

Ritchie Engineering Material Safety Data Sheet

Ritchie Engineering
YELLOW JACKET Products Division
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Emergency: 800-424-9300
Information: 800-769-8370

SECTION 1 CHEMICAL PRODUCT IDENTIFICATION

Product: YELLOW JACKET SuperEvac Premium Vacuum Pump Oil
Synonyms/Other: None
MSDS Number: 10505
Product Type: Industrial Oil
Preparation/Revision Date: 9/7/2010

SECTION 2 COMPOSITION INFORMATION

No Reportable Hazardous Substances(s) or Complex Substance(s)

SECTION 3 HAZARDOUS IDENTIFICATION

This material is not considered to be hazardous according to regulatory guidelines (see MSDS Section 15)

Potential Health Effects

Eye: Contact may cause mild eye irritation including stinging, watering and redness.

Skin: Contact may cause mild skin irritation including redness and a burning sensation. Prolonged or repeated contact can defat the skin, causing drying and cracking of the skin, and possibly dermatitis (inflammation). No harmful effects from skin absorption have been reported.

Inhalation (Breathing): No information available on acute toxicity

Ingestion (Swallowing): No harmful effects reported from ingestion.

Signs and Symptoms: Effects of overexposure may include irritation of the digestive tract, nausea and diarrhea. Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Pre-Existing Medical Conditions: Conditions which may be aggravated by exposure include skin disorders.

NFPA Hazard ID:	Health: 0	Flammability: 1	Reactivity: 0
HMIS Hazard ID:	Health: 0	Flammability: 1	Reactivity: 0

Note: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person. See Section 11 for additional Toxicity Information.

SECTION 4 FIRST AID MEASURES

Inhalation:

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical attention. If breathing has stopped, assist ventilation with a mechanical device or use mouth to mouth resuscitation.

Skin Contact:

Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops and persists, seek medical attention.

Eye contact:

Flush thoroughly with water. If irritation occurs, get medical assistance.

Ingestion:

First aid is normally not required. Seek medical attention if discomfort occurs.

SECTION 5 FIRE FIGHTING MEASURES

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Extinguishing Media:

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide to extinguish

Inappropriate Extinguishing Media: Straight streams of water

Fire Fighting:

Fire Fighting Instructions: Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Hazardous Combustion Products: Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of nitrogen and sulfur may also be formed.

Flammability Properties

Flash Point [Method]: 216°C (420°F) [ASTM D-92]

Flammable limits (approximate volume % in air): No data

Autoignition Temperature: No data

SECTION 6

ACCIDENTAL RELEASE MEASURES

Notification Procedures

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800) 424-8802.

Spill Management

Land Spill: Stop leak if you can do it without risk. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do it without risk. Confine the spill immediately with booms. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: local regulations may prescribe or limit action to be taken.

Environmental Precautions

Large Spills: dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7

HANDLING AND STORAGE

Handling: Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment. Prevent small spills and leakage to avoid slip hazard

Storage: Do not store in open or unlabelled containers. Use and store this material in cool, dry, well-ventilated area away from heat and all sources of ignition.

SECTION 8

EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits/standards for materials that can be formed when handling this product: When mists/aerosols can occur, the following are recommended: 5 mg/m³ - ACGIH TLV, 10mg/m³ – ACGIH STEL, 5 mg/m³ OSHA PEL.

Note: limits/standards shown for guidance only. Follow applicable regulations.

Engineering Controls

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The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider: no special requirements under ordinary conditions of use and with adequate ventilation.

Personal Protection

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration, and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered: none

For airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection:

Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include: none required under normal conditions of use.

Eye Protection:

If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection:

Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include: no skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

Specific Hygiene Measure: 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. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

Environmental Controls:

See sections 6,7,12,14

SECTION 9

PHYSICAL AND CHEMICAL PROPERTIES

Typical physical and chemical properties are given below.

