


Safety Data SheetTrade Name: **Eugenol USP**

1.0 Commercial Product Name and Supplier																									
1.1	Commercial product name / designation Eugenol USP																								
1.2	Application / Use Dental material for use by dental professional only.																								
1.2.2	SIC 851 Human health activity																								
1.2.3	Use Category 55																								
1.3	Manufacturer Pulpdent Corporation 80 Oakland Street, P.O. Box 780 Watertown, MA 02472 USA Telephone: 1 617 926-6666 / Fax: 1 617 926-6262 Email: Pulpdent@pulpdent.com																								
1.4	Emergency Telephone Number 1-800-535-5053 (24 Hour / USA)																								
1.5	Authorized European Representative Advena Ltd. Pure Offices, Plato Close Warwick, CV34 6WE United Kingdom																								
2.0 Hazards Identification																									
2.1	Classification																								
2.1.1	Classification according to Regulation (EC) No 1272/2008 [CLP] <table border="1"> <thead> <tr> <th>Hazard Class</th> <th>Hazard Category</th> <th>Hazard Statement</th> </tr> </thead> <tbody> <tr> <td>Acute toxicity, Oral</td> <td>4</td> <td>H302</td> </tr> <tr> <td>Eye irritation</td> <td>2A</td> <td>H319</td> </tr> <tr> <td>STOT SE</td> <td>3</td> <td>H335</td> </tr> <tr> <td>Skin irritation</td> <td>2</td> <td>H315</td> </tr> <tr> <td>Skin sensitization</td> <td>1</td> <td>H317</td> </tr> <tr> <td>Respiratory sensitization</td> <td>1</td> <td>H334</td> </tr> <tr> <td>Acute aquatic toxicity</td> <td>3</td> <td>H402</td> </tr> </tbody> </table>	Hazard Class	Hazard Category	Hazard Statement	Acute toxicity, Oral	4	H302	Eye irritation	2A	H319	STOT SE	3	H335	Skin irritation	2	H315	Skin sensitization	1	H317	Respiratory sensitization	1	H334	Acute aquatic toxicity	3	H402
Hazard Class	Hazard Category	Hazard Statement																							
Acute toxicity, Oral	4	H302																							
Eye irritation	2A	H319																							
STOT SE	3	H335																							
Skin irritation	2	H315																							
Skin sensitization	1	H317																							
Respiratory sensitization	1	H334																							
Acute aquatic toxicity	3	H402																							
2.1.2	Classification according to Directive 67/548/EEC Irritant; Xi; R 36/37/38-42/43 (See SECTION 16 for full text of risk phrases)																								
2.2	GHS Label Elements Hazard Pictograms  Signal Word: DANGER Restricted to use by dental professional only. Hazard Statements H302: Harmful if swallowed H315: Causes skin irritation H317: May cause an allergic skin reaction. H319: Causes serious eye irritation. H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335: May cause respiratory irritation. H402: Harmful to aquatic life Precautionary Statements P261: Avoid breathing vapor. P280: Wear protective gloves and eye protection P305+P351+P338: If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P342+P311: If experiencing respiratory symptoms, call a poison center or doctor/physician.																								

