

## **SAFETY DATA SHEETS**

**This SDS packet was issued with item:**

071805399

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

071805407

**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).**

071805365 071805373 071805381

## MATERIAL SAFETY DATA SHEET

1.1 Product Trade Name: Prime & Bond™ 2.1 Universal Light-Cured Dental Adhesive System  
 1.2 Part (Item) Number: 934300

### SECTION I

1.3 Division Name : DENTSPLY Caulk  
 1.4 Address : 38 W. Clarke Avenue  
 : Milford DE 19963-0359  
 1.5 Emergency Phone Number : (800) 424-9300 (Chemtrec)  
 1.6 Phone Number for Information : (302) 422-4511  
 1.7 Date Prepared : 10/07/96 Date Revised 10/07/96

### SECTION II - Hazardous Ingredients/Identity Information

| Hazardous Components | OSHA PEL | ACGIH TLV | Other Limits |
|----------------------|----------|-----------|--------------|
| : Methacrylates      | : --     | : --      | : --         |
| : Acetone            | : --     | : 750 ppm | : --         |
| :                    | :        | :         | :            |
| :                    | :        | :         | :            |
| :                    | :        | :         | :            |

### SECTION III - Physical/Chemical Characteristics

3.1 Boiling point : 55 ~ 56°C  
 3.2 Vapor pressure : 233 mbar @ 20°C  
 3.3 Vapor density : N.E.  
 3.4 Solubility in water : 100% soluble  
 3.5 Appearance and odor: Light yellow liquid with acetone odor  
 3.6 Specific Gravity : approx. 0.79 g/mL  
 3.7 Melting Point : -95°C  
 3.8 Evaporation rate : N.E.

### SECTION IV - Fire and Explosion Hazard Data

4.1 Flash point (method used) : -19°C  
 4.2 Flammability (explosive limits) : N.E.  
 LEL: 2.5 vol. % UEL: 13.0 vol. %  
 4.3 Extinguishing media : CO<sub>2</sub>, dry chemical, water fog, foam  
 4.4 Special fire fighting procedures : Wear MSHA/NIOSH approved, pressure demand, self-contained breathing apparatus  
 4.5 Unusual fire and explosion hazards : Keep away from fire

### SECTION V - Reactivity Data

5.1 Stability : Unstable: Stable: X  
 5.2 Conditions to avoid (stability) : Visible light, high temperature, humidity  
 5.3 Incompatibility (materials to avoid) : Strong oxidants, alkali metals, halogens  
 5.4 Hazardous decomposition or byproducts : Methacrylates, acrylates, irritant gasses  
 5.5 Hazardous polymerization : May occur: Will not occur: X  
 5.6 Conditions to avoid (polymerization) : Light and temperature

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**SECTION VI - Health Hazard Data**

|                                                         |                                                                                                                                                                                           |
|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6.1 Route(s) of entry                                   | : Inhalation?: Yes    Skin?: Yes    Ingestion?: Yes                                                                                                                                       |
| 6.2 Health hazards (acute and chronic)                  | : Eye Contact: May cause irritation and possible corneal damage. Individuals sensitive to (meth)acrylates may develop allergic response. Possible nausea on prolonged exposure.           |
| 6.3 Carcinogenicity                                     | : NTP?: Not listed    IARC monographs?: Not listed    OSHA regulated?: No                                                                                                                 |
| 6.4 Signs and symptoms of exposure                      | : Eye Contact: Irritation and possible corneal damage. Dermal irritation or possible allergic reaction.                                                                                   |
| 6.5 Medical conditions generally aggravated by exposure | : Open sores or wounds on skin. Known sensitivity to acrylates.                                                                                                                           |
| 6.6 Emergency first aid procedures                      | : Ingestion: Consult physician. Skin Contact: Immediately wash affected area with plenty of water and soap. Eye Contact: Flush with water for at least 15 minutes then consult physician. |

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**SECTION VII - Precautions for Safe Handling and Use**

|                                                               |                                                                                                                          |
|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| 7.1 Steps to be taken in case material is released or spilled | : Absorb spill with inert materials such as vermiculite or dry sand then place in an appropriate container for disposal. |
| 7.2 Waste disposal methods                                    | : Dispose of in accordance with all applicable Federal, State, and Local regulations.                                    |
| 7.3 Precautions to be taken in handling and storage           | : Avoid prolonged exposure above 100°F. Store away from oxidizing agents such as peroxides.                              |
| 7.4 Other precautions                                         | : Store away from food.                                                                                                  |

