

MATERIAL SAFETY DATA SHEET



1. Product and company identification

PRODUCT NAME : Turbine R&O ISO VG46, 100, 220
PRODUCT CODE : 0284, 0304, 0306
PRODUCT USE : Industrial Hydraulic Oil
WHMIS CLASSIFICATION : Not controlled under WHMIS (Canada).
SUPPLIER : NEMCO RESOURCES LTD.
25 Midland Street
Winnipeg, Manitoba
R3E 3J6 Canada
Date Issued : June, 2014
Emergency (call collect) : 204-788-1030
CANUTEC : 613-996-6666

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	LD50 of Ingredient	LC50 of Ingredient
Mixture of severely hydrotreated and hydrocracked and/or solvent-refined base oil(petroleum).	Mixture	Not Available	Not Available

There are no additional ingredients present which, within the current knowledge of the supplier and in the Concentrations applicable are classified as hazardous to health or the environment and hence require reporting in this section.

3. Hazards identification

EMERGENCY OVERVIEW:

Emergency overview : No specific hazard
Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.
Odor : Mild petroleum oil like
OSHA statues : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product
WHMIS(Canada) : Not controlled under WHMIS(Canada)

POTENTIAL ACUTE HEALTH EFFECTS

Inhalation : No known significant effects or critical hazards
Ingestion : No known significant effects or critical hazards
Eye : Slightly irritating to the eyes

Skin : Slightly irritating to the skin

POTENTIAL CHRONIC HEALTH EFFECTS

Chronic effects : No known significant effects or critical hazards
Carcinogenicity : Not listed as carcinogenic by OSHA, NTP or IARC
Mutagenicity : No known significant effects or critical hazards
Developmental effects : No known significant effects or critical hazards
Teratogenicity : No known significant effects or critical hazards
Fertility effects : No known significant effects or critical hazards
EFFECTS OF OVEREXPOSURE : Not irritating according to U.S. and EC guidelines

4. FIRST AID MEASURES

EYE CONTACT : 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 CONTACT : Wash contact areas with soap and water. High-pressure accidental injection through the skin requires immediate medical attention for possible incision, irrigation and/or debridement

INHALATION : Remove from further exposure. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance.

INGESTION : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. FIRE FIGHTING MEASURES

NFPA 704 Hazard Class

Health: 0 Flammability: 1 Instability: 0 (0-Minimal, 1-slight, 2-Moderate, 3-Serious, 4-Severe)

EXTINGUISHING MEDIA : Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F / 100°C. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

SPECIAL EXPOSURE HAZARDS : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

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

FLASH POINT C (F) : > 207(404)

SPECIAL REMARKS ON FIRE HAZARDS : Low fire hazard. This material must be heated before ignition will occur.

SPECIAL REMARKS ON EXPLOSION HAZARDS : Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition

Flammable limits : LEL: NA, UEL: NA

HAZARDOUS COMBUSTION PRODUCTS : Carbon oxides (CO, CO₂), nitrogen oxides (NO_x), sulphur oxides (SO_x), phosphorus oxides (PO_x), smoke and irritating vapours as products of incomplete combustion

AUTOIGNITION TEMPERATURE : Not Available

6. ACCIDENTAL RELEASE MEASURES

- NOTIFICATION PROCEDURES** : Report spills as required to appropriate authorities. Canadian Regulations require immediate reporting of all oil spills that could reach any waterway, including wetlands and intermittent dry creeks.
- PERSONAL PRECAUTIONS** : This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill/release. Notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures
- ENVIRONMENTAL PRECAUTIONS** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for cleaning up**
- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Note: This product does NOT contain any hazardous substances reportable under CERCLA.

7. HANDLING AND STORAGE

- HANDLING** : Put on appropriate personal protective equipment (see section 8). 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. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- STORAGE** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredient	Exposure limits
Lubricant Base Oil (Petroleum)	ACGIH TLV (United States). Notes: (Mineral oil) TWA: 5 mg/m ³ , (Inhalable fraction) 8 hour(s).

- RESPIRATORY PROTECTION** : Where there is potential for airborne exposure above the exposure limit a NIOSH certified air purifying respirator equipped with R or P95 filters may be used.
- Engineering controls** : If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.
- EYE/FACE PROTECTION** : The use of eye protection that meets or exceeds ANSI Z.87.1 is recommended to protect against potential eye contact, irritation, or injury. Depending on conditions of use, a face shield may be necessary.
- SKIN/HAND PROTECTION** : The use of gloves impervious to the specific material handled is advised to prevent skin contact. Users should check with manufacturers to confirm the breakthrough performance of their products. Suggested protective materials:
Nitrile

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19.5 percent oxygen) situations, or under conditions that are immediately dangerous to life and health (IDLH).

Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.

9. PHYSICAL AND CHEMICAL PROPERTIES

- APPEARANCE** : Liquid
- Physical State** : Viscous liquid
- Color** : Amber
- ODOR THRESHOLD-ppm** : NE
- pH** : Not available
- BOILING POINT C (F)** : Not available
- FLASH POINT C (F)** : > 207(404)
- FLAMMABILITY** : Not established
- AUTO FLAMMABILITY** : Not established
- OXIDIZING PROPERTIES** : Not available
- VAPOR PRESSURE** : <1
- mmHg 20 C**
- VAPOR DENSITY:** : Not available
- RELATIVE DENSITY, 15 C** : 0.850-0.910
- SOLUBILITY IN WATER** : Negligible
- EVAPORATION RATE** : Not established
- FREEZING POINT C(F)** : Not established

FOR FURTHER TECHNICAL INFORMATION, CONTACT YOUR MARKETING REPRESENTATIVE

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY	:	Stable under normal ambient and anticipated conditions of use.
CONDITIONS TO AVOID	:	Extended exposure to high temperatures can cause decomposition. Avoid all possible sources of ignition.
INCOMPATIBILITY (MATERIALS TO AVOID)	:	Strong oxidizers and strong reducing agents.
HAZARDOUS DECOMPOSITION PRODUCTS	:	Not anticipated under normal conditions of use.
HAZARDOUS POLYMERIZATION	:	Not known to occur
REACTIVITY	:	Reactive with oxidising agents, acids, halogens and halogenated compounds.

11. TOXICOLOGICAL DATA

ACUTE TOXICOLOGY

Oral LD 50	:	Greater than 5000 mg/kg (Rat)
Dermal LD50	:	Greater than 2000 mg/kg (Rabbit)
Inhalation LC50	:	Greater than 5 mg/L (Rat)

CHRONIC TOXICOLOGY

Chronic toxicity	:	Not available
Irritation/Corrosion	:	Not available
Conclusion/Summary	:	Not available
Sensitiser	:	Not available
Carcinogenicity	:	Not available
Mutagenicity	:	Not available
Teratogenicity	:	Not available
Reproductive toxicity	:	Not available
Product/ingredient name	:	Mixture of severely hydrotreated and hydrocracked and/or solvent-refined base oil (petroleum).

Lubricant base oil

Carcinogenicity: The petroleum base oil contained in this product has been highly refined by a variety of process including severe hydrocracking / hydroprocessing to reduce aromatics and improve performance characteristics. Under normal conditions of use, no significant health hazards are expected. All of oils meet the IP-346 criteria of less than 3% PAH's and are not considered carcinogens by NTP, IARC or OSHA

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE AND EFFECTS	:	Not known significant effects or critical hazards
<u>Aquatic ecotoxicity</u>	:	Not available
Conclusion / Summary	:	
<u>Biodegradability</u>	:	Not available
Conclusion / Summary	:	
Other adverse effects	:	Not known significant effects or critical hazards

13. DISPOSAL CONSIDERATIONS

The generator of a waste is always responsible for making proper hazardous waste determinations and needs to consider state and local requirements in addition to federal regulations.

This material, if discarded as produced, would not be a federally regulated RCRA "listed" hazardous waste and is not believed to exhibit characteristics of hazardous waste. See Sections 7 and 8 for information on handling, storage and personal protection and Section 9 for physical/chemical properties. It is possible that the material as produced contains constituents which are not required to be listed in the MSDS but could affect the hazardous waste determination. Additionally, use which results in chemical or physical change of this material could subject it to regulation as a hazardous waste.

This material under most intended uses would become "Used Oil" due to contamination by physical or chemical impurities. Whenever possible, Recycle Used Oil in accordance with applicable federal and state or local regulations, container contents should be completely used and containers should be emptied prior to discard.

14. TRANSPORT INFORMATION

USA DOT	:	NOT REGULATED BY USA DOT
RID/ADR	:	NOT REGULATED BY RID/ADR
IMO	:	NOT REGULATED BY IMO
ICAO/IATA	:	NOT REGULATED BY ICAO/IATA
TDG	:	NOT REGULATED BY TDG

15. REGULATORY INFORMATION


United States	:	Not regulated
HCS Classification	:	
Canada	:	Not controlled under WHMIS (Canada).
WHMIS (Canada)	:	

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.

International regulations

Canada inventory	:	All components are listed or exempted
United States inventory (TSCA 8b)	:	All components are listed or exempted.
OSHA	:	All components are listed or exempted
SARA 311/312 Hazard Categories	:	None
SARA 313 Toxic Chemicals	:	None
SARA 302 Extremely Hazardous	:	None
Europe inventory	:	All components are listed or exempted

16. OTHER INFORMATION

<u>Emergency Overview</u>	<u>NFPA</u>
This material is not considered hazardous according to OSHA criteria.	

Information given herein is offered in good faith as accurate, but without guarantee. Conditions of use and suitability of the product for particular uses are beyond our control. All risks of use of the product are therefore assumed by the user and WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. Nothing is intended as a recommendation for uses, which infringe valid patents, or as extending license under valid patents. Appropriate warnings and safe-handling procedures should be provided to handlers and users. Alteration of this document is strictly prohibited. Except to the extent required by law, republication or retransmission of this document, in whole or in part, is not permitted. Nemco assumes no responsibility for accuracy of information unless the document is the most current available from an official Nemco distribution system. Nemco neither represents nor warrants that the format, content or product formulas contained in this document comply with the laws of any country except Canada.

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