1. Product and company identification

- **Product name**: FIBREKLEER
- **Material uses**: Dental product
- **Manufacturer**: Kerr Corporation
  
  1717 West Collins Avenue, Orange, CA 92867
  
  Telephone no.: 1-800-KERR-123
- **Prepared by**: Atrion Regulatory Services, Inc.
- **In case of emergency**: CHEMTREC, U.S.: 1-800-424-9300
  
  International: +1-703-527-3887

2. Hazards identification

- **Physical state**: Solid. [Fiber-reinforced rod]
- **Color**: Clear.
- **Odor**: Odorless.

**Emergency overview**

- **Physical state**: Solid. [Fiber-reinforced rod]
- **Color**: Clear.
- **Odor**: Odorless.

**Hazard statements**

- NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

**Precautions**

- No known significant effects or critical hazards. Avoid prolonged contact with eyes, skin and clothing.

**Routes of entry**

- Dermal contact. Eye contact.

**Potential acute health effects**

- **Inhalation**: No known significant effects or critical hazards.
- **Ingestion**: No known significant effects or critical hazards.
- **Skin**: No known significant effects or critical hazards.
- **Eyes**: No known significant effects or critical hazards.

**Potential chronic health effects**

- **Chronic effects**: No known significant effects or critical hazards.
- **Carcinogenicity**: No known significant effects or critical hazards.
- **Mutagenicity**: No known significant effects or critical hazards.
- **Teratogenicity**: No known significant effects or critical hazards.
- **Developmental effects**: No known significant effects or critical hazards.
- **Fertility effects**: No known significant effects or critical hazards.
- **Target organs**: Contains material which may cause damage to the following organs: upper respiratory tract, skin, eyes.

**Over-exposure signs/symptoms**

- **Inhalation**: No specific data.
- **Ingestion**: No specific data.
- **Skin**: No specific data.
- **Eyes**: No specific data.
- **Medical conditions aggravated by over-exposure**: None known.
3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>glass, oxide, chemicals</td>
<td>65997-17-3</td>
<td>30-60</td>
</tr>
<tr>
<td>ytterbium trifluoride</td>
<td>13760-80-0</td>
<td>10-30</td>
</tr>
<tr>
<td>Poly(oxy-1,2-ethanediyl), .alpha.,.alpha.'-[(1-methylethylidene)di-4,1-</td>
<td>41637-38-1</td>
<td>5-10</td>
</tr>
<tr>
<td>phenylene]bis[.omega.-[(2-methyl-1-oxo-2-propenyl)oxy]-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,6-hexanediyl bismethacrylate</td>
<td>6606-59-3</td>
<td>5-10</td>
</tr>
</tbody>
</table>

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

**Eye contact**: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if symptoms occur.

**Skin contact**: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.

**Inhalation**: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms occur.

**Ingestion**: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

**Protection of first-aiders**

**Antidote information**: No action shall be taken involving any personal risk or without suitable training.

**Product/ingredient name** | **Antidote information**
---|---
No antidote information known | No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

**Flammability of the product**: No specific fire or explosion hazard.

**Extinguishing media**

- **Suitable**: Use an extinguishing agent suitable for the surrounding fire.
- **Not suitable**: None known.

**Special exposure hazards**: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Hazardous thermal decomposition products**: Decomposition products may include the following materials:
- carbon dioxide
- carbon monoxide
- halogenated compounds
- metal oxide/oxides

**Special protective equipment for fire-fighters**: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

04/11/2011. Canada
6. Accidental release measures

Personal precautions: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Small spill: Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill: Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

Handling: Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas.

Storage: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>List name</th>
<th>ppm (TWA)</th>
<th>mg/m³</th>
<th>Other</th>
<th>ppm (STEL)</th>
<th>mg/m³</th>
<th>Other</th>
<th>ppm (Ceiling)</th>
<th>mg/m³</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>ytterbium trifluoride, as F</td>
<td>US ACGIH 2/2010</td>
<td>-</td>
<td>2.5</td>
<td></td>
<td>-</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AB 4/2009</td>
<td>-</td>
<td>2.5</td>
<td></td>
<td>-</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BC 10/2009</td>
<td>-</td>
<td>2.5</td>
<td></td>
<td>-</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ON 7/2010</td>
<td>-</td>
<td>2.5</td>
<td></td>
<td>-</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
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<tr>
<td></td>
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</tr>
<tr>
<td>glass, oxide, chemicals</td>
<td>US ACGIH 2/2010</td>
<td>-</td>
<td>-</td>
<td>1 f/cc</td>
<td>-</td>
<td>-</td>
<td></td>
<td>-</td>
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<td></td>
<td>-</td>
<td>5</td>
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<td></td>
</tr>
</tbody>
</table>

Form: [a]Continuous filament glass fibers [b]Inhalable fraction. See Appendix C, paragraph A. Inhalable Particulate Mass TLVs (IPM–TLVs) for those materials that are hazardous when deposited anywhere in the respiratory tract.

