

ASHLAND
SAFETY DATA SHEET

Page: 1
Revision Date: 10/18/2007
Print Date: 1/3/2008
MSDS Number: R0253115
Version: 1.4

**PYROIL® NON-CHLORINATED
BRAKE PARTS CLEANER PY4003**

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE
COMPANY/UNDERTAKING**

| | | |
|--------------------|-------------------------------|-----------------------------------|
| Ashland | Regulatory Information Number | 1-800-325-3751 |
| P.O. Box 2219 | Telephone | 614-790-3333 |
| Columbus, OH 43216 | Emergency telephone | 1-800-ASHLAND (1-800-274-5263) |

| | |
|-------------------------|--|
| Product name | PYROIL® NON-CHLORINATED BRAKE PARTS CLEANER |
| Product code | PY4003 |
| Product Use Description | No data |

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: aerosol

WARNING! EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. MAY AFFECT THE CENTRAL NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. MAY BE HARMFUL IF INHALED. ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. MAY BE HARMFUL IF INHALED OR ABSORBED THROUGH SKIN. MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN, CAUSE IRRITATION AND BURNS.

Potential Health Effects

Routes of exposure

Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

Eye contact

Can cause eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes.

Skin contact

Can cause skin irritation. Symptoms may include redness and burning of skin, and other skin damage. Prolonged or repeated contact may dry the skin. Symptoms may

ASHLAND
SAFETY DATA SHEET

Page: 2
Revision Date: 10/18/2007
Print Date: 1/3/2008
MSDS Number: R0253115
Version: 1.4

**PYROIL® NON-CHLORINATED
BRAKE PARTS CLEANER PY4003**

include redness, burning, and drying and cracking of skin, skin burns, and other skin damage.

Ingestion

This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

Inhalation

Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

Aggravated Medical Condition

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin, lung (for example, asthma-like conditions), liver, kidney, central nervous system, pancreas, heart, blood-forming system, auditory system, Exposure to this material may aggravate any preexisting condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease or anemias. Individuals with preexisting heart disorders maybe more susceptible to arrhythmias (irregular heartbeats) if exposed to high concentrations of this material., Upper respiratory tract

Symptoms

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: metallic taste, stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), runny nose, central nervous system excitation (giddiness, liveliness, light-headed feeling) followed by central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness) and other central nervous system effects, Weakness, temporary changes in mood and behavior, loss of appetite, muscle cramps, pain in the abdomen and lower back, Lack of coordination, confusion, irregular heartbeats, Blurred vision, Shortness of breath, cyanosis (causes blue coloring of the skin and nails from lack of oxygen), high blood sugar, narcosis (dazed or sluggish feeling), visual impairment (including blindness), coma

Target Organs

This material (or a component) shortens the time of onset or worsens the liver and kidney damage induced by other chemicals., Exposure to lethal concentrations of methanol has been shown to cause damage to organs including liver, kidneys, pancreas, heart, lungs and brain. Although this rarely occurs, survivors of severe intoxication may suffer from permanent neurological damage., Prolonged intentional toluene abuse may lead to damage to many organ systems having effects on: central and peripheral nervous

ASHLAND

SAFETY DATA SHEET

Page: 3
Revision Date: 10/18/2007
Print Date: 1/3/2008
MSDS Number: R0253115
Version: 1.4

PYROIL® NON-CHLORINATED BRAKE PARTS CLEANER PY4003

systems, vision, hearing, liver, kidneys, heart and blood. Such abuse has been associated with brain damage characterized by disturbances in gait, personality changes and loss of memory. Comparable central nervous system effects have not been shown to result from occupational exposure to toluene., Prolonged intentional toluene abuse may lead to hearing loss progressing to deafness. In addition, while noise is known to cause hearing loss in humans, it has been suggested that workers exposed to organic solvents, including toluene, along with noise may suffer greater hearing loss than would be expected from exposure to noise alone., Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals:, mild, reversible kidney effects, blood abnormalities, effects on hearing, liver abnormalities, respiratory tract damage (nose, throat, and airways), central nervous system damage, Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans:, visual impairment, kidney damage

Carcinogenicity

This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA). This material is not expected to cause cancer in humans since it did not cause cancer in laboratory animals.

