

MATERIAL SAFETY DATA SHEET

SECTION I – Product/Company Identification

1.1 Product Trade Name: **PROBOND[®] ADHESIVE All Purpose Bonding Agent**
1.2 Part (Item) Number: **634245 – 634275 All Package Configurations**
1.3 Division Name: DENTSPLY Caulk
1.4 Address: 38 West Clarke Avenue
City State Zip: Milford DE 19963-0359
Internet Address: <http://www.caulk.com>
1.5 Emergency Telephone Number: (800) 424-9300 (Chemtrec)
1.6 Telephone Number for Information: (302) 422-4511 (8:00 AM – 4:30 PM Eastern Time)
1.7 Date Prepared: 2/3/99 **Date Revised:** 02/02/02

SECTION II – Hazardous Ingredients/Identity Information

<u>Hazardous Components</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>CAS #</u>	<u>PERCENTAGE</u>
Urethane dimethacrylate resin	N. E.	N. E.	127312-03-2	< 55 %
Polymerizable dimethacrylate resins	N. E.	N. E.	109-16-0	< 30 %
Dipentaerythritol pentaacrylate phosphate	N. E.	N. E.	87699-25-0	< 7 %
Glutaraldehyde	0.2 mg/m ³	0.2 mg/m ³	111-30-8	< 5 %

SECTION III – Physical/Chemical Characteristics

3.1 Boiling point: N. E. **3.6 Specific Gravity:** approximately 1.1 g/cm³
3.2 Vapor pressure: N. E. **3.7 Melting Point:** N. E.
3.3 Vapor density: N. E. **3.8 Evaporation rate:** N. E.
3.4 Solubility in water: Not Soluble
3.5 Appearance and odor: Light yellow liquid with sweet acrylic ester odor.

SECTION IV – Fire and Explosion Hazard Data

4.1 Flash point (method used): N. E.
4.2 Flammability (explosive limits): LEL: N. E. UEL: N. E.
4.3 Extinguishing media: Carbon dioxide, dry chemical, water fog, and foam.
4.4 Special fire fighting procedures: Firefighters should wear full protective clothing including a MSHA/NIOSH approved, pressure demand, self-contained breathing apparatus.
4.5 Unusual fire and explosion hazards: Keep away from fire. During a fire irritating gases from the decomposition of the resins may be present.

SECTION V – Reactivity Data

5.1 Stability: **Unstable:** **Stable:** X
5.2 Conditions to avoid (stability): Visible light, high temperatures, and humidity.
5.3 Incompatibility (materials to avoid): Strong oxidants, alkali metals, and halogens.
5.4 Hazardous decomposition or byproducts: Methacrylates, acrylates, and irritating gases.
5.5 Hazardous polymerization: **May occur:** **Will not occur:** X
5.6 Conditions to avoid (polymerization): Strong visible lights and elevated temperatures over 50°C(122°F).

SECTION VI - Health Hazard Data

6.1 Route(s) of entry:	Inhalation?: Yes Skin?: Yes Ingestion?: Possible
6.2 Health hazards (acute and chronic):	Eye Contact: Material may cause irritation and possible corneal damage. Avoid contact with eyes. Skin: Material may be an irritant. Susceptible persons with known allergies to methacrylates and acrylates may develop allergic response.
6.3 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.
6.4 Signs and symptoms of exposure:	Dermal redness or irritation. Severe allergic response may result in breathing difficulties.
6.5 Medical conditions generally aggravated by exposure:	Open sores and wounds of the skin. Individuals with known sensitivity to methacrylates, acrylates, or urethane dimethacrylates.
6.6 Emergency first aid procedures:	Eyes: In case of eye contact, flush with flowing water for 15 minutes, including under the eyelids. Get prompt medical attention. Skin: Wash skin with soap and water. If irritation persists, call physician. Ingestion: If swallowed give 2 glasses of water to drink. See a physician. Inhalation: Move to fresh air. Call physician if discomfort persists or if amount was large.

SECTION VII - Precautions for Safe Handling and Use

7.1 Steps to be taken in case material is released or spilled:	Absorb spilled material with inert material such as sand or vermiculite. Scoop up and dispose of in accordance with Federal, State and Local environmental regulations.
7.2 Waste disposal methods:	Dispose of in accordance with Federal, State and Local environmental regulations.
7.3 Precautions to be taken in handling and storage:	Store in a dry area, away from direct sunlight. Maximum storage temperature is 50°C(122°F). Normal storage is at room temperature. Store away from food and beverages.
7.4 Other precautions:	Avoid contact with skin. Observe normal warehouse handling procedures. Handling of this product should be by trained dental healthcare professionals only..