General Information:

Physical State: clear and bright liquid

Color: water white

Odor: characteristic petroleum

Odor threshold: N/D

Important health, safety and environmental information:

Specific Gravity (15.6 C): 0.867

Flash Point: 216C (420F) ASTM D92

Flammable Limits (approximate volume % in air): No data

Autoignition temperature: no data

Boiling point/range: 347C (656F)

Vapor Pressure: <1 kPa (0.1 mmHG) @ 20C

Evaporation rate (n-butyl acetate=1): no data

pH: n/a

Solubility in water: insoluble

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Viscosity: ~43 cSt @ 40C, ~6.5 cSt @ 100C

Other Information:

Freezing point: no data

Melting point: no data

Pour point: -12 °C

SECTION 10 STABILITY AND REACTIVITY

Stability: material is stable under normal conditions

Conditions to avoid: excessive heat. High energy sources of ignition.

Materials to avoid: strong oxidizers

Hazardous decomposition products: material does not decompose at ambient temperatures.

Hazardous polymerization: will not occur

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity

<u>Route of exposure</u>	<u>Conclusions/Remarks</u>
Inhalation	
Toxicity (rat) LC 50>5000 mg/m ³	Minimally toxic. Based on test data for structurally similar materials.
Irritation: no end point data	Negligible hazard at ambient/normal handling temperature. Based on assessment of the components
Ingestion	
Toxicity (rat): LD50>5000 mg/kg	Minimally toxic. Based on test data for structurally similar materials.
Skin	
Toxicity (rabbit): LD50/5000 mg/kg	Minimally toxic. Based on test data for structurally similar materials.
Irritation (rabbit): data available	Negligible irritation to skin at ambient temperatures. Based on test data for structurally similar materials.
Eye	
Irritation (rabbit): data available	May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials.

Chronic/other effects

Contains: Mineral oil. Not expected to cause significant health effects under conditions of normal use, based on laboratory studies with the same or similar materials. Not mutagenic or genotoxic. Not sensitizing in test animals and humans.

Additional information available upon request.

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

Ecotoxicity: Experimental studies show that acute toxicity values are greater than 1000 mg/l. These values are consistent with the predicted aquatic toxicity of these substances based on their hydrocarbon compositions.

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Mobility: Volatilization to air is not expected to be a significant fate process due to the low vapor pressure of this material. In water, base oils will float and spread over the surface at a rate dependent upon viscosity. There will be significant removal of hydrocarbons from the water by sediment adsorption. In soil and sediment, hydrocarbon components will show low mobility with adsorption to sediments being the predominant physical process. The main fate process is expected to be slow biodegradation of base oil components in soil and sediment.

Persistence and degradability: The hydrocarbons in this material are not readily biodegradable, but since they can be degraded by microorganisms, they are regarded as inherently biodegradable.

Bioaccumulation Potential: Low Kow values measured for the hydrocarbon components of this material range from over 4 to over 6, and therefore regarded as having the potential to bioaccumulate. In practice, metabolic processes may reduce bioconcentration.

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

Disposal recommendations:

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

Regulatory Disposal Information:

RCRA information: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity, or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

Empty Container Warning:

Empty container warning (where applicable): empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

SECTION 14 TRANSPORT INFORMATION

Land (DOT): not regulated for land transport

Land (TDG): not regulated for land transport

Sea (IMDG): not regulated for sea transport according to IMDG Code

Air (IATA): not regulated for air transport

SECTION 15 REGULATORY INFORMATION

OSHA Hazard Communication Standard: When used for its intended purposes, this material is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200

National Chemical Inventory Listing: AICS, DSL, CHINA, EINECS, ENCS, KOREA, PICCS, TSCA
Special Cases:

Legend: AICS-Australia Inventory of Chemical Substances, DSL- Domestic Substance List (Canada), CHINA- inventory list, EINECS-European Inventory of Existing Commercial Chemical Substances, ENCS- Japan Existing and New Chemical Substances, KOREA-Existing and Evaluated Chemical Substances, PICCS-Philippines Inventory of Chemicals and Chemical Substances, TSCA-United States Section 8(b) Inventory

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EPCRA: This material contains no extremely hazardous substances.

SARA (311/312) Reportable Hazard Categories: none

SARA (313) Toxic Release Inventory: This material contains no chemicals subject to the supplier notification requirements of the SARA 313 Toxic Release Program.

California Proposition 65: This material does not contain any chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm at concentrations that trigger the warning requirements of California Proposition 65.

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

WHMIS Hazard Class

None

SECTION 16 OTHER INFORMATION

EXTERNAL INFORMATION:

This product may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used. Ritchie Engineering must rely on information provided by those materials manufacturers or distributors.

Version: I

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Revisions / Comments: