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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity
Product Name: PYROIL PENETRATING OIL 12/12 OZ
General or Generic ID: LUBRICANT

Company
The Valvoline Company
P.O. Box 14000
Lexington, KY 40512

Telephone Numbers
Emergency: 1-800-274-5263
Information: 1-859-357-7206

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	% (by weight)
KEROSENE	8008-20-6	74.0- 84.0
SOLVENT-DEWAXED HEAVY PARAFFINIC PETROLEUM D	64742-65-0	6.0- 16.0
CARBON DIOXIDE	124-38-9	1.0- 11.0
ETHYLENE GLYCOL MONOBUTYL ETHER	111-76-2	1.0- 11.0

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3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye
Can cause eye irritation.

Skin
Can cause skin irritation. Prolonged or repeated contact may dry and crack the skin. Additional symptoms of skin contact may include: skin blistering, acne, Passage of this material through the skin may be harmful.

Swallowing
Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

Inhalation
It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing this material may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits (See Section 8).

Symptoms of Exposure
Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways), lung irritation, central

nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), loss of coordination, confusion, difficult breathing, irregular heartbeat, blood in the urine, blood abnormalities (breakage of red blood cells), narcosis (dazed or sluggish feeling), kidney damage, liver damage, convulsions, coma, and death.

Target Organ Effects

Acute lethal exposure to ethylene glycol monobutyl ether in animal studies has resulted in congestion of organs including kidney, spleen, and lung. Exposure to this material (or a component) has been found to cause kidney damage in male rats. The mechanism by which this toxicity occurs is specific to the male rat and the kidney effects are not expected to occur in humans. Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals, and may aggravate preexisting disorders of these organs in humans: blood abnormalities.

Developmental Information

No data

Cancer Information

This material is not listed as a carcinogen by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration. This product (or a component) is a petroleum-derived material. Similar materials and certain compounds occurring naturally in petroleum oils have been shown to cause skin cancer in laboratory animals following repeated exposure without washing or removal.

Other Health Effects

No data

Primary Route(s) of Entry

Inhalation, Skin absorption, Skin contact, Eye contact, Ingestion.

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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

Immediately flush skin with water for at least 15 minutes while removing contaminated clothing and shoes. Seek immediate medical attention. Wash clothing before reuse and discard contaminated shoes. 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.

Swallowing

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, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

Note to Physicians

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 3 - Swallowing) when deciding whether to induce vomiting. Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities. 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, kidneys, blood-forming system, Individuals with pre-existing heart disorders may be more susceptible to arrhythmias (irregular heartbeats) if exposed to high concentrations of this material.

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5. FIRE FIGHTING MEASURES

Flash Point

160.0 F (71.1 C) TCC

Explosive Limit

(for component) Lower .7 Upper 10.6 %

Autoignition Temperature

No data

Hazardous Products of Combustion

May form: carbon dioxide and carbon monoxide, various hydrocarbons.

Fire and Explosion Hazards

Material is highly volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

Extinguishing Media

regular foam, carbon dioxide, dry chemical.

Fire Fighting Instructions

Water may be used to keep fire-exposed containers cool until fire is out. Wear a self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

NFPA Rating
Health - 1, Flammability - 3, Reactivity - 0

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6. ACCIDENTAL RELEASE MEASURES

Small Spill
Eliminate all sources of ignition such as flares, flames (including pilot lights), and electrical sparks. Absorb liquid on vermiculite, floor absorbent or other absorbent material. Persons not wearing proper personal protective equipment should be excluded from area of spill.

Large Spill
Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occured. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Eliminate all ignition sources (flares, flames, including pilot lights,electrical sparks).

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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. Avoid prolonged or repeated contact.

Storage
Under oxidation conditions, peroxides may be formed. If they become concentrated, these peroxides may present an explosion hazard. Do not store near extreme heat, open flame, or sources of ignition.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection
Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

Skin Protection
Wear resistant gloves (consult your safety equipment supplier). To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

Respiratory Protections
If workplace exposure limit(s) of product or any component is exceeded (See Exposure Guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental

control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (consult your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

Engineering Controls
Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

Exposure Guidelines
Component

KEROSENE (8008-20-6)
ACGIH TLV 200.000 mg/m3 - TWA ((Skin))

SOLVENT-DEWAXED HEAVY PARAFFINIC PETROLEUM DISTILLATE (64742-65-0)
OSHA VPEL 5.000 mg/m3 - TWA
ACGIH TLV 5.000 mg/m3 - TWA

CARBON DIOXIDE (124-38-9)
OSHA VPEL 10000.000 ppm - TWA
OSHA VPEL 30000.000 ppm - STEL
ACGIH TLV 5000.000 ppm - TWA
ACGIH TLV 30000.000 ppm - STEL

ETHYLENE GLYCOL MONOBUTYL ETHER (111-76-2)
OSHA VPEL 25.000 ppm - TWA ((Skin))
ACGIH TLV 25.000 ppm - TWA ((Skin))

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9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point
(for component) > 300.0 F (148.8 C)

Vapor Pressure
(for component) 5.000 mmHg @ F

Specific Vapor Density
> 1.000 @ AIR=1

Specific Gravity
.830 @ 77.00 F

Liquid Density
6.920 lbs/gal @ 77.00 F
.830 kg/l @ 25.00 C

Percent Volatiles (Including Water)
No data

Evaporation Rate
FASTER THAN ETHYL ETHER

Appearance
No data

State
LIQUID

Physical Form

No data

Color
No data

Odor
No data

pH
Not applicable

Flame Propagation
> 18.000 in

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10. STABILITY AND REACTIVITY

Hazardous Polymerization
Product will not undergo hazardous polymerization.

Hazardous Decomposition
May form: carbon dioxide and carbon monoxide, various hydrocarbons.

Chemical Stability
Stable.

Incompatibility
Avoid contact with: heat, strong acids, strong alkalies, strong oxidizing agents.

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11. TOXICOLOGICAL INFORMATION

No data

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12. ECOLOGICAL INFORMATION

No data

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13. DISPOSAL CONSIDERATION

Waste Management Information
Dispose of in accordance with all applicable local, state and federal regulations.

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14. TRANSPORT INFORMATION

DOT Information - 49 CFR 172.101
DOT Description:
AEROSOLS,2.1,UN 1950

Container/Mode:
CASES/SURFACE - NO EXCEPTIONS

NOS Component:
None

RQ (Reportable Quantity) - 49 CFR 172.101
Not applicable

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15. REGULATORY INFORMATION

US Federal Regulations

CERCLA RQ - 40 CFR 302.4
None

SARA 302 Components - 40 CFR 355 Appendix A
None

Section 311/312 Hazard Class - 40 CFR 370.2
Immediate(X) Delayed(X) Fire(X) Reactive( ) Sudden Release of Pressure( )

SARA 313 Components - 40 CFR 372.65

Section 313 Component(s)	CAS Number
ETHYLENE GLYCOL MONOBUTYL ETHER	111-76-2

International Regulations

Inventory Status
Not determined

State and Local Regulations

California Proposition 65
None

New Jersey RTK Label Information

KEROSENE	8008-20-6
CARBON DIOXIDE	124-38-9
2-BUTOXY ETHANOL	111-76-2

Pennsylvania RTK Label Information

KEROSINE (PETROLEUM)	8008-20-6
CARBON DIOXIDE	124-38-9
ETHANOL, 2-BUTOXY-	111-76-2

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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.

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