Safety Data SheetTrade Name: **Eugenol USP**

3.0 Composition											
3.1	Chemical characterization of the preparation:										
3.2	Hazardous ingredients										
	<table border="1"> <thead> <tr> <th>CAS Number</th> <th>Name of the Ingredient</th> <th>Concentration</th> <th>Classification per 67/548/EEC</th> <th>Classification per Regulation (EC) No.1272/2008 (CLP).</th> </tr> </thead> <tbody> <tr> <td>97-53-0</td> <td>Eugenol [2-Methoxy-4-(2-propenyl) phenol]</td> <td>85-95%</td> <td>Irritant; Xi, R 36/37/38-42/43</td> <td>Acute toxicity, Oral 4 Eye irritation 2A STOT SE 3 Skin irritation 2 Skin sensitization 1 Respiratory sensitization 1 Acute aquatic toxicity 3</td> </tr> </tbody> </table>	CAS Number	Name of the Ingredient	Concentration	Classification per 67/548/EEC	Classification per Regulation (EC) No.1272/2008 (CLP).	97-53-0	Eugenol [2-Methoxy-4-(2-propenyl) phenol]	85-95%	Irritant; Xi, R 36/37/38-42/43	Acute toxicity, Oral 4 Eye irritation 2A STOT SE 3 Skin irritation 2 Skin sensitization 1 Respiratory sensitization 1 Acute aquatic toxicity 3
CAS Number	Name of the Ingredient	Concentration	Classification per 67/548/EEC	Classification per Regulation (EC) No.1272/2008 (CLP).							
97-53-0	Eugenol [2-Methoxy-4-(2-propenyl) phenol]	85-95%	Irritant; Xi, R 36/37/38-42/43	Acute toxicity, Oral 4 Eye irritation 2A STOT SE 3 Skin irritation 2 Skin sensitization 1 Respiratory sensitization 1 Acute aquatic toxicity 3							
4.0 First Aid Measures											
4.1	General Information	Consult a physician. May be irritating to eyes, respiratory system and skin. Do not inhale vapors. Liquid may cause sensitization by skin contact or inhalation. Show this safety data sheet to medical personnel.									
4.2	Inhalation	Move to fresh air. If necessary, administer oxygen / artificial respiration and seek medical attention.									
4.3	Skin Contact	Take off contaminated clothing. Wash skin thoroughly with soap and water for 15 minutes. Seek medical attention.									
4.4	Eye Contact	Keep eyelids apart and flush with running water for 15+ minutes. Get medical attention. Continue rinsing eyes during transport to hospital.									
4.5	Ingestion	Rinse mouth with water. Do not induce vomiting. Get immediate medical attention. May be irritating to mucous membranes.									
4.6	Precautions for first responders	Ventilate the area. Wear eye and skin protection.									
4.7	Information for physicians										
	Symptoms	Irritation or redness in eyes, throat or on skin. Allergy or asthma symptoms									
	Hazards	May be irritating to eyes, respiratory system and skin. May cause sensitization by skin contact or inhalation.									
	Treatment	As above under First Aid.									
5.0 Fire Fighting Measures											
5.1	Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.									
5.2	Extinguishing media to avoid	None									
5.3	Special exposure hazards in a fire	Burning liberates carbon monoxide, carbon dioxide and smoke.									
5.4	Special protective equipment for fire-fighters	A self-contained breathing apparatus should be worn by firefighting personnel. Cool exposed containers with water spray.									
6.0 Accidental Release Measures											
6.1	Personal precautions.	Ventilate area. Wear gloves, lab coat and safety glasses. Avoid breathing vapors, mist or gas. Evacuate personnel to safe areas.									
6.2	Environmental precautions	Contain spilled material. Do not allow discharge into drains or the environment. Follow all government regulations.									

Safety Data SheetTrade Name: **Eugenol USP**

6.3 Method for clean up Soak up with inert, absorbent material (paper towels, etc.). Collect for disposal in a covered container kept in a cool place. Wash area of spill with soap and water, as the surface will be very slippery.

7.0 Handling and Storage

7.1 Handling Follow good hygiene practices. Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Cap immediately after use.

7.2 Storage Keep containers tightly closed. Store in original container at cool room temperature (<25°C) and in a dry, well-ventilated area. Avoid direct, strong light, sources of ignition and extremes of temperature (>27°C/80°F, <5°C/40°F). Provided that the material has been stored properly, shelf life for unopened eugenol is three years from date of manufacture.

7.3 Specific uses

8.0 Exposure Controls / Personal Protection

8.1 Exposure limit values

8.2 Exposure controls Contains no substances with occupational exposure elements.

8.2.1 Occupational exposure controls .

8.2.1.1 Respiratory protection Good general ventilation is sufficient to control any airborne vapors during normal conditions of use.

8.2.1.2 Hand protection Handle with gloves to limit contact with material.

8.2.1.3 Eye protection Safety glasses and/or face shield

8.2.1.4 Skin protection Wear a lab coat. Practice good personal hygiene and safety practices to protect from unnecessary exposure to material.

