1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE 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 number 1-800-ASHLAND (1-800-274-5263)

Product name Pyroil™ Multi-Purpose Silicone Lubricant SILICONE SPRAY
Product code PYSLS10

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: aerosol, aerosol

DANGER! EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. CONTENTS UNDER PRESSURE. MAY AFFECT THE CENTRAL NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. MAY CAUSE EYE IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION.

Potential Health Effects

Exposure routes
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
May cause slight skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, and drying and cracking of skin, skin burns, and other skin damage.

Ingestion
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**
Breathing aerosol and/or mist is possible when material is sprayed. Aerosol and mist may present a greater risk of injury because more material may be present in the air than from vapor alone. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. 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), blood-forming system

**Symptoms**
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), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness) and other central nervous system effects, loss of appetite, Lack of coordination, irregular heartbeat, coma

**Target Organs**
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. This material (or a component) shortens the time of onset or worsens the liver and kidney damage induced by other chemicals. Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: mild, reversible liver effects, mild, reversible kidney effects, blood abnormalities

**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).

**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.
Other information
When heated to temperatures above 150 degrees C in the presence of air, this product can form formaldehyde vapors. Formaldehyde has been identified as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) and the Occupational Safety and Health Administration (OSHA). Formaldehyde is irritating to the eyes, nose, throat, and airways, and can cause an allergic reaction (causes narrowing of the air passages of the lungs, sweating, flushing, hives, rapid heart rate, and lowered blood pressure). In addition, formaldehyde can cause an allergic skin reaction (delayed skin rash which may be followed by blistering, scaling and other skin effects). It is harmful if inhaled, swallowed or absorbed through skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>CAS-No. / Trade Secret No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC</td>
<td>64742-89-8</td>
<td>&gt;=50-&lt;60%</td>
</tr>
<tr>
<td>ACETONE</td>
<td>67-64-1</td>
<td>&gt;=40-&lt;50%</td>
</tr>
<tr>
<td>CARBON DIOXIDE</td>
<td>124-38-9</td>
<td>&gt;=1.5-&lt;5%</td>
</tr>
<tr>
<td>DIMETHYL SILICONES AND SILOXANES</td>
<td>63148-62-9</td>
<td>&gt;=1.5-&lt;5%</td>
</tr>
</tbody>
</table>

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. Wash exposed area with soap and water. If 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 (or a component) has produced hyperglycemia and ketosis following substantial ingestion. 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.

**Treatment:** No information available.

### 5. FIREFIGHTING MEASURES

**Suitable extinguishing media**

Dry chemical, Carbon dioxide (CO2), Water spray

**Hazardous combustion products**

Aldehydes, carbon dioxide and carbon monoxide, formaldehyde, Hydrocarbons, organic compounds, silicon oxides

**Precautions for fire-fighting**

Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). 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 material with water used for cooling purposes.

**NFPA Flammable and Combustible Liquids Classification**

not applicable

### 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
Do not flush into surface water or sanitary sewer system.

Methods for cleaning up
Remove all sources of ignition. Suppress (knock down) gases/vapours/mists with a water spray jet.

Other information
Comply with all applicable federal, state, and local regulations.

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.

Storage
Store in a cool, dry, ventilated area. Maximum recommended storage temperature 50 degrees C (122 degrees F).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

<table>
<thead>
<tr>
<th>SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC</th>
<th>64742-89-8</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA Z1 time weighted average</td>
<td>500 ppm</td>
</tr>
<tr>
<td>ACGIH time weighted average</td>
<td>300 ppm</td>
</tr>
<tr>
<td>OSHA Z1 time weighted average</td>
<td>2,000 mg/m3</td>
</tr>
<tr>
<td>ACGIH time weighted average</td>
<td>1,370 mg/m3</td>
</tr>
</tbody>
</table>

ACETONE 67-64-1

| ACGIH time weighted average | 500 ppm |
| ACGIH Short term exposure limit | 750 ppm |
| NIOSH Recommended exposure limit (REL): | 250 ppm |
SAFETY DATA SHEET

Pyroil™ Multi-Purpose Silicone Lubricant

SILICONE SPRAY

PYSLS10

NIOSH
OSHA Z1
OSHA Z1
ACGIH NIC
ACGIH NIC

Recommended exposure limit (REL):
Permissible exposure limit
time weighted average
Short term exposure limit

