ASHLAND
SAFETY DATA SHEET

PYROILIC REGULAR STARTING FLUID
PYSFR11

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

Ashland
P.O. Box 2219
Columbus, OH 43216

Regulatory Information Number
1-800-325-2751

Telephony
614-290-3333

Emergency telephone
1-800-ASHLAND
(1-800-274-5263)

Product name
PYROILIC REGULAR STARTING FLUID

Product code
PYSFR11

Product Use Description
No data

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: liquid

WARNING: EXTREMELY FLAMMABLE LIQUID AND VAPOR. MAY CAUSE: FLASH FIRE. CONTENTS UNDER PRESSURE. MAY AFFECT THE CENTRAL NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. CAUSES EYE IRRITATION. MAY CAUSE SKIN AND RESPIRATORY TRACT IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE DERMATITIS AND BURNS.

Potential Health Effects

Routes of exposure
Inhalation, Skin absorption, Skin contact, Eye Contact

Eye contact
Can cause severe eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes. Can injure eye tissue.

Skin contact
Can cause skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, and drying and cracking of skin, burns and other skin damage. Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use.
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). Individuals with preexisting heart disorders maybe more susceptible to arrhythmias (irregular heartbeats) if exposed to high concentrations of this material.

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), loss of appetite, loss of coordination, irregular heartbeat, narcosis (dazed or sluggish feeling).

Target Organs

Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: effects on hearing.

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

There are no data available for assessing risk to the fetus from maternal exposure to this material.
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-HEPTANE</td>
<td>142-82-5</td>
<td>70-80%</td>
</tr>
<tr>
<td>ETHYL ETHER</td>
<td>60-29-7</td>
<td>15-20%</td>
</tr>
<tr>
<td>CARBON DIOXIDE</td>
<td>124-38-9</td>
<td>1.5-5%</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. 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. Symptomatic use of 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 5 - Swallowing) when deciding whether to induce vomiting.
Treatment: No information available.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Water mist, Carbon dioxide (CO₂), Dry chemical

Hazardous combustion products
carbon dioxide and carbon monoxide, various 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. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA).

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 run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred.

Methods for cleaning up
Absorb liquid on vermiculite, floor absorbent or other absorbent material.

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 frequently repeated skin contact with this material. Skin contact can be minimized by wearing impermeable protective gloves. As with all products of this nature, good personal hygiene is essential. Hands and other exposed areas should be washed thoroughly with soap and water after contact, especially before eating and/or smoking. Regular laundering of contaminated clothing is essential to reduce indirect skin contact with this material. Static ignition hazard can result from handling and use. Electrically bond and ground all containers, personal 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. Hydrocarbon solvents are basically non-conductors of electricity and can become electrostatically charged during mixing, filtering or pumping at high flow rates. If this charge reaches a sufficiently high level, sparks can form that may ignite the vapors of flammable liquids.

**Storage**

Do not store near extreme heat, open flame, or sources of ignition.

### 3. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Guidelines**

<table>
<thead>
<tr>
<th>ACGIH</th>
<th>Short-term exposure limit</th>
<th>500 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIOSH</td>
<td>Recommended exposure limit (REL)</td>
<td>85 ppm</td>
</tr>
<tr>
<td>NIOSH</td>
<td>Recommended exposure limit (REL)</td>
<td>350 mg/m³</td>
</tr>
<tr>
<td>NIOSH</td>
<td>Ceiling Limit Value and Time Period (if specified)</td>
<td>440 ppm</td>
</tr>
<tr>
<td>OSHA</td>
<td>Permissible exposure limit</td>
<td>300 ppm</td>
</tr>
<tr>
<td>OSHA</td>
<td>Short-term exposure limit</td>
<td>2,000 mg/m³</td>
</tr>
<tr>
<td>OSHA</td>
<td>Time weighted average</td>
<td>400 ppm</td>
</tr>
<tr>
<td>OSHA</td>
<td>Short-term exposure limit</td>
<td>1,600 mg/m³</td>
</tr>
<tr>
<td>OSHA</td>
<td>Short-term exposure limit</td>
<td>500 ppm</td>
</tr>
<tr>
<td>US CA OEL</td>
<td>Time Weighted Average (TWA) Permissible Exposure Limit (PEL)</td>
<td>2,000 mg/m³</td>
</tr>
<tr>
<td>US CA OEL</td>
<td>Time Weighted Average (TWA) Permissible Exposure Limit (PEL)</td>
<td>1,600 mg/m³</td>
</tr>
</tbody>
</table>
Safety Data Sheet (SDS)

**Ethyl Ether**

<table>
<thead>
<tr>
<th></th>
<th>Time Weighted Average</th>
<th>Short Term Exposure Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>400 ppm</td>
<td>2,000 ppm</td>
</tr>
<tr>
<td>OSHA Z1</td>
<td>400 ppm</td>
<td>2,000 ppm</td>
</tr>
</tbody>
</table>

**Carbon Dioxide**

<table>
<thead>
<tr>
<th></th>
<th>Time Weighted Average</th>
<th>Short Term Exposure Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>5,000 ppm</td>
<td>5,000 ppm</td>
</tr>
<tr>
<td>NIOSH</td>
<td>5,000 ppm (TWA)</td>
<td>5,000 ppm (TWA)</td>
</tr>
<tr>
<td>OSHA Z1</td>
<td>5,000 ppm</td>
<td>5,000 ppm</td>
</tr>
<tr>
<td>OSHA Z2</td>
<td>5,000 ppm</td>
<td>5,000 ppm</td>
</tr>
</tbody>
</table>

**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 (consult your safety equipment supplier).
Safety Data Sheet (SDS)

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Form</td>
<td>aerosol</td>
</tr>
<tr>
<td>Colour</td>
<td>No data</td>
</tr>
<tr>
<td>Odour</td>
<td>No data</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>149.60 °C / 221.41 °F / 1.01323 kPa</td>
</tr>
<tr>
<td>pH</td>
<td>No data</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>1.05 % (V) 36.5 % (V)</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>717.26 kPa @ 77 °F / 25 °C</td>
</tr>
<tr>
<td>Vapour density</td>
<td>No data</td>
</tr>
<tr>
<td>Density</td>
<td>0.7114 g/cm³ @ 60 °F / 15.56 °C</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data</td>
</tr>
<tr>
<td>Partition coefficient n-Octanol/water</td>
<td>No data</td>
</tr>
<tr>
<td>log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Autolignition temperature</td>
<td>No data</td>
</tr>
</tbody>
</table>

10. Stability and Reactivity

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Safety Data Sheet (SDS)

**Stability**
Stable.

**Conditions to avoid**
Avoid heat, open flame, and prolonged storage at elevated temperatures.

**Incompatible products**
Strong oxidizing agents

**Hazardous decomposition products**
Carbon dioxide and carbon monoxide; various hydrocarbons

**Hazardous reactions**
Product will not undergo hazardous polymerization

**Thermal decomposition**
No data

### 11. TOXICOLOGICAL INFORMATION

#### Acute oral toxicity

<table>
<thead>
<tr>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-HIPHTANE</td>
</tr>
<tr>
<td>ETHYL ETHER</td>
</tr>
<tr>
<td>CARBON DIOXIDE</td>
</tr>
</tbody>
</table>

#### Acute inhalation toxicity

<table>
<thead>
<tr>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-HIPHTANE</td>
</tr>
<tr>
<td>ETHYL ETHER</td>
</tr>
<tr>
<td>CARBON DIOXIDE</td>
</tr>
</tbody>
</table>

#### Acute dermal toxicity

<table>
<thead>
<tr>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-HIPHTANE</td>
</tr>
<tr>
<td>ETHYL ETHER</td>
</tr>
<tr>
<td>CARBON DIOXIDE</td>
</tr>
</tbody>
</table>

### 12. ECOLOGICAL INFORMATION
Safety Data Sheet (SDS)

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
Disposal 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

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_ROAD:
UN1950, AEROSOLS 2.1.

IMDG_RAIL:
UN1950, AEROSOLS 2.1.
Safety Data Sheet (SDS)

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.

18. 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.
BENZENE
Toluene

SARA Hazard Classification: Acute Health Hazard

SARA 313 Component(s)

Reportable quantity - Product
U.S. EPA CERCLA Hazardous Substances (40 CFR 302)
511 lbs

Reportable quantity - Components

<table>
<thead>
<tr>
<th>Component</th>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Hexane</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>none</td>
</tr>
<tr>
<td>Ethyl Ether</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbon Dioxide</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>none</td>
</tr>
</tbody>
</table>

The information accumulated herein is believed to be accurate but is not warranted to be neither 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).