SECTION VIII – Control Measures / Personal Protection

8.1 Respiratory protection:	None required during normal use of this product.
8.2 Ventilation:	None required during normal intended use of this product. Local exhaust can be used to keep vapors below threshold level.
8.3 Protective gloves:	Latex or vinyl gloves.
8.4 Eye protection:	Protective goggles.
8.5 Other protective clothing or equipment:	Chemically resistant apron or other impervious clothing.
8.6 Work/Hygienic practices:	Observe normal care when working with chemicals. Avoid eye and skin contact, inhalation and ingestion. Do not eat, drink or smoke when using.

NFPA HAZARD CLASSIFICATIONS	
Health	0
Flammability	1
Reactivity	0
Specific Hazard	N.A.

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

534895 (R-02/02/02)

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<u>Hazardous Components</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>CAS #</u>	<u>Percent</u>
Acetone	500 ppm	1188 mg/m ³	67-64-1	< than 80 %
Ethyl Alcohol	1000 ppm	1880 mg/m ³	64-17-5	< than 25 %
Dipentaerythritol pentaacrylate phosphate	N. E.	N. E.	87699-25-0	< than 10 %

SECTION III – Physical/Chemical Characteristics

3.1 Boiling point: 56°C (133°F) **3.6 Specific Gravity:** approximately 0.8 g/cm³
3.2 Vapor pressure: N. E. **3.7 Melting Point:** N. E.
3.3 Vapor density: N. E. **3.8 Evaporation rate:** N. E.
3.4 Solubility in water: Soluble
3.5 Appearance and odor: Water white liquid with acetone and alcohol odor.

SECTION IV – Fire and Explosion Hazard Data

4.1 Flash point (method used): < 23°C (-5°F) Closed Cup
4.2 Flammability (explosive limits): LEL: 2.5 vol % UEL: 13 vol %
4.3 Extinguishing media: Carbon dioxide, dry chemical, water fog, and foam.
4.4 Special fire fighting procedures: Firefighters should wear full protective clothing including a MSHA/NIOSH approved, pressure demand, self-contained breathing apparatus.
4.5 Unusual fire and explosion hazards: Keep away from fire. During a fire irritating gases from the decomposition of the solvents may be present.

SECTION V – Reactivity Data

5.1 Stability: Unstable: Stable: X
5.2 Conditions to avoid (stability): High temperatures, greater than 37°C(100°F). Keep away from fire.
5.3 Incompatibility (materials to avoid): Strong oxidants.
5.4 Hazardous decomposition or byproducts: During a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds. Hazardous combustion products may include and are not limited to: carbon monoxide, and carbon dioxide.
5.5 Hazardous polymerization: May occur: Will not occur: X
5.6 Conditions to avoid (polymerization): N. A.

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: Material may cause irritation and possible corneal damage. Avoid contact with eyes. Skin: Material may be an irritant. Possible nausea on prolonged exposure. Susceptible persons with known allergies to methacrylates and acrylates may develop allergic response.
6.3 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.
6.4 Signs and symptoms of exposure:	Eye Contact: Material may cause irritation and possible corneal damage. Dermal redness, irritation or possible allergic reaction.
6.5 Medical conditions generally aggravated by exposure:	Open sores and wounds of the skin.
6.6 Emergency first aid procedures:	Eyes: In case of eye contact, flush with flowing water for 15 minutes, including under the eyelids. Get prompt medical attention. Skin: Wash skin with soap and water. If irritation persists, call physician. Ingestion: Consult a physician. Inhalation: Move to fresh air. Call physician if discomfort persists.

SECTION VII - Precautions for Safe Handling and Use

7.1 Steps to be taken in case material is released or spilled:	Absorb spilled material with inert material such as sand or vermiculite. Scoop up and dispose of in accordance with Federal, State and Local environmental regulations.
7.2 Waste disposal methods:	Dispose of in accordance with Federal, State and Local environmental regulations.
7.3 Precautions to be taken in handling and storage:	Store in a dry area, away from direct sunlight. Maximum storage temperature is 50°C(122°F). Normal storage is at room temperature. Store away from food and beverages.
7.4 Other precautions:	Avoid contact with skin. Observe normal warehouse handling procedures. Handling of this product should be by trained dental healthcare professionals only.

SECTION VIII - Control Measures / Personal Protection

8.1 Respiratory protection:	None required during normal use of this product. In large quantities use a self-contained breathing apparatus.
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:	Close fitting protective goggles.
8.5 Other protective clothing or equipment:	Rubber apron. Eye wash, safety shower.
8.6 Work/Hygienic practices:	Observe normal care when working with chemicals. Avoid eye and skin contact, inhalation and ingestion. Do not eat, drink or smoke when using

NFPA HAZARD CLASSIFICATIONS	
Health	1
Flammability	4
Reactivity	0
Specific Hazard	N.A.

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534896 (R-02/02/02)