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**SECTION VIII - Control Measures**

|                                            |                                                                                                    |
|--------------------------------------------|----------------------------------------------------------------------------------------------------|
| 8.1 Respiratory protection                 | : Self contained breathing apparatus during high vapor concentrations.                             |
| 8.2 Ventilation                            | : Local exhaust is recommended. Mechanical ventilation using explosion-proof motors is acceptable. |
| 8.3 Protective gloves                      | : Latex or rubber gloves.                                                                          |
| 8.4 Eye protection                         | : Safety goggles.                                                                                  |
| 8.5 Other protective clothing or equipment | : Eye wash, safety shower.                                                                         |
| 8.6 Work/Hygiene practices                 | : Observe normal care when working with chemicals.                                                 |

| NFPA HAZARD CLASSIFICATIONS |   |
|-----------------------------|---|
| Health                      | 1 |
| Flammability                | 3 |
| Reactivity                  | 0 |
| Specific Hazard             | — |

NFPA - National Fire Protection Association  
N.A. - Not Applicable  
N.E. - Not Established

534399 (10/96)

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

**534801**

### 1. Product and Company Identification

|                                                                                              |                                                                                                                               |
|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Product Name<br><b>Prime &amp; Bond Elect<sup>®</sup> Universal Dental Adhesive</b>          | SDS Code Number<br><b>534801</b>                                                                                              |
| Trade Name & Synonyms<br><b>Prime &amp; Bond Elect<sup>®</sup> Universal Dental Adhesive</b> | Date of Last Revision<br><b>07/31/15</b>                                                                                      |
| Manufacturer:<br><b>DENTSPLY Caulk</b>                                                       | Address<br><b>38 West Clarke Avenue<br/>Milford DE 19963-1805<br/><a href="http://www.caulk.com">http://www.caulk.com</a></b> |
| Grades or Minor Variant Identities<br><b>Not Applicable</b>                                  | Information Telephone Number<br><b>(302) 422-4511 (8:00 AM – 4:30 PM Eastern Time)</b>                                        |
| Product Use (for Canada)<br><b>Dental Bonding Agent</b>                                      | Emergency Telephone Number<br><b>(302) 422-4511 (8:00 AM – 4:30 PM Eastern Time)</b>                                          |

### 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 CO<sub>2</sub> 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         | < 50 |
| Urethane Dimethacrylate Resin             | 105883-40-7          | Not Applicable  | < 20 |
| Dipentaerythritol pentaacrylate phosphate | 87699-25-0           | Not Applicable  | < 20 |
| Polymerizeable dimethacrylate resin       | 1709-71-3 / 868-77-9 | Not Applicable  | < 20 |
| Polymerizeable trimethacrylate resin      | 3290-92-4            | Not Applicable  | < 15 |

### 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.<br>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: 2°C (36°F)<br>Pensky-Marten Closed Cup                                                           | Flammable (Explosive) Limits in Air<br>LEL: 2.5 vol. % UEL: 12.8 vol. % | Autoignition Temperature: Not<br>Applicable                               | Other: Not<br>Applicable |
| Flame Propagation or Burning Rate<br>(for Solids): Not Applicable                                                   | Properties Contributing to Fire Intensity: Not<br>Applicable            | Flammability Classification: 3                                            |                          |
| Extinguishing Media: CO <sub>2</sub> , sand or extinguishing powder.                                                |                                                                         | Extinguishing Media to Avoid: Do not use water or water<br>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).<br>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 like with characteristic sweet acrylic ester odor. |                                                    |
| Normal Physical State: Low viscosity liquid | Melting Point: Not Determined                                    | Boiling Point: 57°C (135°F)                        |
| Specific Gravity: ~0.9 g/cm <sup>3</sup>    | Solubility in Water: Partially                                   | pH: 2.5                                            |
| 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): 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

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                   |                                        |                                   |                                                                                                          |                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------|-----------------------------------|----------------------------------------------------------------------------------------------------------|-----------------|
| 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:<br>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 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 = 2, 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

## 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.                       |
| 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 class1 (Self-assessment): slightly hazardous for water. SARA Codes: CAS # 67-64-1 Acute, chronic, flammable. |
| 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.