LIQUID HARDENER

SECTION 1  IDENTITY OF MATERIAL

TRADE NAME........... LIQUID HARDENER
PRODUCT NUMBERS... 62161 .37 oz. tube, 62174 1.35 oz. tube
FORMULA............. Ketone Peroxide Solution
CHEMICAL FAMILY... Ketone Peroxides
SYNONYMS........... Ketone Peroxide in Fire Resistant Diluent

SECTION 2  HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENTS</th>
<th>% CAS NUMBER</th>
<th>SEC 313</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>38-42%</td>
<td>1338-23-4</td>
</tr>
<tr>
<td>2, 4-Pentanediol Peroxide</td>
<td>5-10%</td>
<td>37187-22-7</td>
</tr>
<tr>
<td>Hydrogen Peroxide</td>
<td>0 - 5%</td>
<td>7722-84-1</td>
</tr>
<tr>
<td>Hexylene Glycol</td>
<td>25-43%</td>
<td>107-41-5</td>
</tr>
<tr>
<td>Fire Retardants</td>
<td>5%</td>
<td>N/A</td>
</tr>
</tbody>
</table>

SECTION 3  KNOWN HAZARDS UNDER 29 CFR 1910.1200

<table>
<thead>
<tr>
<th>HAZARDS</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combustible Liquid</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Flammable Liquid</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Pyrophoric Material</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Explosive Material</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Unstable Material</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Water Reactive Material</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Oxidizer</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Organic Peroxide</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Corrosive Material</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Compressed Gas</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Irritant</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Carcinogen NTP/IARC/OSHA</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 4  REGULATIONS

<table>
<thead>
<tr>
<th>CHEMICAL</th>
<th>TLV (THA)</th>
<th>PEL</th>
<th>STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Ethyl Ketone Peroxide</td>
<td>0.2 ppm, 1.5 mg/cu m</td>
<td>1 ppm, 1.5 mg/cu m</td>
<td>1 ppm, 1.4 mg/cu m</td>
</tr>
<tr>
<td>Hydrogen Peroxide</td>
<td>Ceiling - 0 ppm, 1.5 mg/cu m</td>
<td>1 ppm, 1.5 mg/cu m</td>
<td>2 ppm, 3 mg/cu m</td>
</tr>
<tr>
<td>Hexylene Glycol</td>
<td>Ceiling - 25 ppm, 125 mg/cu m</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION 5  REGULATED IDENTIFICATION

DOT PROPER SHIPPING NAME........... Unregulated Chemical
DOT HAZARD CLASS........... Non-Regulated
SHIPPING ID NUMBER........... N/A
EPA HAZARDOUS WASTE ID NUMBER... D-001, D-003, U-160
EPA HAZARD WASTE CLASS........... Ignitable Waste / Reactive Waste

SECTION 6  EFFECTS OF EXPOSURE

ENTRY ROUTE...... INHALE - YES INGEST - YES SKIN - YES EYE - YES
INHALATION....... May cause irritation or burns of nose, throat, mouth, sneezing, coughing, salvation, respiratory depression, headaches, dizziness, fainting, tremors, metabolic acidosis, coma and death
SKIN............. May cause irritation, burns and dermatitis upon contact. May be absorbed through skin. Vapors may cause tearing and eye irritation.
EYE.............. May cause irritation, burns and dermatitis upon contact. May be absorbed through skin. Vapors may cause tearing and eye irritation.
INGESTION....... May cause burns of the mouth, throat, esophagus and gastrointestinal tract. A large ingestion of hexylene glycol may cause kidney damage.
TARGET ORGANS... Central Nervous System, Eye, Skin, Lung, Kidney

SECTION 7  EMERGENCY AND FIRST AID PROCEDURES - 303/623-5716 COLLECT

SKIN........... Flush with water, then wash thoroughly with soap and water. Remove contaminated clothing and wash before reuse. Call a poison control center or physician if irritation persists.
EYES............ Flush with water for 15 minutes and call a poison control center or physician if irritation persists.
INHALATION... Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Keep victim quiet and warm. Call a poison control center or physician immediately.
INGESTION.... Drink water. DO NOT INDUCE VOMITING, and call a poison control center or physician immediately. Avoid alcoholic beverages. Never give anything by mouth to an unconscious person.