590 mg/m³
1,000 ppm
2,400 mg/m³
200 ppm
500 ppm

CARBON DIOXIDE

ACGIH
ACGIH
NIOSH
NIOSH
NIOSH
NIOSH
OSHA Z1
OSHA Z1

Recommended exposure limit (REL):
Recommended exposure limit
Recommended exposure limit
Recommended exposure limit
Permissible exposure limit
Permissible exposure limit

5,000 ppm
5,000 ppm
9,000 mg/m³
30,000 ppm
30,000 ppm
54,000 mg/m³
5,000 ppm
9,000 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

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

Skin and body protection

Wear resistant gloves such as:

Nitrile rubber
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. Discard gloves that show tears, pinholes, or signs of wear.
Respiratory protection
Respiratory protection is not required under normal conditions of use.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical state</th>
<th>aerosol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>aerosol</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>133 °F / 56 °C @ 1,013.33 hPa Calculated Phase Transition Liquid/Gas, Value for Component</td>
</tr>
<tr>
<td>Flash point</td>
<td>-4 °F / -20 °C Calculated Flash Point, Value for Component</td>
</tr>
<tr>
<td>Lower explosion limit/Upper explosion limit</td>
<td>2.6 %(V) / 12.8 %(V) Calculated Explosive Limit</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>308.000 hPa @ 77 °F / 25 °C Calculated Vapor Pressure</td>
</tr>
<tr>
<td>Density</td>
<td>1.078 g/cm³ @ 77 °F / 25 °C</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Stability
Stable.

Conditions to avoid
Heat, flames and sparks.

Incompatible products
Acids, alkalis, Amines, Ammonia, halogens, peroxides, Reducing agents, Strong oxidizing agents

Hazardous decomposition products
Aldehydes, carbon dioxide and carbon monoxide, formaldehyde, Hydrocarbons, organic compounds, silicon oxides

Hazardous reactions
Product will not undergo hazardous polymerization.
11. TOXICOLOGICAL INFORMATION

### Acute oral toxicity

<table>
<thead>
<tr>
<th>Product</th>
<th>LD 50: &gt; 8,000 mg/kg Species: Rat</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC</td>
<td></td>
</tr>
<tr>
<td>ACETONE</td>
<td>LD 50: 5,800 mg/kg Species: Rat</td>
</tr>
<tr>
<td>DIMETHYL SILICONES AND SILOXANES</td>
<td>LD 50: &gt; 5 g/kg Species: Rat</td>
</tr>
</tbody>
</table>

### Acute inhalation toxicity

<table>
<thead>
<tr>
<th>Product</th>
<th>LC 50: 3400 ppm Exposure time: 4 h Species: Rat</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC</td>
<td></td>
</tr>
<tr>
<td>ACETONE</td>
<td>LC 50: &gt; 16000 ppm Exposure time: 4 h Species: Rat</td>
</tr>
<tr>
<td>DIMETHYL SILICONES AND SILOXANES</td>
<td>LC 50: &gt; 695 mg/m3 Exposure time: 4 h Species: Rat</td>
</tr>
</tbody>
</table>

Method: OECD Test Guideline 403

### Acute dermal toxicity

<table>
<thead>
<tr>
<th>Product</th>
<th>LD 50: &gt; 4,000 mg/kg Species: Rat</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC</td>
<td></td>
</tr>
<tr>
<td>ACETONE</td>
<td>LD 50: &gt; 20,000 mg/kg Species: Rabbit</td>
</tr>
</tbody>
</table>
DIMETHYL SILICONES : LD 50: > 2,000 mg/kg Species: Rabbit
AND SILOXANES

Acute toxicity (other routes of administration)
Acute toxicity (other routes of administration) : no data available

12. ECOLOGICAL INFORMATION

Biodegradability

<table>
<thead>
<tr>
<th>Biodegradability - Product</th>
<th>no data available</th>
</tr>
</thead>
</table>

Biodegradability - Components

<table>
<thead>
<tr>
<th>DIMETHYL SÍLICONES AND SILOXANES</th>
<th>Remarks: Not readily biodegradable.</th>
</tr>
</thead>
</table>

Bioaccumulation

<table>
<thead>
<tr>
<th>Bioaccumulation - Product</th>
<th>no data available</th>
</tr>
</thead>
</table>

Ecotoxicity effects

Toxicity to fish

<table>
<thead>
<tr>
<th>Toxicity to fish - Product</th>
<th>no data available</th>
</tr>
</thead>
</table>