Reproductive hazard

This material (or a component) has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain., Toluene may be harmful to the human fetus based on positive test results with laboratory animals. Case studies show that prolonged intentional abuse of toluene during pregnancy can cause birth defects in humans., Methanol has caused birth defects in laboratory animals, but only when inhaled at extremely high vapor concentrations. The relevance of this finding to humans is uncertain.

Other information

No data

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS-No. | Concentration |
|------------|----------|---------------|
| n-HEPTANE | 142-82-5 | >=40-<50% |
| METHANOL | 67-56-1 | >=30-<40% |
| TOLUENE | 108-88-3 | >=10-<15% |
| ACETONE | 67-64-1 | >=5-<10% |

PYROIL® NON-CHLORINATED
BRAKE PARTS CLEANER PY4003

4. FIRST AID MEASURES

Eyes

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

Skin

Remove contaminated clothing. Flush exposed area with large amounts of water. If skin is damaged, seek immediate medical attention. If skin is not damaged and symptoms persist, seek medical attention. Launder clothing before reuse.

Ingestion

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Notes to physician

Hazards: Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material. This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity (See Section 2 - Swallowing) when deciding whether to induce vomiting. This product contains methanol which can cause intoxication and central nervous system depression. Methanol is metabolized to formic acid and formaldehyde. These metabolites can cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used to prevent methanol metabolism. Ethanol administration is indicated in symptomatic patients or at blood methanol concentrations above 20 ug/dl. Methanol is effectively removed by hemodialysis. This material (or a component) has produced hyperglycemia and ketosis following substantial ingestion.

Treatment: No information available.

PYROIL® NON-CHLORINATED
BRAKE PARTS CLEANER PY4003

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Carbon dioxide (CO₂), Dry chemical

Hazardous combustion products

carbon dioxide and carbon monoxide, hydrocarbons

Precautions for fire-fighting

Material is volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, flames, sparks, heaters, smoking, electric motors, static discharge or other ignition sources at locations near the material handling point. Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). Water may be ineffective for extinguishment unless used under favorable conditions by experienced fire fighters. Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

For personal protection see section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions

Prevent spreading over a wide area (e.g. by containment or oil barriers). Do not let product enter drains. Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained.

Methods for cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Other information

Comply with all applicable federal, state, and local regulations. Suppress (knock down) gases/vapours/mists with a water spray jet.

PYROIL® NON-CHLORINATED
BRAKE PARTS CLEANER PY4003

7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Static ignition hazard can result from handling and use. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Special precautions may be necessary to dissipate static electricity for non-conductive containers. Use proper bonding and grounding during product transfer as described in National Fire Protection Association document NFPA 77.

Storage

Store in a cool, dry, ventilated area, away from incompatible substances.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

| n-HEPTANE | | 142-82-5 |
|------------------|---|-----------------|
| ACGIH | time weighted average | 400 ppm |
| ACGIH | Short term exposure limit | 500 ppm |
| NIOSH | Recommended exposure limit (REL): | 85 ppm |
| NIOSH | Recommended exposure limit (REL): | 350 mg/m3 |
| NIOSH | Ceiling Limit Value and Time Period (if specified): | 440 ppm |
| NIOSH | Ceiling Limit Value and Time Period (if specified): | 1,800 mg/m3 |
| OSHA Z1 | Permissible exposure limit | 500 ppm |
| OSHA Z1 | Permissible exposure limit | 2,000 mg/m3 |
| OSHA Z1A | time weighted average | 400 ppm |
| OSHA Z1A | time weighted average | 1,600 mg/m3 |
| OSHA Z1A | Short term exposure limit | 500 ppm |
| OSHA Z1A | Short term exposure limit | 2,000 mg/m3 |
| US CA OEL | Time Weighted Average (TWA) | 400 ppm |
| | Permissible Exposure Limit (PEL): | |
| US CA OEL | Time Weighted Average (TWA) | 1,600 mg/m3 |
| | Permissible Exposure Limit (PEL): | |
| US CA OEL | Short term exposure limit | 500 ppm |
| US CA OEL | Short term exposure limit | 2,000 mg/m3 |
| ACGIH | time weighted average | 400 ppm |
| ACGIH | Short term exposure limit | 500 ppm |
| METHANOL | | 67-56-1 |