(Continued on reverse side)
LIQUID HARDENER

SECTION 8
PHYSICAL AND CHEMICAL PROPERTIES

NFPA HAZARD SIGNAL... HEALTH - 2 FLAMMABILITY - 1 STABILITY - 1 SPECIAL - NONE

BOILING POINT............ Decomposes
MELTING POINT............. N/A
VAPOR PRESSURE............ N/A
VAPOR DENSITY (AIR = 1)... N/A
VOLATILE COMPONENTS...... N/A
SOLUBILITY IN WATER........ > 98%
PH......................... N/A
SPECIFIC GRAVITY........... 1.05 @ 25 Degrees C
EVAPORATION RATE.......... N/A
APPEARANCE................ Clean, Colorless Liquid
ODOR........................ Slight Acrid Odor
WILL DISSOLVE IN........... Water
MATERIAL IS................ Liquid

SECTION 9
FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY................ LEFL = N/A UEL = N/A
FLASHPOINT AND METHOD USER.... 43 Degrees C 110 Degrees C SETA
STABILITY.................... Unstable CONDITIONS CONTRIBUTING TO INSTABILITY: Contamination and thermal decomposition. HAZARDOUS DECOMP. PICTURES: ND
HAZARDOUS POLYMERIZATION..... Will Not Occur. CONDITIONS TO AVOID: Temperatures above 27 Degrees C and 80 Degrees F. Avoid strong acids, alkalis and oxidizers.
INCOMPATIBILITY/MAT. TO AVOID... MATERIALS TO AVOID: Strong reducing agents; accelerators.
SPECIAL FIRE FIGHTING PROCEDURE... FOR SMALL FIRES: Use dry chemical, CO2 (Carbon Dioxide), water or foam extinguisher. FOR LARGE FIRES: Evacuate area and call Fire Department immediately.

SECTION 10
SPILL AND DISPOSAL INFORMATION

SPILL OR LEAK PROCEDURES... Ventilate area, stop leak if it can be done without risk. Take up with sand, earth or other absorbing material and place in a clean, dry lead-proof container
WASTE DISPOSAL............. Dispose of according to Local, State and Federal Regulations.

SECTION 11
SAFE USAGE DATA

PROTECTIVE EQUIPMENT TYPES... EYES: Chemical splash goggles or face shield if splash hazard exists. RESPIRATORY: Use a chemical-respirator mask whenever spray application is taking place. GLOVES: Rubber or polyethylene. OTHER: Safety shower and/or eye wash should be available. CHEMICAL-RESISTANT APRON OR COVERALLS MAY BE NEEDED IN HIGH EXPOSURE SITUATIONS.
VENTILATION................ GENERAL MECHANICAL: Exhaust ventilation capable of maintaining emissions at the point of use below PEL. LOCAL EXHAUST: Open doors and windows. If used in enclosed area, use fans to remove fumes.
PRECAUTIONS................ HANDLING & STORAGE: Keep away from heat, sparks, flames; keep container closed. Materials such as brass, stainless steel (type 400) iron & rubber should not be in contact with hardener. Store below 80F.

SECTION 12
MANUFACTURER OR SUPPLIER DATA

MSDS PREPARED BY........... Gabriella Bitz Research & Development Chemist
FIRM NAME & MAILING ADDRESS... OATEY COMPANY 4700 West 160th Street P.O. Box 35906 Cleveland, Ohio 44135
OATEY PHONE NUMBER.......... (216) 267-7100
EMERGENCY PHONE NUMBER:..... (303) 623-5716 COLLECT

SECTION 13
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