8.2.1.5 Other controls Emergency eye wash fountain. Wash hands after use.

8.2.2 Environmental exposure controls Should not be discharged into drains or the environment.

9.0 Physical and Chemical Properties

9.1 Characteristics Clear, oily liquid

9.1.1 Appearance /Color / Physical state Colorless to pale yellow

9.1.2 Odor Cloves

9.2 Important health, safety and environmental information

9.2.1 pH 7.0

9.2.2 Boiling point 253°C

9.2.3 Flash point 112°C

9.2.4 Flammability (solid, gas) Not applicable

9.2.5 Explosive properties Not applicable

9.2.6 Oxidizing properties Not an oxygen donor

9.2.7 Vapor pressure < 0.1 mm Hg

9.2.8 Specific gravity 1.064 g/cc³

9.2.9 Solubility in water Slight

Safety Data SheetTrade Name: **Eugenol USP**

9.2.10	Partition coefficient (n-octanol/water)	log Pow: 2.7
9.2.11	Viscosity	Not determined
9.2.12	Vapor density	Not determined
9.2.13	Evaporation rate	Not determined
10.0	Stability and reactivity	
10.1	Conditions to avoid	Temperature > 38°C, light, air
10.2	Materials to avoid	Strong oxidizing agents, ferric chloride, potassium permanganate.
10.3	Hazardous decomposition products	Carbon monoxide and carbon dioxide.
10.4	Further information	Stable under recommended storage conditions.
11.0	Toxicological information	
11.1	Acute toxicity	LD ₅₀ Oral – rat: 1930 mg/kg
11.2	Irritation and corrosiveness	May be irritating to eyes, respiratory system or skin on contact or with prolonged exposure.
11.3	Sensitization	May be sensitizing by inhalation or skin contact.
11.4	Sub-acute, sub-chronic and prolonged toxicity	Prolonged exposure may cause skin, eye and respiratory irritation.
11.5	Carcinogenicity, Mutagenicity, Reproductive Toxicity	None known
11.6	Empirical data	Not available
11.7	Clinical experience	
12.0	Ecological Information	
12.1	Ecotoxicity	Harmful to aquatic life.
13.0	Disposal Considerations	
13.1	Regulations	Follow all local and national government regulations in disposing material or contaminated packaging.
14.0	Transport Information	
14.1	Restrictions	None. Not regulated by IATA.
15.0	Regulatory Information	
15.1	OSHA Hazards	Target organ effect, Harmful by ingestion.
15.2	SARA 302 Components	Not subject to reporting requirement of SARA, Title III, Section 302
15.3	SARA 313 Components	Does not exceed the threshold (De Minimis) reporting levels of SARA, Title III, Section 313.
15.4	SARA 311/312 Hazards	Acute health hazard, Chronic health hazard

Safety Data SheetTrade Name: **Eugenol USP**

16.0 Other information		
16.1	List of relevant R phrases	R36/37/38, Irritating to eyes, respiratory system and skin. R42/43, May be sensitizing by inhalation or skin contact.
16.2	Hazard Statements	H302: Harmful if swallowed H315: Causes skin irritation H317: May cause an allergic skin reaction. H319: Causes serious eye irritation. H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335: May cause respiratory irritation. H402: Harmful to aquatic life
16.3	Precautionary Statements	P261: Avoid breathing vapor. P280: Wear protective gloves and eye protection P305+P351+P338: If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P342+P311: If experiencing respiratory symptoms, call a poison center or doctor/physician.
16.4	Restrictions on use	None
16.5	Further information	The information presented herein is believed to be factual as it has been derived from the works of persons believed to be qualified experts. However, nothing contained in this information is to be taken as a warranty or representation for which Pulpdent Corporation bears legal responsibility. The user should review any recommendations in the specific context of the intended use to determine whether they are appropriate.
16.5	Sources of key data	National Institute for Occupational Safety (NIOSH) US Occupational Safety and Health Administration (OSHA) Eur-Lex European Union Law: Regulation (EC) No. 1272/2008 (CLP) and Regulation (EC) No. 1907/2006 (REACH). Guidance on the compilation of safety data sheets. Version 1.1; December 2011. European Chemicals Agency
16.6	Information which has been added, deleted or revised.	This Safety Data Sheet has been revised to meet the requirements of GHS SDS format and Regulations (EC) No. 1272/2008 (CLP) and (EC) No. 1907/2006 (REACH). Specifically Sections 2.1, 2.2, 3.2, 16.2, 16.3 have been modified.