

Material Safety Data Sheet

Prepared according to 29 CFR 1910.1200

1. Chemical Product and Company Identification

American Refining Group, Inc.
77 North Kendall Avenue
Bradford, PA 16701 USA
Tel: (814) 368.1200
www.amref.com



| | |
|---|--|
| Product Name | R&O ISO VG 32 Turbine-Hydraulic Oil |
| Product Code | 7363 |
| CAS Number | Not applicable for mixtures |
| Synonyms | Hydraulic Oil |
| Generic Chemical Name | Hydrotreated Heavy Paraffinic Distillate |
| Product Type | Mixture |
| Transportation Emergency Phone No. | Chemtrec: 1-800-424-9300 (24 HRS) |
| ARG Emergency Phone No. | 814-368-1297 (24 HRS) |
| MSDS E-Mail | msds@amref.com |

2. Hazards Identification

| | |
|--|---|
| Appearance | Light Amber |
| Odor | Hydrocarbon oil |
| Signal Word | WARNING! Harmful if inhaled May cause eye irritation May cause respiratory tract irritation May cause skin irritation |
| OSHA Regulatory Status | This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200) |
| Precautions | |
| Inhalation | Avoid breathing dust/fume/gas/mist/vapors/spray. Keep container tightly closed. Use only with adequate ventilation. |
| Eyes | Avoid contact with eyes. Wash thoroughly after handling. |
| Skin | Avoid contact with skin and clothing. Wash thoroughly after handling. |
| Medical Conditions Aggravated by Exposure | Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product |
| Chronic Effects | See Section 11 for complete health hazard information |
| Environmental Effects | See Section 12 for complete ecological information |

3. Composition / Information on Ingredients

| CAS No. | Component | Percent |
|---------|-----------|---------|
|---------|-----------|---------|

3. Composition / Information on Ingredients

| | | |
|------------|--|-------|
| 64742-54-7 | Hydrotreated heavy paraffinic distillate | 90-99 |
| | | |

Component Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Mineral Oil (See Section 8)

4. First Aid Measures

| | |
|---------------------------|--|
| Eyes | Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately. |
| Skin | In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately. |
| Inhalation | Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately. |
| Ingestion | DO NOT INDUCE VOMITING. If conscious, rinse out mouth with water. Get medical attention immediately. |
| Note to Physicians | No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |

5. Fire Fighting Measures

Flammable Properties

Not available

Extinguishing Media

Use dry chemical, CO₂, water spray (FOG) or foam

Specific Hazards Arising from Chemical

Elevated temperatures can lead to the formation of irritating fumes and vapors. Decomposition products may include the following materials: Carbon dioxide and Carbon monoxide.

Protective Equipment and Precautions for Firefighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental Release Measures

Personal Precautions

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist.

6. Accidental Release Measures

Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Environmental Precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution.

Methods for Containment

Stop leak if without risk.

Methods for Cleanup

Move containers from spill area. Approach release from upwind. Absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7. Handling and Storage

Handling Procedures

Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Use non-sparking tools.

Shipping and Storing Procedures

Store in accordance with local regulations. Store in a segregated and approved area. Keep in the original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials. Do not store in unlabeled containers. Store and use away from heat, sparks, open flame or any other ignition source. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers that retain product residue may be hazardous. Do not reuse container.

8. Exposure Controls / Personal Protection

Component Exposure Limits

Oil Mist (mineral)

| | | | | | | | | |
|-------------------|------|---------|------|---------------------|-------|---------|-------|-----------------------|
| ACGIH TLV: | TWA: | N/A ppm | TWA: | 5 mg/m ³ | STEL: | N/A ppm | STEL: | 10 mg/m ³ |
| OSHA PEL: | TWA: | N/A ppm | TWA: | 5 mg/m ³ | STEL: | N/A ppm | STEL: | N/A mg/m ³ |
| NIOSH REL: | TWA: | N/A ppm | TWA: | 5 mg/m ³ | STEL: | N/A ppm | STEL: | 10 mg/m ³ |

N/A signifies not available

Engineering Controls

Material should be handled in enclosed vessels and equipment. Use only in adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Eye/Face Protection

Chemical goggles or face shield.

Skin Protection

Chemical resistant, impervious gloves complying with an approved standard should be worn at all times. Coveralls, apron, and boots as necessary to minimize contact.

Respiratory Protection

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicated this is necessary. Respirator selection must be based on known or anticipated exposure levels.

General Hygiene

Wash hands, forearms and face thoroughly after handling chemical

8. Exposure Controls / Personal Protection

products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing.

