SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Citra-Clean Liquid
PRODUCT NUMBER: 16-484
MSDS #0269
TRADE NAME: Citra-Clean Liquid
GENERAL USE: general cleanser
CHEMICAL FAMILY: Terpene based
PRODUCT DESCRIPTION: Colorless to pale yellow liquid with a citrus odor.

MANUFACTURER:
Patch Rubber Company

ADDRESS (NUMBER, STREET, P.O. BOX):
PO Box H

ADDRESS (NUMBER, STREET, P.O. BOX) (CITY, STATE AND ZIP CODE) COUNTRY:
Roanoke Rapids, NC 27870 USA

TELEPHONE NUMBER (General Inquiries) DATE PREPARED: November 6, 2009
01-(252) 536-2574 SUPERSEDES:

CHEMTEL 24-HOUR EMERGENCY TELEPHONE NUMBERS

North America (Toll Free) 1-800-255-3924
International and Local Calls 01-(813)-248-05851-800-255-3924

SECTION 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Warning! Flammable liquid and vapor. May cause respiratory tract irritation. May cause allergic skin reaction in susceptible individuals. May cause eye and skin irritation. D-Limonene component is considered as a potential aquatic pollutant; do not discharge into bodies of water. Target Organs: Skin. Product is 100% bio-based and is generally recognized as safe (GRAS) rated.

POTENTIAL HEALTH EFFECTS

INHALATION:
May cause respiratory tract irritation with coughing and headache.

SKIN:
Causes mild skin irritation in some individuals. May cause skin sensitization, an allergic reaction, which becomes evident upon reexposure to this material. Prolonged and/or repeated contact may result in moderate skin irritation, including defatting of the skin and chemical dermatitis.

EYES:
Causes moderate to severe eye irritation; may result in chemical conjunctivitis in severe exposures.

INGESTION:
May cause digestive tract disturbances, including nausea, vomiting, and diarrhea.

CARCINOGENICITY:

NTP? NO
IARC MONOGRAPHS? NO
OSHA REGULATED? NO
ESIS? NO

SECTION 3 - HAZARDOUS INGREDIENTS

Hazardous Components % (by Weight) CAS # EINECS # Hazard Symbol RISK PHRASES (Full Text Section 15)
d-Limonene* NR 5989-27-5 227-813-5 Xi, N R10, R38, R43, R50/53

Citrus Terpenes* NR 94266-47-4 304-454-3 None None


SECTION 4 - FIRST AID MEASURES

INHALATION:
Move affected person into fresh air. If person is not breathing or is experiencing severe difficulties, call emergency services (911), then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

EYES:
Hold eyes open and rinse slowly and gently with eye wash solution (saline preferred) or potable water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Seek medical assistance for severe cases.

SKIN:
Remove all contaminated clothing. Rinse skin immediately with plenty of water. Seek medical assistance for severe/persistent cases.

INGESTION:
Call Poison Control (Toll-Free at 1-800-222-1222 within the USA), emergency services (911), or physician immediately for treatment advice. Offer victim water if conscious and able to swallow. Do not induce vomiting except under medical instructions from physician or Poison Control. Do not give anything by mouth to an unconscious person.
SECTION 5 - FIRE FIGHTING MEASURES

GENERAL HAZARDS:
As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH or European EN149 (approved or equivalent), and full protective gear. Containers may explode in the heat of a fire. Flammable liquid and vapor. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. This liquid floats on water and may travel to a source of ignition and spread fire.

EXTINGUISHING MEDIA:
Use water fog, Carbon Dioxide, Foams, or Dry Chemical - choose extinguishing media to fight surrounding fire.

FIRE FIGHTING PROCEDURES:
Firefighters should wear self-contained breathing apparatus and turn-out gear when fighting any chemical fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
None

Hazardous Combustion Products:
Carbon monoxide, carbon dioxide, and acrid vapors.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Use proper personal protective equipment as indicated in Section 8. Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Forms smooth, slippery surfaces on floors, posing an accident risk. Remove all sources of ignition. Provide ventilation.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
Ground and bond containers when transferring material under cool, dry conditions to avoid static discharge resulting in ignition. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and pose hazards. Keep away from heat, sparks and flame. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation. Avoid breathing vapor or mist. Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a cool, dry, well ventilated area (Flammables area) away from incompatible substances. Separate from oxidizing materials. If long term storage is required, partially filled containers should be blanketed with nitrogen to prevent peroxide formation.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

HAZARDOUS COMPONENTS

<table>
<thead>
<tr>
<th></th>
<th>NIOSH</th>
<th>TLV/TWA ppm</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPEARANCE AND ODOR</td>
<td>Colorless to pale yellow liquid with a citrus odor.</td>
<td>VAPOR PRESSURE</td>
<td>&lt;2mmHg @ 68ºF (20ºC)</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>NA</td>
<td>SPECIFIC GRAVITY (WATER = 1)</td>
<td>0.838 to 0.843 @ 68ºF (20ºC)</td>
<td></td>
</tr>
<tr>
<td>BOILING POINT</td>
<td>349ºF (176ºC)</td>
<td>SOLUBILITY IN WATER</td>
<td>Insoluble</td>
<td></td>
</tr>
<tr>
<td>FLASH POINT</td>
<td>&gt;110ºF (43ºC)</td>
<td>VISCOSITY</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>FLAMMABLE LIMITS</td>
<td>LEL: 0.70% UEL: 6.10%</td>
<td>VAPOR DENSITY (AIR = 1)</td>
<td>NR</td>
<td></td>
</tr>
<tr>
<td>AUTO-IGNITION TEMPERATURE</td>
<td>458ºF (237ºC)</td>
<td>EVAPORATION RATE (n-Butyl Acetate = 1)</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>VOLATILE ORGANIC COMPOUND (VOC) INFORMATION</td>
<td>&gt;95% by volume.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION 10 - STABILITY AND REACTIVITY