Toxicity to fish - Components

| ACETONE | LC 50: 4,740 - 6,330 mg/l  
          | Exposure time: 96 h  
          | Species: Rainbow trout, donaldson trout (Oncorhynchus mykiss)  
          | Test Type: static test |
|---------|--------------------------------------------------|
|         | LC 50: 8,733 - 9,482 mg/l  
          | Exposure time: 96 h  
          | Species: Fathead minnow (Pimephales promelas)  
          | Test Type: flow-through test |

Toxicity to daphnia and other aquatic invertebrates
Toxicity to daphnia and other aquatic invertebrates:
- Product: no data available

### Toxicity to algae

<table>
<thead>
<tr>
<th>Substance</th>
<th>Toxicity</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity to algae</td>
<td>: no data available</td>
<td></td>
</tr>
<tr>
<td>Product</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Toxicity to bacteria

<table>
<thead>
<tr>
<th>Substance</th>
<th>Toxicity</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity to bacteria</td>
<td>: no data available</td>
<td></td>
</tr>
<tr>
<td>Product</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## 13. DISPOSAL CONSIDERATIONS

**Waste disposal methods**

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

## 14. TRANSPORT INFORMATION

### REGULATION

| ID NUMBER | PROPER SHIPPING NAME | *HAZARD CLASS | SUBSIDIARY HAZARDS | PACKING GROUP | MARINE POLLUTANT /
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. DOT - ROAD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ORM-D, CONSUMER COMMODITY</td>
<td>ORM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| U.S. DOT - RAIL |
| ORM-D, CONSUMER COMMODITY | ORM |

<table>
<thead>
<tr>
<th>U.S. DOT - INLAND WATERWAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORM-D, CONSUMER COMMODITY</td>
</tr>
</tbody>
</table>

Page 10 / 13
ORM-D, CONSUMER COMMODITY

TRANSPORT CANADA - ROAD

| UN | 1950  | AEROSOLS  | 2.1 | LIMITED QUANTITY |

TRANSPORT CANADA - RAIL

| UN | 1950  | AEROSOLS  | 2.1 | LIMITED QUANTITY |

TRANSPORT CANADA - INLAND WATERWAYS

| UN | 1950  | AEROSOLS  | 2.1 | LIMITED QUANTITY |

INTERNATIONAL MARITIME DANGEROUS GOODS

| UN | 1950  | AEROSOLS  | 2.1 | MARINE POLLUTANT: (ALIPHATIC PETROLEUM NAPHTHA) LIMITED QUANTITY |

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

| UN | 1950  | Aerosols, flammable | 2.1 |

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

| UN | 1950  | Aerosols, flammable | 2.1 |

MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

| UN | 1950  | AEROSOLES  | 2 |

*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Dangerous goods descriptions (if indicated above) may not reflect 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 to the State of California to cause cancer. | BENZENE |
| WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. | TOLUENE BENZENE |

#### SARA Hazard Classification

**SARA 311/312 Classification**

- Acute Health Hazard
- Fire Hazard
- Sudden Release of Pressure Hazard

#### SARA 313 Component(s)

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### New Jersey RTK Label Information

- **SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC**: 64742-89-8
- **ACETONE**: 67-64-1
- **CARBON DIOXIDE**: 124-38-9
- **DIMETHYL SILICONES AND SILOXANES**: 63148-62-9

#### Pennsylvania RTK Label Information

- **SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC**: 64742-89-8
- **ACETONE**: 67-64-1
- **CARBON DIOXIDE**: 124-38-9

#### Notification status

- **US. Toxic Substances Control Act**: y (positive listing)
- **Australia. Industrial Chemical (Notification and Assessment) Act**: y (positive listing)
- **New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand**: y (positive listing)
- **Japan. Kashin-Hou Law List**: y (positive listing)
SAFETY DATA SHEET

Pyroil™ Multi-Purpose Silicone Lubricant
SILICONE SPRAY
PYSLS10

Korea. Toxic Chemical Control Law (TCCL) List  y (positive listing)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act y (positive listing)
China. Inventory of Existing Chemical Substances y (positive listing)

Reportable quantity - Product
US. EPA CERCLA Hazardous Substances (40 CFR 302)  11944 lbs

Reportable quantity - Components

<table>
<thead>
<tr>
<th>Component</th>
<th>HMIS</th>
<th>NFPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACETONE</td>
<td>67-64-1</td>
<td>5000 lbs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>HMIS</th>
<th>NFPA</th>
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</thead>
<tbody>
<tr>
<td>Health</td>
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<td>2</td>
</tr>
<tr>
<td>Flammability</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Physical hazards</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Instability</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Specific Hazard</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

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).