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

Product identifier
Product Name: R&O 220 Turbine, Circulating & Compressor Oil

Other means of identification
Product Code: 184
Revision Number: 2063
Synonyms: None

Recommended use of the chemical and restrictions on use
Recommended Use: Lubricant.
Uses advised against: No information available

Details of the supplier of the safety data sheet
Manufacturer Address: U.S. Lubricants A Division of U.S. Venture, Inc. 425 Better Way Appleton, WI 54915

Emergency telephone number
Company Phone Number: 800-490-4900
24 Hour Emergency Phone Number: 800-688-4005 DTCG84-01-A-900043

2. HAZARDS IDENTIFICATION

Classification
Serious eye damage/eye irritation: Category 2B

Label elements
Emergency Overview

Warning
Hazard statements
Causes eye irritation

Appearance Viscous
Physical state Liquid
Odor Mild Petroleum

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses (if present and easy to do). Continue rinsing. If eye irritation persists: Get medical advice/attention

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Weight-%</th>
<th>Trade Secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum distillates, hydrotreated heavy paraffinic</td>
<td>64742-54-7</td>
<td>90-99</td>
<td>*</td>
</tr>
</tbody>
</table>
4. FIRST AID MEASURES

First aid measures

Eye contact  
Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin Contact  
If skin irritation persists, call a physician. Wash contaminated clothing before reuse. Wash with soap and water.

Inhalation  
Remove to fresh air.

Ingestion  
Do NOT induce vomiting. Get medical attention. Drink 1 or 2 glasses of water.

Most important symptoms and effects, both acute and delayed

Symptoms  
No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians  
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media  
Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical  
No information available.

Explosion data  
Sensitivity to Mechanical Impact  
None.

Sensitivity to Static Discharge  
None.

Protective equipment and precautions for firefighters  
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

UNUSUAL FIRE & EXPLOSION HAZARDS  
Toxic Fumes may be evolved on burning or exposure to heat. Pressure may increase in overheated closed containers. Store below 120°F

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions  
Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas. Stop leak if you can do it without risk.

Environmental precautions

Environmental precautions  
See Section 12 for additional ecological information.

Methods and material for containment and cleaning up
Methods for containment
Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
Soak up with inert absorbent material. Prevent product from entering drains. Pick up and transfer to properly labeled containers.

Prevention of secondary hazards
Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling
Handle in accordance with good industrial hygiene and safety practice. Avoid breathing fume/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep containers tightly closed in a dry, cool and well-ventilated place. Store at temperatures not exceeding 120°F.

Incompatible materials
Incompatible with oxidizing agents. Incompatible with strong acids and bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering Controls
Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

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

Skin and body protection
Wear protective nitrile or Neoprene™ gloves.

Respiratory protection
No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General Hygiene Considerations
Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Viscous</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Light amber</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Mild Petroleum</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>Essentially Neutral</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>415°F</td>
<td></td>
</tr>
</tbody>
</table>
Evaporation rate  Less than 0.01 (@1ATM and 25°C.  
n-butyl acetate=1

Flammability (solid, gas)  No information available
Flammability Limit in Air
  Upper flammability limit: 10% (Estimated Value)
  Lower flammability limit: 1% (Estimated Value)
Vapor pressure  Less than 0.01 mm HG
Vapor density  Greater than 1 (Air=1)
Specific Gravity  0.890  lbs/gal:  7.44
Water solubility  Insoluble in water
Solubility in other solvents  No information available
Partition coefficient  No information available
Autoignition temperature  No information available
Decomposition temperature  No information available
Kinematic viscosity  210-230 cSt@ 40°C
Dynamic viscosity  No information available
Explosive properties  No information available
Oxidizing properties  No information available

Other Information
Softening point  No information available
Molecular weight  No information available
VOC Content (%)  Negligible
Density  No information available
Bulk density  No information available

10. STABILITY AND REACTIVITY

Reactivity  Not Applicable

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous polymerization  Hazardous polymerization does not occur.

Conditions to avoid
Strong oxidizing agents. Heat, flames and sparks.

Incompatible materials
Incompatible with oxidizing agents. Incompatible with strong acids and bases.

Hazardous Decomposition Products
Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information  No data available

Inhalation  Avoid breathing vapors or mists. Inhalation of vapors in high concentration may cause irritation of respiratory system.

Eye contact  Contact with eyes may cause irritation.
**Skin Contact**

Prolonged contact may cause redness and irritation.

**Ingestion**

Unlikely to cause harm if accidentally swallowed in small doses, though larger quantities may cause nausea and diarrhea.

**Information on toxicological effects**

**Symptoms**

No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<table>
<thead>
<tr>
<th>Skin corrosion/irritation</th>
<th>Irritating to skin.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Irritating to eyes.</td>
</tr>
<tr>
<td>Irritation</td>
<td>May cause skin and eye irritation. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION.</td>
</tr>
<tr>
<td>Sensitization</td>
<td>No information available.</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>No information available.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>No information available.</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>No information available.</td>
</tr>
<tr>
<td>STOT - single exposure</td>
<td>No information available.</td>
</tr>
<tr>
<td>STOT - repeated exposure</td>
<td>No information available.</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>No information available.</td>
</tr>
</tbody>
</table>

**Numerical measures of toxicity - Product Information**

### 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

Harmful to aquatic life with long lasting effects

0.03% of the mixture consists of components(s) of unknown hazards to the aquatic environment

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Toxicity to microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum distillates, hydrotreated heavy paraffinic 64742-54-7</td>
<td>5000: 96 h Oncorhynchus mykiss mg/L LC50</td>
<td>1000: 48 h Daphnia magna mg/L EC50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Persistence and degradability**

No information available

**Other adverse effects**

No information available

### 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods**

**Disposal of wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging**

Do not reuse container.
14. TRANSPORT INFORMATION

DOT Not regulated

ICAO (air) Not regulated

IATA Not regulated

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>All components of this material are on the US TSCA Inventory or are exempt.</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>Does not comply</td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>Does not comply</td>
</tr>
<tr>
<td>ENCS</td>
<td>Does not comply</td>
</tr>
<tr>
<td>IECSC</td>
<td>Does not comply</td>
</tr>
<tr>
<td>KECL</td>
<td>Does not comply</td>
</tr>
<tr>
<td>PICCS</td>
<td>Does not comply</td>
</tr>
<tr>
<td>AICS</td>
<td>Does not comply</td>
</tr>
</tbody>
</table>

Legend:
- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute health hazard</td>
<td>No</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Fire hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden release of pressure hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations
California Proposition 65
This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

U.S. EPA Label Information
EPA Pesticide Registration Number  Not Applicable

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and Chemical Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health hazards</th>
<th>Flammability</th>
<th>Physical hazards</th>
<th>Personal protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>X</td>
</tr>
</tbody>
</table>

Issue Date 26-Mar-2009
Revision Date 29-Sept-2015
Revision Note No information available

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet