**MATERIAL SAFETY DATA SHEET**

**DATE PRINTED:** 7/23/2002

**MANUFACTURER/NEMA:** KLEEN-STRIP

**ADDRESS:** 2100 Channel Ave. Memphis, TN 38119

**EMERGENCY TELEPHONE #1:** 901-775-8100

**EMERGENCY CONTACT:** W.M. Barr Technical Services

**INVENTORY ITEM #**

**PRODUCT NAME:** KLEEN-STRIP STRIP-X STRIPPER

**REVISION DATE:** 3/05/2002

**INVENTOR SIZE:** 105.3

### SUBSTANCE DESCRIPTION

<table>
<thead>
<tr>
<th>PERCENT</th>
<th>CAS#</th>
<th>NTP GCIH OSHA IARC</th>
</tr>
</thead>
<tbody>
<tr>
<td>METHYLENE CHLORIDE</td>
<td>15-78</td>
<td>75-09-2</td>
</tr>
<tr>
<td>TOLUENE</td>
<td>10-88</td>
<td>106-28-3</td>
</tr>
<tr>
<td>NONYLPHENOXYPOLYPHENOXYETHANOL</td>
<td>3-5</td>
<td>990-16-9</td>
</tr>
<tr>
<td>ACETONE</td>
<td>53-48-0</td>
<td>67-64-1</td>
</tr>
</tbody>
</table>

**AMMONIA**

**AMMONIA INGREDIENT CONSISTS OF THE FOLLOWING**: 23-26 7664-41-7 N N N N

### SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

**SUBSTANCE DESCRIPTION**

<table>
<thead>
<tr>
<th>REG.ACGIH U/M</th>
<th>TWA</th>
<th>STEL</th>
<th>CEIL</th>
<th>SKIN</th>
<th>PEL</th>
</tr>
</thead>
</table>

**OSHA PEAK CONCENTRATION FOR BHR SHIFT:** 2000 PPM FOR 5 WKS. IN ANY 2 WKS. EXPLODERS ARE REQUIRED TO CONDUCT INITIAL MONITORING OF AIRBORNE METHYLENE CHLORIDE (VOC) CONCENTRATIONS AND TO CONDUCT PERIODIC (WEEKLY) EXPOSURE MONITORING FOR ALL TASKS WHERE EXPOSURES ARE ABOVE THE ACTION LEVEL (25.0 PPM: 8-HR. TWA) OR AT THE ABILITY TO PERFORM THE TASKS RPM ANTIMACROMUS (2B): HCDH-SUSPECTED CANCER (IC); NIOSH-DEFINED CANCER (IC). CANCER (IC) HAS CAUSED CANCER IN CERTAIN LABORATORY ANIMAL TESTS. RISK TO HUMAN HEALTH DEPENDS ON LEVEL AND DURATION OF EXPOSURE.

**TOLUENE**

| OSHA PM | 150.00 | N/E | N/E | N/E | T | N/E |

**OSHA PEAK CONCENTRATION FOR BHR SHIFT:** 500 PPM FOR 10 MINUTES.

**NONYLPHENOXYPOLYPHENOXYETHANOL**

| OSHA PM | 250.00 | N/E | N/E | N/E | N/E | N/E |

### SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

**EXPOSURE LIMITS/REGULATORY INFORMATION**

**METHYLENE CHLORIDE**

| ACODH PM | 25.00 | OSHA PM | 25.00 | 1000.00 | N/E | N/E |

**TOLUENE**

| ACODH PM | 250.00 | OSHA PM | 250.00 | N/E | N/E | T | N/E |

**OSHA PEAK CONCENTRATION FOR BHR SHIFT:** 200 PPM FOR 10 MINUTES.
ACETONE

ACIDIN PPM 500.00 750.00 N/E N N N
OSHA PPM N/E N/E N/E N 1000.00

AMMONIUM HYDROXIDE SOLUTION

ACIDIN PPM N/E N/E N/E N N
OSHA PPM N/E N/E N/E N N

AMMONIA

ACIDIN PPM 25.00 35.00 N/E N N N
OSHA PPM N/E N/E N/E N 50.00

ADDITIONAL REGULATORY INFO

The time weighted average (TWA) value described herein is a threshold limit value (TLV) as established by ACIDIN. The permissible exposure limit (PEL) is a value established by OSHA.

CALIFORNIA (PROPOSITION 65)

WARNING: Using this product will expose you to Methylene Chloride, which is known to cause cancer; and Isopropyl, which is known to cause birth defects or other reproductive harm.

SEC. 313 SUPPLIER NOTIFICATION

The following information must be included in all MSDS that are copied and distributed for this material.

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-Know Act of 1986 (EPCRA 313):

SUBSTANCE DESCRIPTION PERCENT BY WEIGHT
METHYLENE CHLORIDE 45 75-09-2
METHANOL 29 67-56-1
TOLUENE 29 108-88-3
ACETONE 29 67-60-1

CLEAN AIR ACT

This formula contains no known ozone depleting chemicals.

Hazard Communication Standard

This document is prepared in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200). This MSDS contains thirteen (13) sections.

The following effects and/or symptoms are not expected to be experienced by persons who use this product properly and according to all instructions, precautions, and warnings; however, should the product user experience any questionable effects or symptoms, the product user should immediately seek medical attention.

SECTION 4. HAZARDS IDENTIFICATION

STABILIZATION ACUTE EXPOSURE EFFECTS

Vomiting; convulsions; headache; watering of eyes; irritation to mucous membranes; difficulty breathing; loss of coordination; bronchitis; bronchospasm; chemical pneumonitis; irritation of the respiratory tract; weakness; dizziness; numbness; weakness in fingers, arms and legs; loss of appetite; eye irritation; spotted vision; fatigue; dilatation of pupils; light-headedness; confusion; anesthesia; brain damage; pulmonary edema; increase in carbon dioxide levels, which may cause stress to the cardiovascular system; are, leg, and wrist pains; depression of the central nervous system; vomiting; visual disturbances; dizziness and intoxication; sleepiness; cough and dyspnea; cold, clammy extremities; diarrhea; and hallucinations. Severe overexposure may cause irregular or rapid heartbeat; convulsions;
unconsciousness; coma; and death. Intentional misuse of product by deliberately concentrating and inhaling can be harmful or fatal. Elevated carbon monoxide skin levels can be additive to the increase caused by seeking and other carbon monoxide sources.

SKIN CONTACT ACUTE EXPOSURE EFFECTS

This product is a skin irritant. Product may be absorbed through the skin. May cause irritation; drying and cracking of skin; burning; redness; and blisters; defatting; dermatitis; and tissue destruction. Reaperns and mist may irritate moist skin. May cause or increase severity of symptoms listed under inhalation.

EYE CONTACT ACUTE EXPOSURE EFFECTS

This material is an eye irritant. May cause irritation and pain; burns; conjunctivitis; stinging; swelling; redness; tearing; blurred vision; corneal ulcerations of the eye; temporary normal injury; and blindness. Vapors or mist may irritate eyes.

INGESTION ACUTE EXPOSURE EFFECTS

POISON. CANNOT BE MADE NON-POISONOUS. May be fatal or cause blindness if swallowed. May cause irritation or burning sensation in mouth, throat and stomach; dizziness; headache; nausea; loss of appetite; drooling; abdominal pain; fatigue; collapse; blindness; diarrhea; vomiting; loss of coordination; slurred; gastrointestinal irritation; depression of the central nervous system; numbness; liver, kidney and heart damage; unconsciousness; coma and death. May produce symptoms listed under inhalation. Liquid aspirated into the lungs may cause chemical pneumonia and systemic effects.

CHRONIC EXPOSURE EFFECTS

Reports have associated repeated and prolonged overexposure to patients with neurological and other physiological damage. Prolonged or ruptured contact may cause dermatitis. Prolonged skin contact may result in absorption of a harmful amount of this material. May cause cholinergic, gastritis disturbances; insomnia; dizziness; headache; nausea; skin irritation; weakness; fatigue; blood disorders; permanent central nervous system changes; numbness in hands and feet; brain damage; decreased response to visual and auditory stimuli; some loss of memory; bradycardia; visual impairment or blindness; hallucinations; pancreatic damage; kidney damage; liver damage; heart palpitations; and death. May cause additional symptoms listed under inhalation.

MEDICAL CONDITIONS AGGRAVATED

Diseases of the blood; skin; eyes; liver; kidneys; lungs; pulmonary system; cardiovascular system and respiratory system; acidosis and respiratory disorders of the heart.

**SECTION 5. FIRST AID MEASURES**

**INHALATION**

If user experiences breathing difficulty, move to air free of vapors. Administer oxygen or artificial respiration until medical assistance can be rendered.

**SKIN CONTACT**

Wash with soap and large quantities of water and seek medical attention if irritation from contact persists.

**EYE CONTACT**

Flush with large quantities of water for at least 35 minutes and seek immediate medical attention.
INDICATION

Call your poison control center, hospital, emergency room or physician immediately for instructions to induce vomiting.

NOTE TO PHYSICIAN

POISON: THIS PRODUCT CONTAINS METHANOL AND METHYlene CHLORIDE. Methanol is metabolized to formaldehyde and formic acid. These metabolites may cause metabolic acidosis, visual disturbances, and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 36 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used as an antidote. Methanol is effectively removed by hemodialysis. Adrenalin should never be given to a person overexposed to methylene chloride. This formula is registered with POISONNET. Call your local poison control center for further information.

SECTION 5. FIRE FIGHTING MEASURES

FLASH POINT

25.00 F

9.88 C

LOWER EXPLOSION LIMIT

1.09

GENERAL COMMENTS

OSHA FLAMMABILITY: Class Ib

EXTINGUISHING METHOD

Use carbon dioxide, dry powder, or foam.

FIRE FIGHTING PROCEEDURES

Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

FIRE AND EXPLOSION HAZARDS

DISPERSE FLAMMABLE. KEEP AWAY FROM HEAT, SPARKS, FLAME AND ALL OTHER SOURCES OF IGNITION. Do not smoke. Extinguish all flames and pilot lights, and turn off stovetops, heaters, electric motors and all other sources of ignition during use and until all vapors are gone. Beware of static electricity that may be generated by synthetic clothing and other sources. Contact of liquid or vapor with flame or hot surfaces will produce toxic gases and a corrosive residue that will cause deterioration of metal.
CLEAN-UP
Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area. SMALL SPILLS: take up liquid with sand, earth or other nonabsorbable absorbent material and place in a plastic container where applicable. LARGE SPILLS: dike far ahead of spill for later disposal.

For transportation related spills contact Chemtrec at 1-800-424-9300 for emergency assistance.

WHITE DISPOSAL
Dispose in accordance with applicable local, state and federal regulations.

SECTION 7. ACCIDENTAL RELEASE MEASURES

STORAGE
Store in a cool, dry place. Exposure to high temperatures or prolonged exposure to sun may cause can to leak or swell. Once opened, remover should be used within six months or discarded to avoid can deterioration. Do not store near flames or at elevated temperatures.

HANDLING
Read carefully all caution and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

SECTION 8. HANDLING AND STORAGE

TRANSPORTATION
For DOT information, contact W.M. Barr Technical Services Department.

SECTION 9. TRANSPORT INFORMATION

VENTILATION PROTECTION
Use only with adequate ventilation to prevent build-up of vapors. Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea, or eye-watering - STOP - ventilation is inadequate. Leave area immediately.

RESPIRATORY PROTECTION
For UGC controlled work place and other regular users - Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLVs. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved self-contained breathing apparatus for chlorinated solvent vapors. A dust mask does not provide protection against vapors.

SKIN PROTECTION
Wear impermeable gloves. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product.

EYE PROTECTION
Safety glasses, chemical goggles or face shields are recommended to guard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.
OTHER PROTECTION

Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure. A source of clean water should be available in the work area for flushing eyes and skin. Do not eat, drink, or smoke in the work area. Wash hands thoroughly after use. Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

SECTION 11. PHYSICAL AND CHEMICAL PROPERTIES

VOLATILE %
97.00 by weight

BOILING POINT
GI 104.00 F 40.00 C BOILING RANGE: 104 F - 232 F

VAPOR DENSITY (Air = 1.0)
Heavier than air

VAPORIZATION RATE
Slower than ether

BULK DENSITY
9.001 lbs/gal at 70 F

PH FACTOR
N/E

PHOTOCHEMICALLY REACTIVE
No

MAX V.O.C.
500 grams per liter (excluding exempt solvents and water)

MAX VAPOR PRESSURE
(of the V.O.C.) bleed Hg at 20 degrees C.

SECTION 12. STABILITY AND REACTIVITY

INCOMPATIBILITIES
Incompatible with strong oxidizing agents; strong caustics; acids; strong alkalies; oxygen; chemically active metals such as aluminum or magnesium powders; sulfuric acid; halogens; sodium; potassium; and nitric acid.

DECOMPOSITION
Thermal decomposition may produce hydrogen chloride; chlorine gas; small quantities of phosphorus; carbon monoxide; carbon dioxide; formaldehyde; unidentified organic compounds in black smoke; and oxides of nitrogen.

POLYMERIZATION
Will not occur.

STABILITY
Stable.