

1. **Identification of the substance / preparation and of the company / undertakings****Product Details:**

Trade Name: Perm® Reline/Repair Resin (Compounded Polymethyl Methacrylate)

**Manufacturer:****Coltène/Whaledent Inc.**235 Ascot Parkway  
Cuyahoga Falls, OH 44223 / USA  
Fax +1 330 916 7077  
info@coltenewhaledent.com

Authorized EU Representative

**Coltène/Whaledent GmbH+ Co. KG**Raiffeisenstrasse 30  
89129 Langenau / Germany  
Tel. +49 (0) 7345 805 0  
Fax +49 (0) 7345 805 201**Emergency Contact Numbers:**USA & Canada: 1 800 535 5053  
Main Phone Number: +1 330 916 88002. **Composition / Information on Ingredients****Chemical Characterization:** Acrylic Powder Resin**Hazardous Components**

Particulates, NoC

Benzoyl Peroxide

Diethyl Phthalate

Wt %

&gt; 90%

&lt; 1%

&lt; 15%

Index, R/S Phrases

None

E, Xi, R-3,36,37,38

Xi; R – 36,37,38,63 ; S-26,36

3. **Hazard Identification**

Hazard Designation: Non-Hazardous

Information pertaining to particular dangers for man and environment: Nuisance dust. Polymer dust is combustible.

Classification is in line with BC directive 88/379/EEC: Yes

4. **First-Aid Measures**

After Inhalation: Get to fresh air, if irritation persists, consult a physician.

After Skin Contact: Wash thoroughly with water for 15 minutes. If irritation persists, consult a physician.

After Eye Contact: Flush with water for 15 minutes. If irritation persists, consult a physician.

After Swallowing: Rinse mouth out with water. Contact a physician if large quantities were consumed.

5. **Fire-Fighting Measures****Flammability: Combustible Dust Flash Point: 304°C (> 212 °F) LEL: Not Established UEL: Not Established**Extinguishing Media: Water, CO<sub>2</sub>, dry chemical or foam.

Unsuitable Extinguishing Media: Avoid extinguishing methods that generate a dust cloud.

Protective Equipment: Wear NIOSH approved self-contained breathing respirator in positive pressure mode.

Special Hazards: Polymer dust is combustible (at limits similar to coal dust).

6. **Accidental Release Measures**

Personal Precautions: Avoid eye contact by wearing safety goggles; avoid skin contact by wearing rubber gloves.

Environmental Precautions: Do not contaminate food or feed with this product. Keep container closed and upright when not in use.

Methods of Cleaning Up: Sweep up dust to avoid slipping hazard.

7. **Handling and Storage**

Precautions for Safe Handling: Always wear gloves and eye protection. Keep container closed when not in use.

Storage: Keep out of reach of children. Keep container closed. Store in a cool dry environment.

8. **Exposure Controls/Personal Protection**

Components with recommended limits for the work place

CAS No.	Description	Wt%	Type / Value
n.a.	Particulates NOC	> 90 %	OSHA PEL 15 mg/m <sup>3</sup>
94-36-0	Benzoyl Peroxide	< 1 %	OSHA PEL 5 mg/ m <sup>3</sup>
88-66-2	Diethyl Phthalate	<15 %	OSHA PEL 5 mg/ m <sup>3</sup>

Engineering Controls: Local Exhaust Adequate; mechanical ventilation helpful.

Work/Hygienic Protection: Wash hands and equipment after use.

Hand/Skin Protection: Wear Protective Gloves.

Respiratory Protection: None Needed.

Eye Protection: Wear Safety Goggles.

Date of Issue: May 2004

Coltène/Whaledent Inc.

n.a = not applicable, n.k. = not known

Perm® Reline/Repair Resin

**9. Physical And Chemical Properties**

Appearance: Free Flowing Powder  
Boiling Point: n.a.  
Flammability: No  
Vapor Pressure: n.a.  
pH: n.a.

Odor: Faint Acrylic  
Flash Point: 304 °C (> 212 °F)  
Auto flammability: No  
Explosive Properties: n.k.  
Viscosity: n.a.

Solubility: Insoluble in water  
Method: Tag Closed Cup  
Density: n.k.  
Explosive Limits in Air: N.K.  
Method: n.a.

**10. Stability and Reactivity**

Chemical Stability: Stable  
Materials to avoid: Strong Oxidizers

Conditions to avoid: Heating above 240 °C  
Hazardous Decomposition Products: Oxides of Carbon

**11. Toxicological Information**

Acute Toxicity: N.A.  
Primary Effects to Skin: Irritation can occur by repeated direct contact.  
Primary Effects to Eyes: Irritation can occur by repeated direct contact.  
Primary Effects to Respiratory System: Overexposure to dust may cause respiratory tract irritation  
Sensitization: N.A.  
Additional Toxicological Info: Possible risk of impaired fertility. May cause harm to the unborn child

**12. Ecological Information**

General Information: N.A.  
Classification of Water endangerment: N.A.

**13. Disposal Considerations**

Product: This material contains Dibutyl phthalate. Contaminated product may be a RCRA/OSHA hazardous waste. Consult local regulatory laws for proper disposal. Completely polymerized materials can be disposed of together with household refuse in accordance with local regulatory law.

**14. Transportation Information**

DOT Shipping Name:  
Compounded Polymethyl Methacrylate  
Sea Transport IMDG/GGV Sea  
Class: Not Regulated  
Air Transport ICAO-TI and IATA-DGR  
Class: Not Regulated

DOT Hazard Class:  
Non-Regulated  
UN. No.: N.A.  
UN. No.: N.A.

UN-No.  
N.A.  
EmS-No: N.A. MFGA-No: N.A.

**15. Regulatory Information**

TSCA Inventory Status: This product and/or all of its components are included on the TSCA Inventory of Chemical Substances.  
SARA 311/312 Hazard Categories: None  
SARA 302 Extremely Hazardous Substances: None  
SARA 313 Toxic Chemicals

<u>Chemical Name</u>	<u>CAS-No.</u>	<u>Weight %</u>
Particulates, NOC	N/A	> 90 %
Benzoyl Peroxide	94-36-0	< 1 %
Dibutyl Phthalate	88-66-2	< 15%

Classification According to EEC Guidelines: n.a.

Classification According to VBF: n.a.

Canadian Regulations require the inclusion of the following statements under "Regulatory Information";

"This product has been classified in accordance with the hazard criteria of the controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations."

**16. Other Information**

Revision Summary: Changed to Company Format and Updated Address 2/24/04. Added authorized EU Rep. 5/5/04.

The information and recommendations set forth herein are presented in good faith and are believed to be correct as of the date hereof. Coltène/Whaledent Inc., however, makes no representations as to the completeness of security of this information and supplies it on the condition that the persons receiving same will make their own determination as to its suitability of their purposes prior to use. In no event will Coltène/Whaledent Inc. be responsible for damages of any nature whatsoever resulting from use of or reliance upon information

n.a = not applicable, n.k. = not known

**1. Identification of the substance / preparation and of the company / undertakings****Product Details:**

Trade Name: Perm® Reline/Repair Resin (Liquid)

**Manufacturer:****Coltène/Whaledent Inc.**

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**Emergency Contact Numbers:**

USA &amp; Canada: 1 800 535 5053

Main Phone Number: +1 330 916 8800

**2. Composition / Information on Ingredients****Chemical Characterization:** Methyl Methacrylate Monomer, Inhibited**Hazardous Components**

Methyl Methacrylate, Inhibited

N,N-Dimethyl-p-toluidine

Ethylene Glycol DiMethacrylate

Wt %

&gt; 1%

&lt; 1%

&gt; 1%

Index, R/S Phrases

F, R-11,37,38,43

n.k

n.k

**3. Hazard Identification**

Hazard Designation: Flammable Liquid

Information pertaining to particular dangers for man and environment: Flammable Liquid, skin sensitizer, respiratory irritant

Classification is in line with BC directive 88/379/EEC: Not Applicable (N/A)

**4. First-Aid Measures**

After Inhalation: Get to fresh air, if not breathing, administer artificial respiration. If discomfort persists, seek medical attention.

After Skin Contact: Wash thoroughly with water for 15 minutes. If irritation persists, consult a physician

After Eye Contact: Flush with water for 15 minutes. If irritation persists, consult a physician

After Swallowing: In the event of ingestion, call a physician immediately. Do not induce vomiting.

