

1. Product and Company Identification

Product Name Xeno™ IV One Component Self Etching Dental Adhesive	MSDS Code Number 568890
Trade Name & Synonyms Xeno™ IV One Component Self Etching Dental Adhesive	Date of Last Revision 08/10/04
Chemical Name Dimethacrylate Resins	Manufacturer DENTSPLY/Caulk
C.A.S. Number N. A.	Address 38 West Clarke Avenue Milford DE 19963-0359 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) N. A.	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	< 50
Urethane Dimethacrylate Resin	105883-40-7	N. A.	< 15
Dipentaerythritol pentaacrylate phosphate	87699-25-0	N. A.	< 15
Polymerizeable dimethacrylate resin	1709-71-3	N. A.	< 10
Polymerizeable trimethacrylate resin	3290-92-4	N. A.	< 10
Polymerizeable dimethacrylate resin	868-77-9	N. A.	< 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	N. A.	No
Other Central nervous system	N. A.	N. A.	N. A.	N. A.	Yes
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					

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	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: 2°C (36°F) Pensky-Martens Closed Cup	Flammable (Explosive) Limits in Air LEL: 2.5 vol. % UEL: 12.8 vol. %	Autoignition Temperature: N. A.	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 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: N. A.
Special Instructions: N. A.
Reporting Requirements: N. A.

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	N. A.
Skin	The glove material has to be impermeable and resistant to the product.	N. A.
Inhalation	Not Required for normal volumes used in Dental office.	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.		

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: N. A.
Specific Gravity: ~0.9 g/cm ³	Solubility in Water: Partially	pH: 2.5
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): 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

<p>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.</p>

12. Ecological Information

<p>Toxicity Data, Environmental Fate, Physical/Chemical Data, or other Data Supporting Environmental Hazard Statements: Water Hazard class1 (Self-assessment): The acetone in the product will volatilizes, leech 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 probable 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.</p>
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13. Disposal Considerations

<p>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</p> <p>Properties (Physical/Chemical) Affecting Disposal: Dispose of material as solid waste in a closed container.</p> <p>RCRA P-Series: None Listed, RCRA U-Series CAS#67-64-1: Waste Number U002 (Ignitable Waste)</p>
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14. Transport Information

Regulated for Shipping: Yes	Proper Shipping Name: Flammable Liquid NOS (Acetone)	Packing Group: II
Do Changes in Quantities, packaging, or shipment method change product classification? No	Hazard Class: 3	UN Identification Number: 1993
Other: N. A.		

15. Regulatory Information

<p>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.</p> <p>International Regulations: Hazard Symbol: Flammable XI F Risk Phrases: R11 Highly Flammable, R36 Irritating to Eyes, R66 Repeated exposure may cause dryness or cracking, R67 Vapors may cause drowsiness and dizziness. Safety Phrases: 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, S9 Keep container in a well –ventilated place.</p> <p>Other: Canada WHMIS for the acetone, classification of B2, D2B. Acetone CAS#67-64-1 is on the Canadian Ingredient Disclosure List.</p>
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16. Other Information

<p>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.</p>
