SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name: PERMATEX® #77 ULTRA BLUE® Multi-Purpose Gasket Maker - 3.35 oz. tube, carded
Product Code: 81724
Stock No.: 81724
Manufacturer Name: Permatex, Inc.
Address: 10 Columbus Blvd.
Hartford, CT 06106 USA
General Phone Number: 1-87-Permatex, (877) 376-2839
Emergency Phone Number: 800-255-3924
CHEMTREC: For emergencies in the US, call CHEMTREC: 800-424-9300
MSDS Revision Date: June 30, 2012
MSDS Format: According to ANSI Z400.1-2004

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS#</th>
<th>Ingredient Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butanone, O,O',O''-(ethenylsilylidyne)trioxime</td>
<td>2224-33-1</td>
<td>1 - 5 by weight</td>
</tr>
<tr>
<td>Ethyl methyl ketoxime</td>
<td>96-29-7</td>
<td>0.5 - 2.0 by weight</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated light; Kerosine - unspecified</td>
<td>64742-47-8</td>
<td>15 - 25 by weight</td>
</tr>
<tr>
<td>Stearic Acid</td>
<td>57-11-4</td>
<td>1 - 5 by weight</td>
</tr>
<tr>
<td>Calcium Carbonate</td>
<td>471-34-1</td>
<td>20 - 40 by weight</td>
</tr>
<tr>
<td>Limestone</td>
<td>1317-65-3</td>
<td>15 - 25 by weight</td>
</tr>
<tr>
<td>Dimethyl siloxane, hydroxy-terminated</td>
<td>70131-67-8</td>
<td>20 - 40 by weight</td>
</tr>
</tbody>
</table>

SECTION 3 - HAZARDS IDENTIFICATION

Emergency Overview: CAUTION! Harmful. Irritant.
Route of Exposure: Eyes. Skin. Inhalation. Ingestion.

Potential Health Effects:

- **Eye:** Can cause moderate irritation, burning sensation, tearing, redness, and swelling. Overexposure may cause laceration, conjunctivitis, corneal damage and permanent injury.
- **Skin:** Can cause skin irritation; itching, redness, rashes, hives, burning, and swelling.
- **Inhalation:** Respiratory tract irritant. High concentration may cause dizziness, headache, and anesthetic effects.
- **Ingestion:** Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.

Chronic Health Effects: Prolonged skin contact may lead to burning associated with severe reddening, swelling, and possible tissue destruction.

Signs/Symptoms: Overexposure can cause headaches, dizziness, nausea, and vomiting.


Aggravation of Pre-Existing Conditions: Individuals with pre-existing skin disorders, asthma, allergies or known sensitization may be more susceptible to the effects of this product.

SECTION 4 - FIRST AID MEASURES

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.

**Skin Contact:** Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

**Ingestion:** If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.
**SECTION 5 - FIRE FIGHTING MEASURES**

**Flash Point:** >200°F (93.3°C)

**Flash Point Method:** Tag closed cup (TCC)

**Auto Ignition Temperature:** Not determined.

**Lower Flammable/Explosive Limit:** Not determined.

**Upper Flammable/Explosive Limit:** Not determined.

**Fire Fighting Instructions:** Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.

**Extinguishing Media:** Use carbon dioxide (CO2) or dry chemical when fighting fires involving this material.

**Protective Equipment:** As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.

**Hazardous Combustion Byproducts:** Oxides of carbon, Oxides of nitrogen, Methyl ethyl ketone, possibly methyl ethyl ketoxime, Silica fume, Formaldehyde

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**Personnel Precautions:** Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.

**Environmental Precautions:** Avoid runoff into storm sewers, ditches, and waterways.

**Spill Cleanup Measures:** Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section. After removal, flush spill area with soap and water to remove trace residue. Avoid personal contact and breathing vapors or mists. Ventilate area. Use proper personal protective equipment as listed in section 8.

**Other Precautions:** Pump or shovel to storage/salvage vessels.

**SECTION 7 - HANDLING and STORAGE**

**Handling:** Use with adequate ventilation. Avoid breathing vapor, aerosol or mist.

**Storage:** Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use. Do not store in reactive metal containers. Do not store in reactive metal containers. Keep away from acids, oxidizers.

**Hygiene Practices:** Wash thoroughly after handling.

**SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES**

**Engineering Controls:** Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.

**Eye/Face Protection:** Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.

**Skin Protection Description:** Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.

**Respiratory Protection:** A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

**Other Protective:** Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.

**EXPOSURE GUIDELINES**

**Calcium Carbonate:**

- **Guideline ACGIH:** 10 mg/m³
- **Guideline OSHA:** 5 mg/m³

**PEL-TWA:**
- **Total particulate/dust (T):** 15 mg/m³
- **Respirable fraction (R):** 5 mg/m³

**Notes:** Only established PEL and TLV values for the ingredients are listed.
SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

Physical State Appearance: Paste.
Color: Black.
Odor: Mild chemical.
Boiling Point: Not determined.
Melting Point: Not determined.
Specific Gravity: 1.44
Solubility: Polymerized
Vapor Density: Not determined.
Vapor Pressure: Not determined.
Percent Volatile: <5
Evaporation Rate: Not determined.
pH: Not determined.
Molecular Formula: Mixture
Molecular Weight: Mixture
Flash Point: >200°F (93.3°C)
Flash Point Method: Tag closed cup (TCC)
Auto Ignition Temperature: Not determined.
VOC Content: <4%
Percent Solids by Weight: Not determined.

SECTION 10 - STABILITY and REACTIVITY

Chemical Stability: Stable under normal temperatures and pressures.
Hazardous Polymerization: Not reported.
Conditions to Avoid: Extreme heat, sparks, and open flame. Incompatible materials, oxidizers and oxidizing conditions. Protect against moisture.
Special Decomposition Products: When heated to temperatures above 300 degrees F in the presence of air, this product can form formaldehyde vapors. Formaldehyde is a potential cancer hazard and a known skin and respiratory sensitizer. Safe handling conditions may be maintained by keeping vapor concentrations below the OSHA permissible limit for formaldehyde.

SECTION 11 - TOXICOLOGICAL INFORMATION

Ethyl methyl ketoxime:
RTECS Number: EL9275000
Eye: Eye - Rabbit Standard Draize test: 100 uL
Skin: Administration onto the skin - Rat LD50: >2 g/kg [Details of toxic effects not reported other than lethal dose value]
Administration onto the skin - Rabbit LD50: 200 uL/kg [Details of toxic effects not reported other than lethal dose value]
Ingestion: Oral - Rat LD50: 930 mg/kg [Details of toxic effects not reported other than lethal dose value]
Distillates (petroleum), hydrotreated light; Kerosine - unspecified:
RTECS Number: OA5504000
Stearic Acid:
RTECS Number: WI2800000
Skin: Administration onto the skin - Rabbit: >5 g/kg [Details of toxic effects not reported other than lethal dose value]
Administration onto the skin - Human: 75 mg/24H (Intermittent)
Administration onto the skin - Rabbit: 500 mg/24H
Calcium Carbonate:
RTECS Number: FF9335000
Eye: Eye - Rabbit Standard Draize test: 750 ug/24H
Skin: Administration onto the skin - Rabbit: 500 mg/24H
Ingestion: Oral - Rat LD50: 6450 mg/kg [Details of toxic effects not reported other than lethal dose value]
Limestone:
**SECTION 12 - ECOLOGICAL INFORMATION**

**Ecotoxicity:** No ecotoxicity data was found for the product.

**Environmental Fate:** No environmental information found for this product.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

**Waste Disposal:** Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.

**RCRA Number:** Not determined.

**SECTION 14 - TRANSPORT INFORMATION**

**DOT Shipping Name:** Non regulated.

**DOT UN Number:** Non regulated.

**SECTION 15 - REGULATORY INFORMATION**

**2-Butanone, O,O',O''-(ethenylsilylidyne)trioxime:**
- TSCA Inventory Status: Listed
- Canada DSL: Listed

**Ethyl methyl ketoxime:**
- TSCA Inventory Status: Listed
- Canada DSL: Listed

**Distillates (petroleum), hydrotreated light; Kerosine - unspecified:**
- TSCA Inventory Status: Listed
- Canada DSL: Listed

**Stearic Acid:**
- TSCA Inventory Status: Listed
- Canada DSL: Listed

**Calcium Carbonate:**
- TSCA Inventory Status: Listed
- Canada DSL: Listed

**Limestone:**
- TSCA Inventory Status: Listed
- Massachusetts: Listed
- Pennsylvania: Listed
- Canada NDSL: Listed

**Dimethyl siloxane, hydroxy-terminated:**
- TSCA Inventory Status: Listed
- Canada DSL: Listed
- Canadian Regulations: WHMIS Hazard Class(es): D2B

All components of this product are on the Canadian Domestic Substances List.

**SECTION 16 - ADDITIONAL INFORMATION**
HMIS Health Hazard: 1
HMIS Fire Hazard: 1
HMIS Reactivity: 0
HMIS Personal Protection: X
MSDS Revision Date: June 30, 2012
MSDS Author: Actio Corporation

Disclaimer: This Health and Safety Information is correct to the best of our knowledge and belief at the date of its publication but we cannot accept liability for any loss, injury or damage which may result from its use. The information given in the Data Sheet is designed only as a guidance for safe handling, storage and the use of the substance. It is not a specification nor does it guarantee any specific properties. All chemicals should be handled only by competent personnel, within a controlled environment.