N. A. | Flammable (Explosive) Limits in Air LEL: N. A. UEL: N. A. | Autoignition Temperature: N. A. Product will not autoignite. | Other: N. A. |
| Flame Propagation or Burning Rate (for Solids) N. A. | Properties Contributing to Fire Intensity N. A. | Flammability Classification N. A. | |
| 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: N. A. | |
| Special Instructions: N. A. | |
| Reporting Requirements: N. A. | |

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

| | | |
|---|--|-----------------------------------|
| Ventilation: None required during normal intended use of this product | | Other Engineering Controls: N. A. |
| Routes of Entry | Personal Protective Equipment (PPE) for Normal Use | PPE for Emergencies |
| Eye/Face | Safety Glasses | N. A. |
| Skin | The glove material has to be impermeable and resistant to the product. | N. A. |
| Inhalation | Not Required | N. A. |
| Body Protection | Protective work clothing | N. A. |
| 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: N. A. | | |
| Other Protective Measures and Equipment: N. A. | | |

Caulk

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: N. A. |
| Specific Gravity: 1.8 g/cm ³ | Solubility in Water: Not soluble | pH: N. A. |
| Vapor Pressure (mm Hg): N. A. | Vapor Density (AIR=1) N. A. | Evaporation Rate (Butyl Acetate =1) N. A. |
| Other: N. A. | | |

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.

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.

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: N. A. |
| Do Changes in Quantities, packaging, or shipment method change product classification? No | DOT Hazard Class N. A. | UN Number: N. A. |
| DOT Labels Required (49CFR172.101): N/A | Other: N. A. | |
| IATA Shipping Name: Not Regulated | IATA Hazard Class: N/A | UN Number: N/A |
| IATA Hazard Labels Required: N/A | | |
| IMDG Shipping Name: Not Regulated | IMDG Hazard Class: N/A | UN Number: N/A |
| IMDG Hazard Labels Required: N/A | | |

15. Regulatory Information

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: N. A.

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.

DENTSPLY/International
DENTSPLY/Caulk
Material Safety Data Sheet

530699

1. Product and Company Identification

| | |
|--|--|
| Product Name Esthet•X® HD High Definition Micro Matrix Restorative | MSDS Code Number 530699 |
| Trade Name & Synonyms Esthet•X® HD High Definition Micro Matrix Restorative | Date of Last Revision 06/03/08 |
| Chemical Name Dimethacrylate Resins | Manufacturer DENTSPLY/Caulk |
| C.A.S. Number Not Applicable | Address 38 West Clarke Avenue Milford DE 19963-1805 http://www.caulk.com |
| Grades or Minor Variant Identities Compules® and Easy•Twist Syringe | 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. Composition Of 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 | N.E. | < than 10 |
| Polymerizable dimethacrylate resins | 24448-20-2/109-16-0 | N.E. | < than 20 |

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

3. Hazard Identification

| 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 probably not harmful if swallowed | Not Applicable | Not Applicable | 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. 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 | | | | | |

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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 | Not Applicable | Not Applicable |
| Other | Not Applicable | Not Applicable | Not Applicable |
| Note to Physicians (Treating, Testing and Monitoring): Not Applicable | | | |

5. Fire and Explosion Data

| | | | |
|---|--|--|-----------------------|
| 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 |
| Flame Propagation or Burning Rate (for Solids): Not Applicable | Properties Contributing to Fire Intensity: Not Applicable | Flammability Classification: 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

| | | |
|---|--|-----------------------------|
| Ventilation: None required during normal intended use of this product | | Other Engineering Controls: |
| 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 | 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: 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 |
| 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 |

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Material Safety Data Sheet**

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.

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 |
| DOT Labels Required (49CFR172.101): Not Applicable Other: Not Applicable | | |

15. Regulatory Information

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.

DENTSPLY/International
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Material Safety Data Sheet

534898

| 1. Product and Company Identification | |
|--|---|
| Product Name PRIME & BOND[®]NT[™] including Unit Dose Package Nano – Technology Light Cured Dental Adhesive | MSDS Code Number 534898 |
| Trade Name & Synonyms PRIME & BOND[®]NT[™] including Unit Dose Package Nano – Technology Light Cured Dental Adhesive | Date of Last Revision 02/02/07 |
| Chemical Name Dimethacrylate Resins | Manufacturer DENTSPLY/Caulk |
| C.A.S. Number N. A. | Address 38 West Clarke Avenue Milford DE 19963-1805 http://www.caulk.com |
| Grades or Minor Variant Identities N. A. | 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. Composition Of Ingredients | | | |
|---|----------------------|------------------------|----------|
| Hazardous Components | C.A.S. Number | Exposure Limits | % |
| Acetone | 67-64-1 | 500 ppm | < 70 |
| Urethane dimethacrylate resin | 105883-40-7 | N. E. | < 20 |
| Dipentaerythritol pentaacrylate phosphate | 87699-25-0 | N.E. | < 10 |
| Polymerizable dimethacrylate resins | 2358-84-1 | N. E. | < 10 |
| Polymerizable trimethacrylate resins | 3290-92-4 | N.E. | < 10 |

| 3. Hazard Identification | | | | | |
|--|--|--|-----------------------------------|--|-----------------|
| Emergency Overview Material is irritating to eyes, respiratory system and skin. Breathing vapors may cause drowsiness and dizziness. | | | | | |
| 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 may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. | Repeated | Moderate | 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 | | | | | |

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| 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, If symptoms persist consult physician | 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 , extinguishing powder or water spray. Fight larger fires with water sprat 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 gases is possible during heating or in case of fire. | | | |

| 6. Accidental Release Measures | |
|--|--|
| Containment Techniques: Wear protective clothing and absorb spill with inert material (e.g. vermiculite, sand, earth), then place material in suitable labeled plastic or metal container. | |
| Spill/Leak Clean-up Procedures and Equipment: Wear protective clothing and absorb spill with inert material (e.g. vermiculite, sand, earth), then place material in suitable 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 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: N. A. |
| 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/cm ³ | Solubility in Water: Partially | pH: N. A. |
| Vapor Pressure (mm Hg): 233 mbar @ 20°C | Vapor Density (AIR=1) N. A. | Evaporation Rate (Butyl Acetate =1) Not Applicable |
| Other: Not Applicable | | |

**DENTSPLY/International
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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: <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: 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. ACGIH: A4- Not classifiable as a Human Carcinogen.

12. Ecological Information

Toxicity Data, Environmental Fate, Physical/Chemical Data, or other Data Supporting Environmental Hazard Statements: Water Hazard class I (Self-assessment): The acetone in the product will volatilize, leach and biodegrade when released to the soil. Terrestrial Fate: If release on soil, acetone will both volatilize and leach into the ground. Acetone readily biodegrades and there is evidence suggesting that it biodegrades fairly rapidly in soils. Aquatic Fate: If released into water acetone will probably biodegrade. It is readily biodegradable in screening tests, although data from natural water are lacking. It will also be lost due to volatilization. Adsorption to sediment should not be significant.

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? No | Hazard Class: 3 | UN Identification Number: 1090 |
| Other: Not Applicable | | |

15. Regulatory Information

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.