1. Identification

Product identifier: Medium and Heavy Pale Oil

Other means of identification:
- SDS number: 505
- Synonyms: Medium Pale Oil, Heavy Pale Oil

Recommended use: Not available.

Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information:

Manufacturer/Supplier: Valero Marketing & Supply Company and Affiliates
One Valero Way
San Antonio, TX 78269-6000

General Assistance: 210-345-4593
E-Mail: CorpHSE@valero.com

Contact Person: Industrial Hygienist

Emergency Telephone:
- 24 Hour Emergency: 866-565-5220
- 1-800-424-9300 (CHEMTREC USA)

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards: Not classified.

OSHA defined hazards: Not classified.

Label elements:
- Hazard symbol: None.
- Signal word: None.

Hazard statement: The product does not meet the criteria for classification.

Precautionary statement:
- Prevention: Observe good industrial hygiene practices.
- Response: Wash hands after handling.
- Storage: Store away from incompatible materials.
- Disposal: Dispose of contents/container in accordance with local/region/national/international regulations.

Hazard(s) not otherwise classified (HNOC): None known.

Supplemental information: None.

3. Composition/information on ingredients

Mixtures:

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic</td>
<td>64742-52-5</td>
<td>100</td>
</tr>
</tbody>
</table>

4. First-aid measures

Inhalation: If symptomatic, move to fresh air. Get medical attention if symptoms persist.

Skin contact: Remove contaminated clothing and shoes. Wash off immediately with soap and plenty of water. Get medical attention if irritation develops and persists. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms occur.
Ingestion

First aid is normally not required. However, if greater than 1/2 liter (pint) ingested, seek medical attention.

Most important symptoms/effects, acute and delayed

Under normal conditions of intended use, this product is not expected to be a health risk.

Indication of immediate medical attention and special treatment needed

Treat symptomatically. Symptoms may be delayed.

General information

Get medical attention if symptoms occur. Wash contaminated clothing before re-use.

5. Fire-fighting measures

Suitable extinguishing media


Unsuitable extinguishing media

Not available.

Specific hazards arising from the chemical

Not applicable.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear appropriate personal protective equipment (See Section 8).

Methods and materials for containment and cleaning up

Absorb spill with vermiculite or other inert material, then place in a sealed container for chemical waste.

Large Spills: Flush area with water. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal.

7. Handling and storage

Precautions for safe handling

Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in a well-ventilated place. Keep container tightly closed.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)</td>
<td>PEL</td>
<td>5 mg/m3</td>
<td>Mist.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2000 mg/m3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>500 ppm</td>
<td></td>
</tr>
</tbody>
</table>

US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td>Inhalable fraction.</td>
</tr>
</tbody>
</table>
### US. NIOSH: Pocket Guide to Chemical Hazards

#### Components

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)</td>
<td>Ceiling</td>
<td>1800 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>10 mg/m³</td>
<td>Mist.</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Mist.</td>
</tr>
</tbody>
</table>

**Biological limit values**
No biological exposure limits noted for the ingredient(s).

**Exposure guidelines**
No exposure standards allocated.

**Appropriate engineering controls**
Ensure adequate ventilation, especially in confined areas.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**
Wear safety glasses with side shields (or goggles).

**Skin protection**

**Hand protection**
Wear protective gloves.

**Skin protection**

**Other**
Wear chemical-resistant gloves, footwear and protective clothing appropriate for risk of exposure. Contact glove manufacturer for specific information.

**Respiratory protection**
If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134. Respirator type: Use NIOSH approved respirator with organic vapor/acid gas protection.

**Thermal hazards**
When material is heated, wear gloves to protect against thermal burns.

**General hygiene considerations**
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

### 9. Physical and chemical properties

**Appearance**
Oily, viscous liquid.

**Physical state**
Liquid.

**Form**
Liquid.

**Color**
Pale straw to amber.

**Odor**
Petroleum-like.

**Odor threshold**
Not available.

**pH**
Not available.

**Melting point/freezing point**
-49 - -16 °F (-45 - -26.67 °C)

**Initial boiling point and boiling range**
> 482 °F (> 250 °C)

**Flash point**
> 420.0 °F (> 215.6 °C) Pensky-Martens Closed Cup

**Evaporation rate**
Not available.

**Flammability (solid, gas)**
Not available.

**Upper/lower flammability or explosive limits**

**Flammability limit - lower (%)**
Not available.

**Flammability limit - upper (%)**
Not available.

**Explosive limit - lower (%)**
Not available.

**Explosive limit - upper (%)**
Not available.

**Vapor pressure**
0.16 kPa

**Vapor density**
Not available.

**Relative density**
Not available.
Solubility(ies)

Solubility (water) Insoluble

Partition coefficient (n-octanol/water) > 6

Auto-ignition temperature > 518 °F (> 270 °C)
Decomposition temperature > 536 °F (> 280 °C)

Viscosity Not available.

Other information
Density 940.00 kg/m³ @ 59°F (15°C)
Kinematic viscosity 250 - 4200 cSt
Kinematic viscosity temperature > 104 °F (> 40 °C)

10. Stability and reactivity
Reactivity Not available.
Chemical stability Material is stable under normal conditions.
Possibility of hazardous reactions Hazardous polymerization does not occur.
Conditions to avoid Excessive heat.
Incompatible materials Strong oxidizing agents.
Hazardous decomposition products No hazardous decomposition products are known.

11. Toxicological information
Information on likely routes of exposure

Inhalation Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Skin contact Based on available data, the classification criteria are not met.
Eye contact Based on available data, the classification criteria are not met.
Ingestion Under normal conditions of intended use, this material does not pose a risk to health.

Symptoms related to the physical, chemical and toxicological characteristics
Under normal conditions of intended use, this material does not pose a risk to health.

Information on toxicological effects
Acute toxicity Based on available data, the classification criteria are not met.
Skin corrosion/irritation Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitization

Respiratory sensitization Based on available data, the classification criteria are not met.
Skin sensitization Based on available data, the classification criteria are not met.
Germ cell mutagenicity Based on available data the product is not mutagenic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. Petroleum components contained in this product meet the IP 346 criteria of less than 3 percent DMSO-extractable components.

IARC Monographs. Overall Evaluation of Carcinogenicity
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5) 3 Not classifiable as to carcinogenicity to humans.

NTP Report on Carcinogens
Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not regulated.

Reproductive toxicity Based on best current information, there is no known reproductive toxicity associated with this product.
Specific target organ toxicity - single exposure
Based on available data, the classification criteria are not met.
Specific target organ toxicity - repeated exposure
Based on available data, the classification criteria are not met.
Aspiration hazard
Based on available data, the classification criteria are not met.

12. Ecological information
Ecotoxicity
This material has not been tested for environmental effects.
Persistence and degradability
No data available.
Bioaccumulative potential
Has the potential to bioaccumulate.
  Partition coefficient n-octanol / water (log Kow)
  Medium and Heavy Pale Oil > 6
Mobility in soil
Not available.
Other adverse effects
Not available.

13. Disposal considerations
Disposal instructions
Dispose of contents/container in accordance with local/regional/national/international regulations. When this product as supplied is to be discarded as waste, it does not meet the definition of a RCRA waste under 40 CFR 261.
Hazardous waste code
Not regulated.
Waste from residues / unused products
Dispose of in accordance with local regulations.
Contaminated packaging
Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information
DOT
Not regulated as dangerous goods.
IATA
Not regulated as dangerous goods.
IMDG
Not regulated as dangerous goods.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable. However, this product is a liquid and if transported in bulk covered under MARPOL 73/78, Annex I.

15. Regulatory information
US federal regulations
  TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
  Not regulated.
  OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
  Not regulated.
  CERCLA Hazardous Substance List (40 CFR 302.4)
  Not listed.
Superfund Amendments and Reauthorization Act of 1986 (SARA)
  Hazard categories
  Immediate Hazard - No
  Delayed Hazard - No
  Fire Hazard - No
  Pressure Hazard - No
  Reactivity Hazard - No
  SARA 302 Extremely hazardous substance
  Not listed.
  SARA 311/312 Hazardous chemical
  Yes
  SARA 313 (TRI reporting)
  Not regulated.
Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations

US. Massachusetts RTK - Substance List
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)

US. New Jersey Worker and Community Right-to-Know Act
Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law
Not listed.

US. Rhode Island RTK
Not regulated.

US. California Proposition 65
Not Listed.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date
16-January-2014

Revision date
11-November-2015

Version #
04

References
EPA: AQUIRE database
US. IARC Monographs on Occupational Exposures to Chemical Agents
HSDB® - Hazardous Substances Data Bank
National Toxicology Program (NTP) Report on Carcinogens
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices

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