**5. Fire-Fighting Measures****Flammability: Flammable Flash Point: 11°C (52 °F) LEL: 1.8% UEL: 8.2%**

Extinguishing Media: Use alcohol foam, carbon dioxide or dry chemical to extinguish fire.

Unsuitable Extinguishing Media: Water stream may be ineffective.

Protective Equipment: Wear NIOSH approved self-contained breathing respirator in positive pressure mode and full firefighting protective clothing.

Special Hazards: Heat and pressure in closed containers may result in polymerization. Vapor is heavier than air and may travel a considerable distance to source of ignition and flash back.

**6. Accidental Release Measures**

Personal Precautions: Remove any sources of ignition, sparks and flame. Avoid contact with eyes. Wear self-contained positive pressure breathing apparatus and full firefighting protective clothing.

Environmental Precautions: Cover spills with an inert absorbent material; soak up and place in an appropriate disposal container. For large spills, a professional HAZMAT Team should handle it.

**7. Handling and Storage**

Precautions for Safe Handling: Avoid contact with eyes and skin. Always wear gloves and eye protection. Use with adequate ventilation. Keep container closed when not in use.

Storage: Store in cool dry container. Keep out of direct sunlight. Storage areas should comply with all appropriate Federal, State and Local regulations. Keep out of reach of children. Keep container closed.

Further Information on Storage: Open container periodically to see if product has polymerized. Do not use after expiration date.

**8. Exposure Controls/Personal Protection**

Components with recommended limits for the work place

CAS No.	Description	Wt%	Type / Value
80-62-6	Methyl Methacrylate, Inhibited	> 1%	OSHA PEL 100 ppm
99-97-8	N,N-Dimethyl-p-toluidine	< 1%	OSHA PEL Not Established
97-90-5	Ethylene Glycol DiMethacrylate	> 1%	OSHA PEL Not Established

Engineering Controls: Mechanical vapor capture enclosure and local ventilation should be used.

Work/Hygienic Protection: Wash hands and equipment after use.

Hand/Skin Protection: Wear Protective Gloves

Respiratory Protection: If exposure is above OSHA PEL, wear a NIOSH approved respirator.