9. Physical and Chemical Properties

| | | | |
|---------------------------|-----------------|---------------------------------------|---------------|
| Appearance | Light amber | Vapor Pressure (mm Hg at 20°C) | 0 |
| Odor | Hydrocarbon oil | Water Soluble | No |
| Physical State | Liquid | Specific Gravity (g/cc) | .858 |
| Flash Point (°F) | 400 | Density (lbs/gal) | 7.160 |
| Boiling Point (°F) | >625 | pH | Not available |

10. Chemical Stability & Reactivity Information

| | |
|---|--|
| Stability | Stable under normal conditions |
| Polymerization | No polymerization |
| Incompatibility | Strong acids and oxidizing materials |
| Conditions to Avoid | High temperatures |
| Hazardous Decomposition Products | Smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion. |

11. Toxicological Information

| | |
|-------------------------------|---|
| Acute Exposure | |
| Respiratory Irritation | If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract. Based on data from components or similar materials. |
| Eye Irritation | May cause eye irritation. Vapors formed from heating may cause eye irritation. |
| Skin Irritation | May cause skin irritation. Prolonged or repeated direct exposure to the skin may result in symptoms of irritation and redness. |
| Sensitization | Not expected to cause skin or respiratory sensitization. |

Component Analysis – LD50 / LC50

Acute Toxicity Estimate (ATE) Values for Product:

| | |
|----------------------------|----------------|
| Inhalation LC50 Rat | 8.72 mg/L 1 HR |
| Oral LD50 Rat | >5000 mg/kg |
| Dermal LD50 Rabbit | >3000 mg/kg |

Chronic Exposure

Target Organ Effects No data available to indicate product or components present at greater than 1% are chronic health hazards.

| | |
|------------------------------|--|
| Carcinogenicity | This product contains mineral oils which are considered to be severely refined and not considered to be carcinogenic under IARC. All of the oils in this product have been demonstrated to contain less than 3% extractables by the IP 346 test. |
| Mutagenicity | No data available to indicate product or any components present at greater than .1% are mutagenic or genotoxic. |
| Reproductive Toxicity | No data available to indicate product or any components present at greater than .1% are a reproductive toxin. |
| Teratogenicity | No data available to indicate product or any components contained at greater than .1% may cause birth defects. |

12. Ecological Information

Component Analysis- Ecotoxicity – Aquatic Life

| Duration/Test/Species | Concentration/Conditions |
|-----------------------------------|--------------------------|
| 96 Hr LC50 Pimephales promelas | N/A mg/L |

| | |
|------------------------|------------------------|
| Degradability | Not readily degradable |
| Bioaccumulation | Not determined |
| Soil Mobility | Not determined |

13. Disposal Considerations

Disposal Instructions

The generation of waste should be avoided or minimized wherever possible. Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

14. Transportation Information

| | | | | |
|-------------------------------------|-----------|---|--------------|---------------|
| Emergency Response Guide No. | 128 | <i>North American Emergency Response Guide Book</i> | | |
| U.S. DOT Bulk | UN Number | Shipping Name (technical name) | Hazard Class | Packing Group |
| U.S. DOT Non-Bulk | | Not Regulated | | |
| | | Not Regulated | | |

15. Regulatory Information

| | |
|---|--|
| SARA Extremely Hazardous Substances (Sections 302 & 304) | This product does not contain greater than 1% of any “extremely hazardous substances” listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or |
|---|--|

15. Regulatory Information

SARA Section 313

Section 304 as identified in 40 CFR Part 355, Appendix A and B. This product does not contain greater than 1.0% of the substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

SARA Section 311 & 312 Classifications

Acute Hazard Yes
Chronic Hazard No
Fire Hazard No
Reactivity Hazard No

CERCLA

This product does not contain any “hazardous substances” listed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4.

California Prop 65

This product does not intentionally contain any chemicals known by the State of California to cause cancer and/or birth defects. Moreover, we do not routinely analyze its products for impurities which may be such chemicals.

Clean Water Act / Oil Pollution Act

This product contains petroleum distillates and is subject to regulation by Section 311 of the Clean Water Act and the Oil Pollution Act. Releases of the product into or leading to surface waters must be reported to the National Response Center at 1-800-424-8802.

Global Chemical Inventories

| Inventory | Component |
|------------------|-----------------------|
| | All components |
| US TSCA | Present |
| EU | Present |
| Japan | Not available |
| Australia | Present |
| New Zealand | Not available |
| Canada | Present |
| Switzerland | Not available |
| Korea | Present |
| Philippines | Present |
| China | Present |
| Taiwan | Not available |

16. Other Information

US NFPA Ratings

| Health | Fire | Reactivity |
|---------------|-------------|-------------------|
| 1 | 1 | 0 |

HMIS Ratings

| Health | Fire | Physical Hazards |
|---------------|-------------|-------------------------|
| 1 | 1 | 0 |

| |
|------------------------------|
| 16. Other Information |
|------------------------------|

Precautionary Labels

Signal Word

WARNING!
Harmful if inhaled
May cause eye irritation
May cause respiratory tract irritation
May cause skin irritation

Preparation/Revision Date

11/30/2011

Revision Reason

Outdated

Prepared By:

Jenna Prechtel, Product Compliance Coordinator

The information provided on this MSDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of MSDS