ASHLAND
SAFETY DATA SHEET

Page: 7
Revision Date: 10/18/2007
Print Date: 1/3/2008
MSDS Number: R0253115
Version: 1.4

**PYROIL® NON-CHLORINATED
BRAKE PARTS CLEANER PY4003**

| | | |
|---------|--------------------------------------|-----------|
| ACGIH | time weighted average | 200 ppm |
| ACGIH | Short term exposure limit | 250 ppm |
| NIOSH | Recommended exposure limit (REL): | 200 ppm |
| NIOSH | Recommended exposure limit (REL): | 260 mg/m3 |
| NIOSH | Short term exposure limit | 250 ppm |
| NIOSH | Short term exposure limit | 325 mg/m3 |
| OSHA Z1 | Permissible exposure limit | 200 ppm |
| OSHA Z1 | Permissible exposure limit | 260 mg/m3 |

TOLUENE 108-88-3

| | | |
|---------|--------------------------------------|-----------|
| ACGIH | time weighted average | 20 ppm |
| NIOSH | Recommended exposure limit (REL): | 100 ppm |
| NIOSH | Recommended exposure limit (REL): | 375 mg/m3 |
| NIOSH | Short term exposure limit | 150 ppm |
| NIOSH | Short term exposure limit | 560 mg/m3 |
| OSHA Z2 | time weighted average | 200 ppm |
| OSHA Z2 | Ceiling Limit Value: | 300 ppm |
| OSHA Z2 | Maximum concentration: | 500 ppm |

ACETONE 67-64-1

| | | |
|---------|--------------------------------------|-------------|
| ACGIH | time weighted average | 500 ppm |
| ACGIH | Short term exposure limit | 750 ppm |
| NIOSH | Recommended exposure limit (REL): | 250 ppm |
| NIOSH | Recommended exposure limit (REL): | 590 mg/m3 |
| OSHA Z1 | Permissible exposure limit | 1,000 ppm |
| OSHA Z1 | Permissible exposure limit | 2,400 mg/m3 |

General advice

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Exposure controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Eye protection

ASHLAND

SAFETY DATA SHEET

Page: 8
Revision Date: 10/18/2007
Print Date: 1/3/2008
MSDS Number: R0253115
Version: 1.4

PYROIL® NON-CHLORINATED
BRAKE PARTS CLEANER PY4003

Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.

Skin and body protection

Wear normal work clothing including long pants, long-sleeved shirts and foot covering to prevent direct contact of the product with the skin. Launder clothing before reuse. If skin irritation develops, contact your facility health and safety professional or your local safety equipment supplier to determine the proper personal protective equipment for your use.

Respiratory protection

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--|--|
| Physical state | aerosol |
| Form | No data |
| Colour | No data |
| Odour | No data |
| Boiling point/boilingrange | No data |
| pH | No data |
| Flash point | 39.9 °F / 4.4 °C |
| Evaporation rate | No data |
| Explosion limits | No data |
| Vapour pressure | No data |
| Vapour density | No data |
| Density | 0.8057 g/cm ³ @ 60.01 °F / 15.56 °C |
| | No data |
| Solubility | No data |
| Partition coefficient: n-octanol/water | No data |
| Autoignition temperature | No data |

PYROIL® NON-CHLORINATED
BRAKE PARTS CLEANER PY4003

10. STABILITY AND REACTIVITY

Stability

Stable.

Conditions to avoid

Avoid heat, open flame, and prolonged storage at elevated temperatures.

Incompatible products

acids, alkalis, hypochlorites, peroxides, reducing agents, sodium, strong bases,
Zinc, strong oxidizing agents

Hazardous decomposition products

carbon dioxide and carbon monoxide, hydrocarbons

Hazardous reactions

Product will not undergo hazardous polymerization.

Thermal decomposition

No data

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity

| | |
|-----------|--------------------------------|
| n-HEPTANE | LD 50 Rat: 15,000 mg/kg |
| METHANOL | LD 50 Rat: 5,045 mg/kg |
| TOLUENE | LD 50 Rat: 2,600 - 7,500 mg/kg |
| ACETONE | LD 50 Rat: 5,800 mg/kg |

Acute inhalation toxicity

| | |
|-----------|---------------------------------------|
| n-HEPTANE | LC 50 Rat: 103 g/m ³ , 4 h |
| METHANOL | LC 50 Rat: 64000 ppm, 4 h |

ASHLAND
SAFETY DATA SHEET

Page: 10
Revision Date: 10/18/2007
Print Date: 1/3/2008
MSDS Number: R0253115
Version: 1.4

**PYROIL® NON-CHLORINATED
BRAKE PARTS CLEANER PY4003**

TOLUENE LC 50 Rat: 8000 ppm, 4 h

ACETONE LC 50 Rat: 16000 ppm, 4 h

Acute dermal toxicity

n-HEPTANE LD 50 Rabbit: 2,000 mg/kg

METHANOL LD 50 Rabbit: 12,800 mg/kg

TOLUENE LD 50 Rabbit: 12,124 mg/kg

ACETONE LD 50 Rabbit: 20,000 mg/kg

12. ECOLOGICAL INFORMATION

Aquatic toxicity

Acute and Prolonged Toxicity to Fish

No data

Acute Toxicity to Aquatic Invertebrates

No data

Environmental fate and pathways

No data

13. DISPOSAL CONSIDERATIONS

Waste disposal methods Dispose of in accordance with all applicable local, state and federal regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution's Environmental Services Group at 800-637-7922.

14. TRANSPORT INFORMATION

ASHLAND
SAFETY DATA SHEET

Page: 11
Revision Date: 10/18/2007
Print Date: 1/3/2008
MSDS Number: R0253115
Version: 1.4

PYROIL® NON-CHLORINATED
BRAKE PARTS CLEANER PY4003

IMDG:
UN1950, AEROSOLS 2.1,
IATA_P:
UN1950, Aerosols, flammable 2.1,
IATA_C:
UN1950, Aerosols, flammable 2.1,
CFR_ROAD:
UN1950, Aerosols 2.1,
CFR_RAIL:
UN1950, Aerosols 2.1,
CFR_INWTR:
UN1950, Aerosols 2.1,
IMDG_INWTR:
UN1950, AEROSOLS 2.1,
IMDG_ROAD:
UN1950, AEROSOLS 2.1,
IMDG_RAIL:
UN1950, AEROSOLS 2.1,

Dangerous goods descriptions (if indicated above) may not reflect package size, quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

15. REGULATORY INFORMATION

California Prop. 65

WARNING! This product contains a chemical known in the State of California to cause cancer.

BENZENE

WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

TOLUENE

BENZENE

SARA Hazard Classification Fire Hazard
 Acute Health Hazard

ASHLAND
SAFETY DATA SHEET

Page: 12
Revision Date: 10/18/2007
Print Date: 1/3/2008
MSDS Number: R0253115
Version: 1.4

**PYROIL® NON-CHLORINATED
BRAKE PARTS CLEANER PY4003**

SARA 313 Component(s)

| | | |
|----------|----------|----------|
| METHANOL | 67-56-1 | 36.681% |
| TOLUENE | 108-88-3 | 11.3994% |

| | Health | Flammability | Reactivity | Other |
|-------------|---------------|---------------------|-------------------|--------------|
| HMIS | | | | No data |
| NFPA | | | | No data |

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).