

| 1. Product and Company Identification | |
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| Product Name ZOE B & T™ LIQUID Zinc Oxide Eugenol Base and Temporary Filling Material | MSE's Code Number 510899 |
| Trade Name & Synonyms ZOE B & T™ LIQUID Zinc Oxide Eugenol Base and Temporary Filling Material | Date of Last Revision 01/15/07 |
| Company Name DENTSPLY/Cauk | Address 28 West Clarke Avenue Millford DE 19963-1805 http://www.cauk.com |
| Grades or Other Variant Identifiers 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 | % |
| Eugenol | 99-53-0 | 10 mg/M ³ | > than 98 |
| Acetic Acid | 64-19-7 | 10 PPM | < than 2 |

| 3. Hazard Identification | | | | | |
|---|--|--|---|----------------------------------|-----------------|
| Emergency Overview: Material may be irritating to eyes. No significant hazards for emergency responses are known. | | | | | |
| Routes of Exposure | Signs and Symptoms | Single, Repeated, or Lifetime Exposure | Severity (Irritation, Medical, Serious) | Acute and Chronic Health Effects | Target Organ(s) |
| Eye | Material may cause slight irritation (see entry). | Single & Repeated | Mild | Not Applicable | Not Applicable |
| Skin | Material may be an irritant after repeated and prolonged exposure. | Repeated | Mild | Not Applicable | Not Applicable |
| Inhalation | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| Ingestion | Material is not acutely not harmful if swallowed. | Not Applicable | Mild | 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. Carcinogenicity: NTP ¹ Test Data: "ARC monographs" Not listed. GSHA 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 Rating (Scale 0-4): Health = 1, Fire = 1, Reactivity = 0. | | | | | |

| 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 a 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 | Rinse mouth out and then drink plenty of water. Induce vomiting and call for medical help. | Not Applicable | Not Applicable |
| Other | Not Applicable | Not Applicable | Not Applicable |
| Notes to Physicians (Treatment, Testing and Monitoring): Treat symptomatically. | | | |

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Material Safety Data Sheet

| 5. Fire and Explosion Data | | | | |
|---|---|--|-----------------------|--|
| Flashpoint Method: 110°C (230°F) Closed Cup | 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: CO ₂ , foam, powder or water spray. | | Extinguishing Media to Avoid: Water with full jet. | | |
| Unusual Fire and Explosion Hazards: During a fire, formation of toxic and/or irritating compounds may be present. | | | | |

| 6. Accidental Release Measures | |
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| Containment Techniques: Absorb spill with inert material (e.g. vermiculite, sand, and earth), then place material in suitable labeled plastic or metal container. | |
| Spill/Leak: Clean-up Procedures and Equipment: Absorb spill with inert material (e.g. vermiculite, sand, and earth), then place material in suitable labeled plastic or metal container. Ensure adequate ventilation. | |
| Evacuation Procedures: Not Applicable | |
| Special Instructions: Not Applicable | |
| Labeling 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. Protect from heat and direct sunlight. | |

| 8. Exposure Control / Personal Protection | | | |
|--|--|--|---------------------|
| Ventilation: None required during normal intended use of this product. | Other Engineering Controls: Not Applicable | | |
| Routes of Entry: Possible: Protective Equipment (PPE) for Normal Use | | | |
| Eye/Face: Safety Glasses | | | PPV for emergencies |
| Skin: No gloves required but to be impermeable and resistant to the product | | | Not Applicable |
| Inhalation: Not Required | | | Not Applicable |
| Body Protection: Protective work clothing | | | Not Applicable |
| General Hygiene, Concentrations and Work Practices: Keep away from foodstuffs, beverages and food. Immediately remove all shoes and contaminated clothing. Wash hands before break and at end of work. Avoid contact with the eyes and skin. | | | |
| Protective Measures: Training, Repair and Maintenance of Contaminated Equipment: Not Applicable | | | |
| Other Protective Measures and Language: Not Applicable | | | |

| 9. Physical and Chemical Characteristics | | | |
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| Appearance: Colorless to pale yellow liquid. | | Odor: Not given | |
| Boiling Point: 149°C (300°F) | | Melting Point: -18°C (1°F) | |
| Specific Gravity: 1.06 g/cm ³ | Solubility in Water: Insoluble | pH: Not Applicable | |
| Vapor Pressure mm Hg: 0.009 | Vapor Density (AIR=1): Not Applicable | Evaporation Rate (Butyl Acetate = 1) MDA: Applicable | |
| Other: Not Applicable | | | |

| 10. Stability and Reactivity Data | | | |
|--|---------------|---------------------------------|--|
| Incompatibility (Materials to Avoid): Strong oxidizing agents. | | | |
| Hazardous Products Produced During Decomposition: Forms carbon monoxide and/or carbon dioxide. | | | |
| Hazardous Interactions: May Occur | May Not Occur | Conditions to Avoid: None known | |
| Stability: Stable. Conditions to Avoid: None known. | | | |

| 11. Toxicological Information | |
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| Toxicity Data, Epidemiology Studies, Carcinogenicity, Neurological Effects, Genetic Effects, Reproductive Effects, or Structure Activity Data: The Oral LD ₅₀ for Eugenol, in rats, is 1930mg/kg. | |

| 12. Ecological Information | |
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| Toxicity Data, Environmental Fate, Physical-Chemical Data, or other Data Supporting Environmental Hazard Statements: Water Hazard Class 1 (Self-assessment) slightly hazardous for water. Do not allow product to reach ground water, water streams or sewage system. | |

