**PRODUCT AND COMPANY IDENTIFICATION**

Manufacturer
The Penray Companies Inc.
440 Denniston Court
Wheeling, IL 60090

Contact: EHS Department
Telephone Number: 847-459-5041
FAX Number: 847-459-5043
E-Mail: penray.com

**HAZARDS IDENTIFICATION**

Route of Entry: Ingestion; inhalation; Skin;
Target Organs: NA
Inhalation: Minimal respiratory tract irritation may occur with exposure to a large amount of material
Skin Contact: May Cause Irritation.
Eye Contact: Will Cause Irritation upon direct contact
Ingestion: Aspiration hazard. Harmful or fatal if swallowed.

HMIS II-ratings (scale 0-4): Health = 0, Fire = 1, Reactivity = 0
HMIS® Rating H0/F1/P0
NFPA-ratings (scale 0-4): Health = 0, Fire = 1, Reactivity = 0

Human Health Hazards: Not to be expected if handled and used properly.

Canada: WHMIS classification - NOT CONTROLLED

Prolonged unprotected exposure to this product will cause skin irritation. Material splashed in eyes will irritate tissues.
As with any petroleum product, avoid mixing this product with strong oxidizers.

Carcinogen listing by: National Toxicology Program (NO)
I.A.R.C (NO)
OSHA (NO)
ACGIH (NO)
This product does not require a cancer hazard warning in accordance with the OSHA Hazard Communication Standard.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
Personnel with pre-existing skin disorders should avoid contact with this product
This product is slightly combustible (Flammability Class IIIB) but will burn. Heated product will produce colorless vapor. Heated vapors in the presence of an ignition source can be explosive if confined. When burned, the product will produce carbon monoxide and other asphyxiants during combustion.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

<table>
<thead>
<tr>
<th>Cas #</th>
<th>Perc.</th>
<th>Chemical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>64742-52-4</td>
<td>80-100%</td>
<td>Heavy Hydrotreated Naphthenic Distillates (Petroleum)</td>
</tr>
</tbody>
</table>

OSHA Regulatory Status:
This MSDS Contains valuable information critical to the safe handling and proper use of this product. This MSDS should be retained and available for employees and other users of this product.

4 FIRST AID MEASURES

**Inhalation:** No vapours appear at normal working temperature.
**Skin Contact:** Wash with soap and water.
**Eye Contact:** Immediately flush eyes with large amounts of water for at least 15 minutes, lifting eyelids occasionally to facilitate irrigation.
**Ingestion:** Bring to the attention of a physician.
Dilute with fluids (e.g. water, milk, juice, etc.).

5 FIRE FIGHTING MEASURES

Flash Point: > 400 degrees F (204 degrees C)
Flash Point Method: coc
Burning Rate: NA
Autoignition Temperature: >650 degrees F (343 degrees C)
LEL: NA
UEL: NA
Flammability Classification: IIIB

Wear self contained breathing apparatus and other protective clothing.
Use any standard agent - choose the one most appropriate for type of surrounding fire.
6  ACCIDENTAL RELEASE MEASURES

Release Measures:
Extinguish any open flames and remove heat sources.

This material will float on water and will be transported by stormwater runoff. Soils to the ground should be immobilized and removed immediately. Spills to watercourse such as storm drains, sewers, ditches, streams.

7  HANDLING AND STORAGE

Handling Precautions:  Handle with care and avoid spillage on the floor (slippage).
Consider normal working hygiene.
Do not expose containers to open flame, excessive heat, or direct sunlight.
Do not puncture or drop containers.

Storage Requirements:  Store in cool/dry area;
Suitable packing materials:

8  EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:  Use mechanical (general) ventilation for storage areas.
All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94).

Protective Equipment:  HMIS PP, X | Consult your supervisor for special instructions

If there is likelihood of splashing, oil resistant clothing should be worn. Never wear oil soaked clothing. Affix warning labels on containers in accordance with 29 CFR 1910.1200 (Hazard Communication Standard)

Exposure Guidelines/Other:

Exposure Limits: OIL MIST

Heavy Hydrotreated Naphthenic Distillates (petroleum)

USA OSHA (TWA)/PEL): 5 MG/M3 8 hrs
ACGIH (TWA/TLV): 5 MG/M# 8 hrs

Respiratory Protection: X-consult supervisor
Ventilation: X-consult supervisor
Protective Gloves: X-consult supervisor
Eye Protection: X-consult supervisor
Other Protective Equipment: X-consult supervisor
## PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear, Pale, Straw</td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>&gt;630 degrees F (332 degrees C)</td>
</tr>
<tr>
<td>Odor</td>
<td>Light bland, Petroleum</td>
</tr>
<tr>
<td>Freezing/Melting Pt.</td>
<td>-28 degrees F (-33 degrees C)</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>&lt;0.0001 mm Hg @ 20 degrees C</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>&gt; 5 (Air =1)</td>
</tr>
<tr>
<td>pH</td>
<td>Neutral</td>
</tr>
<tr>
<td>Solubility</td>
<td>Negligible</td>
</tr>
<tr>
<td>Spec Grav./Density</td>
<td>0.9086</td>
</tr>
<tr>
<td>Heat Value</td>
<td>N/A</td>
</tr>
<tr>
<td>VOC</td>
<td>2.53%</td>
</tr>
<tr>
<td>Evap. Rate</td>
<td>N/A</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>7.567 lbs/gal</td>
</tr>
<tr>
<td>Octanol</td>
<td>N/A</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>420</td>
</tr>
<tr>
<td>Particle Size</td>
<td>N/A</td>
</tr>
<tr>
<td>Softening Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Viscosity</td>
<td>515.0 SUS at 100 degrees F</td>
</tr>
<tr>
<td>Percent Volatile</td>
<td>N/A</td>
</tr>
<tr>
<td>Sat. Vap. Concentrat.:</td>
<td>N/A</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>N/A</td>
</tr>
</tbody>
</table>

## STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability</td>
<td>Product is stable under normal conditions.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>Extreme heat, ignition sources</td>
</tr>
<tr>
<td>Materials to avoid (incompatibility)</td>
<td>Strong Oxidizing Agents. Peroxides;</td>
</tr>
<tr>
<td>Hazardous Decomposition products</td>
<td>Combustion will produce carbon dioxide and, possibly toxic chemicals such as carbon monoxide.</td>
</tr>
<tr>
<td>Hazardous Polymerization</td>
<td>Will not occur.</td>
</tr>
</tbody>
</table>
IMMEDIATE (ACUTE) EFFECTS:

ACUTE STUDIES : Low order, mild to severe pulmonary effects as oil mist.

ACUTE SKIN: Prolonged skin contact tends to remove skins oils, possibly leading to irritation and dermatitis, however, based on human experience and available toxicological data, this product is judged to be neither "corrosive" nor an "irritant by OSHA criteria.

EYE EFFECTS: Product contacting eyes will cause irritation

ACUTE ORAL : Product has a low order of acute and dermal toxicity, but minute amounts aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possibly death.

ACUTE INHALATION: Product has a low order of acute and dermal toxicity, but minute amounts aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possibly death.

IARC: In accordance with the current OSHA Hazard Communication Standard criteria, this product does not require a cancer hazard warning. This is because the product is formulated from base stocks which are severely hydrotreated, severely solvent extracted, and or processed by mild hydrotreatment and extraction. Alternatively, it may consist of components not otherwise affected by IARC criteria, such as atmospherics distillates or synthetically derived materials, and as such is not characterized by current IARC classification criteria.

ECOLOGICAL INFORMATION

ECOLOGICAL INFO

If applied to leaves, this product may kill grass and small plants by interfering with transpiration and respiration. This product is not toxic to fish but may coast gill structures resulting in suffocation if spilled in shallow, running water. Product may be moderately toxic to amphibians by preventing dermal respiration. This product may cause gastrointestinal distress to birds and mammals through ingestion during pelage grooming. This product is rapidly biodegradable. Biodegradation is possible within 90 to 120 days in aerobic environments at temperatures above 70 degrees F.

DISPOSAL CONSIDERATIONS

DISPOSAL
Product, as supplied does not meet the characteristics of a hazardous waste as defined in 40 CFR 261.21-24. If mixed with other products, waste mixture must be characterized. Do NOT dispose of this product in drains or storm sewers. DO NOT dispose of this product in a landfill without prior solidification.

Dispose of in accordance with local regulations. Suitable waste-disposal site approved by local authorities.
14 TRANSPORT INFORMATION

DOT: Not Regulated
TDG: Not Regulated
IATA: Not Regulated
IMDG: Not Regulated
ADR: Not Regulated

15 REGULATORY INFORMATION

COMPLIANCE
U.S. FEDERAL REGULATORY INFORMATION
SARA 302 Threshold Planning Quantity: NOT APPLICABLE
SARA 304 Reportable Quantity: NOT APPLICABLE
SARA 311 Categories: Immediate (Acute Health effects- None
Delayed Chronic effects- Y
Fire Hazard-N
Sudden Release of pressure- N
Reactivity Hazard-N

EPA/ TSCA Inventory: The components of this product are listed on the EPA/TSCA (Toxic Substances Control Act) inventory of chemicals.

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA): No chemicals in this product are subject to the reporting requirements of CERCLA

CANADIAN REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

This products contents are listed on the Canadian Domestic Substances List (DSL)
CALIFORNIA PROPOSITION 65: This product does contain a chemical known to the State of California to cause cancer, birth defects and other reproductive harm.

USERS RESPONSIBILITY: This MSDS provides environmental, health and safety information. This product is to be used in applications consistent with our product literature and container label. Individuals handling this product should be informed to the recommended safety precautions and have access to this MSDS. Please contact your local sales representative or our EH&S Department for further information.

END OF MSDS.

END OF MSDS DOCUMENT