**STABILITY**
Product is stable under normal conditions.

**CONDITIONS TO AVOID:**
Extreme temperatures, incompatible materials (see below)

**INCOMPATIBILITY (MATERIALS TO AVOID):**
Strong oxidizers

**HAZARDOUS DECOMPOSITION OR BYPRODUCTS:**
Hydrocarbons, carbon oxides, small amounts of sulfur, phosphorous, and nitrogen oxides

**HAZARDOUS POLYMERIZATION:**
Will not occur.

**CONDITIONS TO AVOID:**
None Related to Hazardous Polymerization.

SECTION 11 - TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>CAS #</th>
<th>EINECS #</th>
<th>LD50 of Ingredient (Specify Species and Route)</th>
<th>LC50 of Ingredient (Specify Species)</th>
</tr>
</thead>
<tbody>
<tr>
<td>d-Limonene</td>
<td>5989-27-5</td>
<td>227-813-5</td>
<td>Oral, mouse: LD50 = 5600 mg/kg Oral, rat: LD50 = 4400 mg/kg</td>
<td>NE</td>
</tr>
<tr>
<td>Citrus Terpenes</td>
<td>94266-47-4</td>
<td>304-454-3</td>
<td>Oral, Rabbit: LD50 &gt; 5 g/kg</td>
<td>Inhalation, Mouse; Sensory Irritation: RD50&gt; 1g/kg</td>
</tr>
</tbody>
</table>

SECTION 12 - ECOLOGICAL INFORMATION

No testing information available. Citrus terpenes volatilize rapidly; no appreciable bioconcentration is expected in the environment. Some studies have identified d-Limonene as a marine pollutant with specific toxicities to some marine species such as brine shrimp. This product is expected to be readily biodegradable.

SECTION 13 - DISPOSAL CONSIDERATIONS

PROPER SHIPPING NAME: None (USA Ground), Terpene Hydrocarbons, N.O.S. (Air/Water/International/Bulk)

HAZARDOUS POLYMERIZATION: CONDITIONS TO AVOID:
Will not occur.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS:
Will not occur.

HAZARDOUS POLYMERIZATION:
None Related to Hazardous Polymerization.

SECTION 14 - TRANSPORT INFORMATION

DOT HAZARD CLASS / Pack Group: None-USA Ground under 119 Gal: Flammable 3 / PG III for air/ocean/bulk shipments

UN / NA IDENTIFICATION NUMBER: UN2319

LABEL: Flammable - See Above

HAZARD SYMBOLS: Hazard Identification Number (HIN): 30 (EAC 3Y)

WASTE DISPOSAL METHOD:
Dispose of in accordance with Local, State, and Federal Regulations. Product is not defined or designated as hazardous by current provisions of the Federal (EPA) Resource Conservation and Recovery Act (RCRA, 40CFR261). Incinerate waste product when in liquid form (i.e., as supplied) in a properly permitted (approved) incineration facility. Do not flush to sanitary sewer or waterway; do not dispose of liquid product in landfill. According to the European Waste Catalogue, waste codes are application specific and should be assigned by the user based on the application for which the product is used.

SECTION 15 - REGULATORY INFORMATION

**TSCA (USA - Toxic Substance Control Act):** All components are listed under TSCA.

**SARA TITLE III (USA - Superfund Amendments and Reauthorization Act):**
- Acute Health: YES
- Chronic Health: NO
- Fire: YES
- Sudden Release of Pressure: NO
- Reactive: NO

**SARA 313 REPORTABLE INGREDIENTS:** None

**CERCLA (USA - Comprehensive Response Compensation and Liability Act):** No reportable ingredients.

**California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986:** No reportable ingredients.

**CPR (Canadian Controlled Products Regulations):** WHMIS Classification D2B.

**IDL (Canadian Ingredient Disclosure List):**

**DSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List):** Listed on DSL/NDSL.
SECTION 15 - REGULATORY INFORMATION Continued

EINECS (European Inventory of Existing Commercial Chemical Substances): Referenced.

WGK Water Quality Index: 3

RISK PHRASES: SYMBOL(S) REQUIRED FOR EU LABEL SAFETY PHRASES:
R10 Flammable.
R38 Irritating to skin.
R43 May cause sensitisation by skin contact.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S2 Keep out of the reach of children.
S24 Avoid contact with skin.
S37 Wear suitable gloves.
S60 This material and its container must be disposed of as hazardous waste.
S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.

SECTION 16 - OTHER INFORMATION

Legend:

ACGIH - American Congress of Government Industrial Hygienists
CAS - Chemical Abstracts Service
EINECS - European Inventory of Existing Commercial Chemical Substances
HMIS - Hazardous Materials Identification System
IARC - International Agency for Research on Cancer
NA - Not Available
NE - Not Established
ND - Not Determined
NR - Not Reported
NIPHS - National Institute for Occupational Safety and Health
NTP - National Toxicology Program
OSHA - Occupational Safety and Health Administration

HMIS HAZARD RATINGS: HEALTH: FLAMMABILITY: PHYSICAL HAZARD: PERSONAL PROTECTIVE EQUIPMENT: 2 0 = INSIGNIFICANT 2 1 = SLIGHT 0 2 = MODERATE B 3 = HIGH 4 = EXTREME Glasses, Gloves

REVISION SUMMARY: Authored 6 November 2009 to GHS protocols. JTV/LB

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.