Eye Protection: Wear Safety Goggles

Date of Issue: May 2004 n.a = not applicable, n.k. = not known	Coltène/Whaledent Inc. Perm® Reline/Repair Resin (Liquid)	Page 2 of 2 P/N 48054B												
<b>9. Physical And Chemical Properties</b> Appearance: Clear, lightly tinted liquid      Odor: sharp, pungent      Solubility: 1.6 g/ 100 g water @ 20°C Boiling Point: 101 °C (>212 °F)      Flash Point: 11 °C (52 °F)      Method: Tag Closed Cup Flammability: Yes      Auto flammability: n.k.      Density: 8.0 lb/gal Vapor Pressure: 29 mmHg @ 20°C      Explosive Properties: n.e.      Explosive Limits in Air: l=1.8%, u=8.2% pH: n.a.      Viscosity: 10 cps      Method: n.a.														
<b>10. Stability and Reactivity</b> Chemical Stability: Stable in presence of inhibitor      Conditions to avoid: Excessive heat, storage without inhibitor, and inadvertent addition of catalyst. Materials to avoid: Reducing and strong oxidizing agents.      Hazardous Decomposition Products: Oxides of Carbon Material has strong solvent qualities and can soften paint or rubber														
<b>11. Toxicological Information</b> Acute Toxicity: Acute Oral Rat LD50 – 7990 mg/kg, Acute Dermal Rabbit LD50 – 35,500 mg/kg, Acute Inhalation Rat 12,500 – 16,500 ppm for ½ hour Primary Effects to Skin: Allergic reaction can occur by repeated direct contact. Primary Effects to Eyes: Irritation can occur by repeated direct contact. Primary Effects to Respiratory System: Overexposure to vapors may cause respiratory tract irritation and central nervous system depression Sensitization: N.A Additional Toxicological Info: The national Toxicology program used rats with chronic inhalation @ concentration up to 1000 ppm which caused nasal irritation, inflammation of the nasal cavity and degeneration of the olfactory epithelium.														
<b>12. Ecological Information</b> General Information: Liquid with moderate volatility. Product is sparingly soluble in water. The product has low potential for Bioaccumulation. Low Toxicity to fish. Classification of Water endangerment: N.A.														
<b>13. Disposal Considerations</b> Product: This material is to be treated as a special waste material. Follow Federal, State and Local regulatory laws for proper disposal. If determined to be a hazardous waste as classified by RCRA, then incinerate in an EPA approved facility. Completely polymerized materials can be disposed of together with household refuse in accordance with local regulatory laws.														
<b>14. Transportation Information</b> <table border="0"> <tr> <td>DOT Shipping Name:</td> <td>DOT Hazard Class:</td> <td>UN-No.</td> </tr> <tr> <td>Methyl Methacrylate Monomer, stabilized</td> <td>3</td> <td>UN 1247, Packing Group II</td> </tr> <tr> <td>Sea Transport IMDG/GGV Sea Class: 3.2</td> <td>UN. No.: 1247, Packing Group II.</td> <td>EmS-No: N.A.    MFGA-No: N.A.</td> </tr> <tr> <td>Air Transport ICAO-Ti and IATA-DGR Class: 3</td> <td>UN. No.: 1247, Packing Group II</td> <td></td> </tr> </table>			DOT Shipping Name:	DOT Hazard Class:	UN-No.	Methyl Methacrylate Monomer, stabilized	3	UN 1247, Packing Group II	Sea Transport IMDG/GGV Sea Class: 3.2	UN. No.: 1247, Packing Group II.	EmS-No: N.A.    MFGA-No: N.A.	Air Transport ICAO-Ti and IATA-DGR Class: 3	UN. No.: 1247, Packing Group II	
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<b>15. Regulatory Information</b> TSCA Inventory Status: This product and/or all of its components are included on the TSCA Inventory of Chemical Substances. SARA 311/312 Hazard Categories: Flammable Liquid SARA 302 Extremely Hazardous Substances: None SARA 313 Toxic Chemicals <table border="0"> <thead> <tr> <th><u>Chemical Name</u></th> <th><u>CAS-No.</u></th> <th><u>Weight %</u></th> </tr> </thead> <tbody> <tr> <td>Methyl Methacrylate, Inhibited</td> <td>80-62-6</td> <td>&gt; 1%</td> </tr> <tr> <td>N,N-Dimethyl-p-toluidine</td> <td>99-97-8</td> <td>&lt; 1%</td> </tr> <tr> <td>Ethylene Glycol DiMethacrylate</td> <td>97-90-5</td> <td>&gt; 1%</td> </tr> </tbody> </table> Classification According to EEC Guidelines: Index: F, Xi      R-Phrases – R11, 37, 38, 43      S-Phrases – S 24, 37, 46 Classification According to VBF: n.a. Canadian Regulations require the inclusion of the following statements under "Regulatory Information"; "This product has been classified in accordance with the hazard criteria of the controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations."			<u>Chemical Name</u>	<u>CAS-No.</u>	<u>Weight %</u>	Methyl Methacrylate, Inhibited	80-62-6	> 1%	N,N-Dimethyl-p-toluidine	99-97-8	< 1%	Ethylene Glycol DiMethacrylate	97-90-5	> 1%
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<b>16. Other Information</b> Revision Summary: Changed to Company Format and Updated Address 12/06/03. Added Authorized EU Rep 5/5/04.  Definitions F – Highly Flammable, Xi - Irritant R11 – Highly Flammable, R37/38 – Irritation to respiratory system and skin, R43 – May cause sensitization by skin contact S2- Keep out of reach of children, S24 – Avoid contact with skin, S37 – Wear Suitable Gloves S46 – If swallowed, seek medical advice immediately and show this container of label.  The information and recommendations set forth herein are presented in good faith and are believed to be correct as of the date hereof. Coltène/Whaledent Inc., however, makes no representations as to the completeness of security of this information and supplies it on the condition that the persons receiving same will make their own determination as to its suitability of their purposes prior to use. In no event will Coltène/Whaledent Inc. be responsible for damages of any nature whatsoever resulting from use of or reliance upon information.														