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures: No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

8. Exposure controls/personal protection

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Respiratory: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

Physical state: Solid. [Fiber-reinforced rod]
Flash point: Not available.
Auto-ignition temperature: Not available.
Flammable limits: Not available.
Color: Clear.
Odor: Odorless.
pH: Not available.
Boiling/condensation point: Not available.
Melting/freezing point: Not available.
Relative density: 2
Density: Not available.
Vapor pressure: Not available.
Vapor density: Not available.
Odor threshold: Not available.
Evaporation rate: Not available.
Viscosity: Not available.
Solubility: Insoluble in the following materials: cold water and hot water.
LogKow: Not available.
10. Stability and reactivity

**Chemical stability**: The product is stable.

**Incompatible materials**: Not available.

**Hazardous decomposition products**: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**Possibility of hazardous reactions**: Under normal conditions of storage and use, hazardous reactions will not occur.

11. Toxicological information

**Acute toxicity**: Not available.

**Chronic toxicity**: Not available.

**Conclusion/Summary**: Contains material that may cause target organ damage, based on animal data.

**Irritation/Corrosion**: Not available.

- **Skin**: May cause skin irritation.
- **Eyes**: May cause eye irritation.
- **Respiratory**: May cause respiratory irritation.

**Sensitizer**: Not available.

**Conclusion/Summary**: Not available.

- **Skin**: May cause skin sensitization.

**Carcinogenicity**

**Classification**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>EPA</th>
<th>NIOSH</th>
<th>NTP</th>
<th>OSHA</th>
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</thead>
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<tr>
<td>glass, oxide, chemicals</td>
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<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>ytterbium trifluoride</td>
<td>A4</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Mutagenicity**: Not available.

**Teratogenicity**: Not available.

**Reproductive toxicity**: Not available.

12. Ecological information

**Ecotoxicity**: No known significant effects or critical hazards.

**Aquatic ecotoxicity**: Not available.

**Persistence/degradability**: Not available.


12. Ecological information

<table>
<thead>
<tr>
<th>Property</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not available.</td>
</tr>
<tr>
<td>Bioconcentration factor</td>
<td>Not available.</td>
</tr>
<tr>
<td>Mobility</td>
<td>Not available.</td>
</tr>
<tr>
<td>Toxicity of the products of biodegradation</td>
<td>Not available.</td>
</tr>
<tr>
<td>Other adverse effects</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

13. Disposal considerations

Waste disposal: The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

TDG/IMDG/IATA: Not regulated.

15. Regulatory information

<table>
<thead>
<tr>
<th>Country/Inventory</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States inventory (TSCA 8b)</td>
<td>Not determined.</td>
</tr>
<tr>
<td>WHMIS (Canada)</td>
<td>Not controlled under WHMIS (Canada).</td>
</tr>
<tr>
<td>Canadian lists</td>
<td>None of the components are listed.</td>
</tr>
<tr>
<td>CEPA Toxic substances</td>
<td>The following components are listed: Inorganic fluorides</td>
</tr>
<tr>
<td>Canada inventory</td>
<td>Not determined.</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>International regulations</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>International lists</td>
<td></td>
</tr>
<tr>
<td>Australia inventory (AICS)</td>
<td>Not determined.</td>
</tr>
<tr>
<td>China inventory (IECSC)</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Japan inventory</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Korea inventory</td>
<td>Not determined.</td>
</tr>
<tr>
<td>New Zealand Inventory of Chemicals (NZIoC)</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Philippines inventory (PICCS)</td>
<td>Not determined.</td>
</tr>
</tbody>
</table>

| Chemical Weapons Convention List Schedule I   |                                |
| Chemicals                                    | Not listed                    |
15. Regulatory information

**Chemical Weapons Convention List Schedule II Chemicals**
Not listed

**Chemical Weapons Convention List Schedule III Chemicals**
Not listed

16. Other information

**Label requirements**

<table>
<thead>
<tr>
<th>Hazardous Material Information System (U.S.A.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health: 0</td>
</tr>
<tr>
<td>Flammability: 0</td>
</tr>
<tr>
<td>Physical hazards: 0</td>
</tr>
</tbody>
</table>

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

**Date of issue**
04/11/2011.

**Date of previous issue**
No previous validation.

**Version**
1

*Indicates information that has changed from previously issued version.*

**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.