# PENRAY NON-CHLORINATED BRAKE CLEANER
## Safety Data Sheet

**Date of issue:** 02/11/2014  
**Revision date:** 02/11/2014  
**Version:** 1.0

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

- **Product name:** PENRAY NON-CHLORINATED BRAKE CLEANER
- **Product code:** 4620

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Use of the substance/mixture:** Brake and Parts Cleaner

### 1.3. Details of the supplier of the safety data sheet

The Penray Companies, Inc.  
440 Denniston Ct.  
60090 Wheeling  
T (800) 373-6729  
nhto@penray.com

### 1.4. Emergency telephone number

- **Emergency number:** (800) 373-6729  
  CHEMTREC (800) 424-9300  
  CHEMTREC International +1 (703) 527-3887 24 hr

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**GHS-US classification**

- Flammable Aerosol 1
- Gases Under Pressure - Compressed Gas
- Skin irritation 2
- Eye irritation 2A
- Reproductive toxicity 2
- Specific target organ toxicity - Single exposure 3
- Specific target organ toxicity - Repeated exposure 2
- Aspiration hazard 1

### 2.2. Label elements

**GHS-US labelling**

- **Hazard pictograms (GHS-US):**
  - GHS02
  - GHS04
  - GHS07
  - GHS08

- **Signal word (GHS-US):** Danger

- **Hazard statements (GHS-US):** Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes skin irritation. Causes serious eye irritation. Suspected of damaging fertility or the unborn child. May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure. May be fatal if swallowed and enters airways.

- **Precautionary statements (GHS-US):** Keep away from heat/sparks/open flames/hot surfaces. -No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Wash hands thoroughly after handling. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. If on skin: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If exposed or concerned: Get medical advice/attention. Protect from sunlight. Do not expose to temperatures exceeding 50 ºC/122 ºF. Store in a well-ventilated place. Store locked up. Dispose of contents and container in accordance with all local, regional, national and international regulations.

### 2.3. Other hazards

No additional information available

### 2.4. Unknown acute toxicity (GHS-US)

22 % of the mixture consists of ingredient(s) of unknown acute toxicity.
PENRAY NON-CHLORINATED BRAKE CLEANER
Safety Data Sheet

SECTION 3: Composition/information on ingredients

3.1. Substance
Not applicable

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>(CAS No) 67-64-1</td>
<td>30 - 60</td>
<td>Flam. Liq. 2, Eye Irrit. 2A, STOT SE 3</td>
</tr>
<tr>
<td>Heptane, branched, cyclic and linear</td>
<td>(CAS No) 426260-76-6</td>
<td>15 - 40</td>
<td>Flam. Liq. 2, Skin Irrit. 2, STOT SE 3</td>
</tr>
<tr>
<td>n-Heptane</td>
<td>(CAS No) 142-82-5</td>
<td>10 - 30</td>
<td>Flam. Liq. 2, Skin Irrit. 2, STOT SE 3</td>
</tr>
<tr>
<td>Xylenes (o-, m-, p- isomers)</td>
<td>(CAS No) 1330-20-7</td>
<td>7 - 13</td>
<td>Flam. Liq. 3, Acute Tox. 4 (Dermal, Inhalation), Skin Irrit. 2</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>(CAS No) 124-38-9</td>
<td>3 - 7</td>
<td>Compressed gas</td>
</tr>
<tr>
<td>Toluene</td>
<td>(CAS No) 108-88-3</td>
<td>1 - 5</td>
<td>Flam. Liq. 2, Acute Tox. 4 (Oral), Repr. 2, STOT SE 3, Asp. Tox. 1</td>
</tr>
</tbody>
</table>

The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER /doctor/physician if you feel unwell.

First-aid measures after skin contact: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.

First-aid measures after eye contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. If irritation persists, get medical attention.

First-aid measures after ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation: Vapours may cause drowsiness and dizziness.

Symptoms/injuries after skin contact: Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Symptoms/injuries after eye contact: Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Symptoms/injuries after ingestion: May be fatal if swallowed and enters airways. This product may be aspirated into the lungs and cause chemical pneumonitis. May cause stomach distress, nausea or vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Treat for surrounding material.

Unsuitable extinguishing media: None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard: Extremely flammable aerosol. Products of combustion may include, and are not limited to: oxides of carbon.

Explosion hazard: Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

5.3. Advice for firefighters

Firefighting instructions: Cool closed containers exposed to fire with water.

Protection during firefighting: Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Vapours may be heavier than air and may travel along the ground to a distant ignition source and flash back.
SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.2. Methods and material for containment and cleaning up

For containment: Eliminate sources of ignition. Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up: Scoop up material and place in a disposal container. Provide ventilation.

6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Keep away from sources of ignition. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid contact with skin and eyes. Do not swallow. Do not breathe gas, fumes, vapour or spray. When using do not eat, drink or smoke. Use only outdoors or in a well-ventilated area.

Hygiene measures: Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Keep locked up and out of reach of children. Do not expose to temperatures exceeding 50°C/ 122°F. Store away from direct sunlight or other heat sources.

Storage area: Store in a well-ventilated place.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Acetone (67-64-1)</th>
<th>USA ACGIH ACGIH TWA (ppm)</th>
<th>500 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>USA ACGIH ACGIH STEL (ppm)</td>
<td>750 ppm</td>
</tr>
<tr>
<td></td>
<td>USA OSHA OSHA PEL (TWA) (mg/m³)</td>
<td>2400 mg/m³</td>
</tr>
<tr>
<td></td>
<td>USA OSHA OSHA PEL (TWA) (ppm)</td>
<td>1000 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>n-Heptane (142-82-5)</th>
<th>USA ACGIH ACGIH TWA (ppm)</th>
<th>400 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>USA ACGIH ACGIH STEL (ppm)</td>
<td>500 ppm</td>
</tr>
<tr>
<td></td>
<td>USA OSHA OSHA PEL (TWA) (mg/m³)</td>
<td>2000 mg/m³</td>
</tr>
<tr>
<td></td>
<td>USA OSHA OSHA PEL (TWA) (ppm)</td>
<td>500 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Xylenes (o-, m-, p- isomers) (1330-20-7)</th>
<th>USA ACGIH ACGIH TWA (ppm)</th>
<th>100 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>USA ACGIH ACGIH STEL (ppm)</td>
<td>150 ppm</td>
</tr>
<tr>
<td></td>
<td>USA OSHA OSHA PEL (TWA) (mg/m³)</td>
<td>435 mg/m³</td>
</tr>
<tr>
<td></td>
<td>USA OSHA OSHA PEL (TWA) (ppm)</td>
<td>100 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Carbon dioxide (124-38-9)</th>
<th>USA ACGIH ACGIH TWA (ppm)</th>
<th>5000 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>USA ACGIH ACGIH STEL (ppm)</td>
<td>30000 ppm</td>
</tr>
<tr>
<td></td>
<td>USA OSHA OSHA PEL (TWA) (mg/m³)</td>
<td>9000 mg/m³</td>
</tr>
<tr>
<td></td>
<td>USA OSHA OSHA PEL (TWA) (ppm)</td>
<td>5000 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Toluene (108-88-3)</th>
<th>USA ACGIH ACGIH TWA (ppm)</th>
<th>20 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>USA OSHA OSHA PEL (TWA) (ppm)</td>
<td>200 ppm</td>
</tr>
<tr>
<td></td>
<td>USA OSHA OSHA PEL (STEL) (ppm)</td>
<td>150 ppm</td>
</tr>
</tbody>
</table>
PENRAY NON-CHLORINATED BRAKE CLEANER
Safety Data Sheet

Toluene (108-88-3)

<table>
<thead>
<tr>
<th>USA OSHA</th>
<th>OSHA PEL (Ceiling) (ppm)</th>
<th>300 ppm</th>
</tr>
</thead>
</table>

8.2. Exposure controls

Appropriate engineering controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Personal protective equipment: Avoid all unnecessary exposure.

Hand protection: Chemical-resistant gloves.

Eye protection: Safety glasses or goggles are recommended when using product.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: A NIOSH approved respirator is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Environmental exposure controls: Maintain levels below Community environmental protection thresholds.

Other information: Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Gas/Pressurized Liquid.

Appearance: Clear.

Colour: Colourless.

Odour: Solvent.

Odour threshold: No data available.

pH: No data available.

Relative evaporation rate (butylacetate=1): No data available.

Melting point: No data available.

Freezing point: No data available.

Boiling point: No data available.

Flash point: No data available.

Self ignition temperature: No data available.

Decomposition temperature: No data available.

Flammability (solid, gas): Extremely flammable aerosol.

Vapour pressure: No data available.

Relative vapour density at 20 °C: No data available.

Relative density: No data available.

Solubility: No data available.

Log Pow: No data available.

Log Kow: No data available.

Viscosity, kinematic: No data available.

Viscosity, dynamic: No data available.

Explosive properties: No data available.

Oxidising properties: No data available.

Explosive limits: No data available.

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions. Extremely flammable aerosol. Contents under pressure. Container may explode if heated. Do not puncture. Do not burn.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid


10.5. Incompatible materials

Strong oxidizing agents.
10.6. Hazardous decomposition products
May include, and are not limited to: oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity: Based on available data, the classification criteria are not met.

<table>
<thead>
<tr>
<th>Substance</th>
<th>LD50 oral rat</th>
<th>LD50 dermal rabbit</th>
<th>LC50 inhalation rat (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4620</td>
<td></td>
<td>&gt; 2000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Acetone (67-64-1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td></td>
<td>5800 mg/kg</td>
<td></td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td></td>
<td>50100 mg/m³/8h</td>
<td></td>
</tr>
<tr>
<td>n-Heptane (142-82-5)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td></td>
<td>3000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td></td>
<td>103 g/m³/4h</td>
<td></td>
</tr>
<tr>
<td>Xylenes (o-, m-, p- isomers) (1330-20-7)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td></td>
<td>4300 mg/kg</td>
<td></td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td></td>
<td>&gt; 1700 mg/kg</td>
<td></td>
</tr>
<tr>
<td>ATE (dust,mist)</td>
<td></td>
<td>1.5 mg/l/4h</td>
<td></td>
</tr>
<tr>
<td>Toluene (108-88-3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td></td>
<td>&gt; 5000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>LD50 dermal rat</td>
<td></td>
<td>12124 mg/kg</td>
<td></td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td></td>
<td>8390 mg/kg</td>
<td></td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td></td>
<td>28.1 mg/l/4h</td>
<td></td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Causes skin irritation.
Serious eye damage/irritation: Causes serious eye irritation.
Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.
Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.

Xylenes (o-, m-, p- isomers) (1330-20-7)
IARC group: 3

Toluene (108-88-3)
IARC group: 3

Reproductive toxicity: Suspected of damaging fertility or the unborn child.
Specific target organ toxicity (single exposure): May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure): May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard: May be fatal if swallowed and enters airways.
Symptoms/injuries after inhalation: Vapours may cause drowsiness and dizziness.
Symptoms/injuries after skin contact: Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.
Symptoms/injuries after eye contact: Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Symptoms/injuries after ingestion: May be fatal if swallowed and enters airways. This product may be aspirated into the lungs and cause chemical pneumonitis. May cause stomach distress, nausea or vomiting.

SECTION 12: Ecological information

12.1. Toxicity
Ecology - general: May cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability
4620
Persistence and degradability: Not established.

12.3. Bioaccumulative potential
4620
Bioaccumulative potential: Not established.
PENRAY NON-CHLORINATED BRAKE CLEANER  
Safety Data Sheet  

12.4. Mobility in soil  
No additional information available

12.5. Other adverse effects  
No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods  
Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

Additional information : Flammable vapours may accumulate in the container. Do not incinerate closed containers.

SECTION 14: Transport information

In accordance with DOT:

14.1. UN number
UN-No. UN1950

14.2. UN proper shipping name  
Proper Shipping Name : Aerosols, flammable, (each not exceeding 1 L capacity)

Hazard Classes 2.1

Hazard labels :

14.3. Additional information

Other information : No supplementary information available.

Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. US Federal regulations

Acetone (67-64-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

EPA TSCA Regulatory Flag T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.

Heptane, branched, cyclic and linear (426260-76-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Xylenes (o-, m-, p- isomers) (1330-20-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on SARA Section 313 (Specific toxic chemical listings)

SARA Section 313 - Emission Reporting 1.0 %

n-Heptane (142-62-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

EPA TSCA Regulatory Flag T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.

Toluene (108-86-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on SARA Section 313 (Specific toxic chemical listings)

SARA Section 313 - Emission Reporting 1.0 %

Carbon dioxide (124-38-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. US State regulations

4620()  
State or local regulations This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

<table>
<thead>
<tr>
<th>IARC (I)</th>
<th>International Agency for Research on Cancer.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - Carcinogenic to humans;</td>
<td></td>
</tr>
<tr>
<td>2A - Probably carcinogenic to humans;</td>
<td></td>
</tr>
<tr>
<td>2B - Possibly carcinogenic to humans;</td>
<td></td>
</tr>
<tr>
<td>3 - Not classifiable;</td>
<td></td>
</tr>
<tr>
<td>4 - Probably not carcinogenic to humans.</td>
<td></td>
</tr>
</tbody>
</table>
IARC (I) | International Agency for Research on Cancer.
--- | ---
NTP (N) | National Toxicology Program.

1 - Evidence of Carcinogenicity;
2 - Known Human Carcinogens;
3 - Reasonably anticipated to be Human Carcinogen;
4 - Substances delisted from report on Carcinogens;
5 - Twelfth Report - Items under consideration.

SECTION 16: Other information

<table>
<thead>
<tr>
<th>Indication of changes</th>
<th>None.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other information</td>
<td>None.</td>
</tr>
<tr>
<td>NFPA health hazard</td>
<td>2</td>
</tr>
<tr>
<td>NFPA fire hazard</td>
<td>4</td>
</tr>
<tr>
<td>NFPA reactivity</td>
<td>0</td>
</tr>
</tbody>
</table>

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should therefore be construed as guaranteeing any specific property of the product.