1 PRODUCT AND COMPANY IDENTIFICATION

Manufacturer
THE PENRAY COMPANIES INC.
440 Denniston Ct.
Wheeling, IL 60090

Contact: EH&S Manager
Telephone Number: (847) 459-5000
FAX Number: (847) 459-5043
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Product Name: PENRAY CHLORINATED BRAKE CLEANER - 4820
Revision Date: 05/08/2008
MSDS Number: 4820
Common Name: AEROSOL CLEANER CONTAINING CHLORINATED SOLVENTS
Chemical Formula: F450

EMERGENCY PHONE NUMBER: (800) 752-7869

NFPA 704 M RATING:
HEALTH: 2  FIRE: 0  REACTIVITY: 0  SPECIAL:
0=INSIGNIFICANT  1=SLIGHT  2=MODERATE  3=HIGH  4=EXTREME

2 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Ingredients (% by Weight)

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>Percent Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERCHOLETHYLENE</td>
<td>127-18-4</td>
<td>89% - 99%</td>
</tr>
<tr>
<td>CARBON DIOXIDE</td>
<td>124-38-9</td>
<td>01% - 05%</td>
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</tbody>
</table>
### HAZARDS IDENTIFICATION

**Route of Entry:** Skin absorption and inhalation  
**Target Organs:** Lungs, kidneys, liver and nervous system.  
**Inhalation:** Respiratory irritation and dizziness  
**Skin Contact:** Prolonged contact with skin can cause irritation. Repeated skin contact may cause persistent irritation and dermatitis  
**Eye Contact:** Will cause irritation upon contact.  
**Ingestion:** Product may cause discomfort, nausea, vomiting and diarrhea.

**CARCINOGENICITY:** Product is considered 'probably carcinogenic to humans" by IARC.  
**MEDICAL CONDITIONS:** Pre-existing eye or skin conditions may be aggravated by over-exposure to this product.

### FIRST AID MEASURES

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. Seek medical attention. Inhalation hazard unlikely due to low volatility of product.  
**Skin Contact:** Wash area with soap and water. seek medical attention if irritation persists  
**Eye Contact:** Immediately flush eyes with plenty of water for 15 minutes. Seek medical attention.  
**Ingestion:** DO NOT induce vomiting. Only give CONSCIOUS victim two glasses of water and seek medical attention. NEVER give UNCONSCIOUS anything by mouth.

### FIRE FIGHTING MEASURES

**Flash Point:** N/G  
**EXTINGUISHING MEDIA:** Carbon Dioxide (CO2) Dry Chemical, Foam.  
**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Vapors are heavier than air and can collect in low areas  
**FIRE FIGHTING INSTRUCTIONS:** Containers can build up pressure if exposed to fire. Containers should be cooled with water supply.  
**FIRE FIGHTING EQUIPMENT:** Self- contained breathing apparatus with full face piece operated in positive pressure mode.

### ACCIDENTAL RELEASE MEASURES

**SPILL/LEAK PROCEDURES:** Notify safety personnel, evacuate all unnecessary personnel and provide adequate ventilation. If feasible, and without risk, clean-up personnel should stop leak. All clean up personnel should wear proper personal protective equipment.  
**SMALL SPILLS:** Clean with inert absorbent and place in recovery drums for disposal.  
**LARGE SPILLS:** Dike to prevent further migration of material. DO NOT release into waterways or sewers. Follow applicable federal and state regulations.

### HANDLING AND STORAGE

**Handling Precautions:** Wash thoroughly after handling. Do not get into eyes, on skin or on clothing.. Do not smoke while using this product. Do not use near excessive heat, sparks, or open flame.  
**Storage Requirements:** Store in clean, dry locations away from excessive heat. Store in areas designated for the storage of Level I aerosols according to NFPA 30B (Manufacturing and Storage of Aerosol Products.)
8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Eye wash station and safety shower.
Strong general ventilation or local exhaust.

Protective Equipment: EYE: Chemical splash goggles with indirect or no ventilation.
SKIN: Chemical resistant gloves, such as nitrile.
RESPIRATORY: Organic vapor air purifying respirator if vapors are a nuisance or if the concentrations are above PEL or TLV.

Exposure Guidelines/Other: Never eat, drink or smoke in work area.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colorless liquid
Physical State: liquid
Odor: Chlorinated Solvent Odor
pH: 
Vapor Pressure: BT 31.0 - 60.0 mmHg
Vapor Density: >1.0

Boiling Point: 189-250 F
Freezing/Melting Pt.: 
Solubility: Not soluble in water
Spec Grav./Density: BT 1.456-1.610

10 STABILITY AND REACTIVITY

Stability: Material is stable.
Conditions to avoid: Excessive heat and open flame.
Materials to avoid (incompatibility): Strong oxidizing agents.
Hazardous Decomposition products: Carbon Monoxide and Carbon Dioxide
Hazardous Polymerization: Cannot occur.

11 TOXICOLOGICAL INFORMATION

LD50
Perchloroethylene: 10,000 ml/kg (skin)

12 ECOLOGICAL INFORMATION

No data.
13 DISPOSAL CONSIDERATIONS

As a waste, this product in its raw form DOES MEET the criteria of a hazardous waste as defined by RCRA (40 CFR 361). All used and unused product and container should be disposed of in accordance with all applicable federal, state and local regulations. Do not dump in drains, sewers, on the ground or into any body of water.

14 TRANSPORT INFORMATION

DOMESTIC:
CONSUMER COMMODITY ORM-D

EXPORT:
UN 1950, AEROSOL DISPENSERS, CLASS 2.1, LIMITED QUANTITY

15 REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS
OSHA: Considered to be a hazardous material as defined by 29CFR1910.1200

EPA SARA TITLE III
Section 311-312 (40CFR370): If stored in excess of the threshold quantities, this product should be reported as a(n):
IMMEDIATE (acute) HEALTH HAZARD
DELAYED (chronic) HEALTH HAZARD
SUDDEN RELEASE HAZARD

Section 313(40CFR372) This product contains ingredients which are subject to the reporting requirements of SARA 313:
Perchloroethylene 127-18-4 91.800%

16 OTHER INFORMATION

CALIFORNIA PROPOSITION 65: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.
Tetrachloroethylene

Notes:
NG= NOT GIVEN
BT= BETWEEN
<= LESS THAN
>= GREATER THAN

USERS RESPONSIBILITY: This MSDS provides environmental, health and safety information. This product is to be used in applications consistent with our product literature and container label. Individuals handling this product should be informed of the recommended safety precautions and have access to this MSDS. Please contact your local sales representative or our EH&S Department for further information.

END OF MSDS

END OF MSDS DOCUMENT