

SAFETY DATA SHEET

Item Code: N0105/6/9

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| Section 1. | Identification of the material and the supplier |
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| Item Code: | N0105/6/9 |
| Product: | Yellow Jacket Super Evac Vacuum Pump Oil |
| Product Use: | Industrial Oil |
| | |
| New Zealand Supplier: | Realcold Ltd |
| Address: | 9 Prescott Street Penrose, Auckland |
| Telephone: | 09 526 5700 |
| Fax Number: | 09 526 5721 |
| Emergency Telephone: | 09 526 5700 0800 766 764 (National Poison Centre) |
| | |
| Manufacturer: | Ritchie Engineering, 10950 Hampshire Ave, South Bloomington, USA |
| | |
| Date of MSDS Preparation: | 14 March 2017– ver 2 |

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| Section 2. | Hazards Identification |
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The manufacturer has stated that this substance is not hazardous according to the HSNO (Minimum Degrees of Hazard) Regulations 2001

Major Route(s) of Entry : Skin contact.

Symptoms of Acute Exposure:

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| Inhalation: | At elevated temperatures or in enclosed spaces, product mist or vapors may irritate the mucous membranes of the nose, the throat, bronchi, and lungs. |
| Eye Contact: | This product can cause transient mild eye irritation with short-term contact with liquid sprays or mists. Symptoms include stinging, watering, redness, and swelling. |
| Skin Contact: | This material can cause mild skin irritation from prolonged or repeated skin contact. Injection under the skin can cause inflammation and swelling. Injection of pressurized hydrocarbons can cause severe, permanent tissue damage. Initial symptoms may be minor. Injection of petroleum hydrocarbons requires immediate medical attention. |
| Ingestion: | If swallowed, large volumes of material can cause generalized depression, headache, drowsiness, nausea, vomiting and diarrhea. Smaller doses can cause a laxative effect. If aspirated into the lungs, liquid can cause lung damage. |

Chronic Health Effects:

This product contains a petroleum-based mineral oil. Prolonged or repeated skin contact can cause mild irritation and inflammation characterized by drying, cracking, (dermatitis) or oil acne. Repeated or prolonged inhalation of petroleum-based mineral oil mists at concentrations

above applicable workplace exposure levels can cause respiratory irritation or other pulmonary effects.

Conditions Aggravated by Exposure:

Disorders of the following organs or organ systems that may be aggravated by significant exposure to this material or its components include: Skin

Target Organs: Skin

Carcinogenic Potential

This product is not known to contain any components at concentrations above 0.1% which are considered carcinogenic by OSHA, IARC or NTP.

Section 3. Composition / Information on Ingredients

| Ingredients | Wt% | CAS NUMBER. |
|---|------------|--------------------|
| Highly Refined Petroleum Lubricant Oils | 100 | Various |

Section 4. First Aid Measures

Routes of Exposure:

- If in Eyes** Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Call a physician immediately.
- If on Skin** If burned by hot material, cool skin by quenching with large amounts of cool water. For contact with product at ambient temperatures, remove contaminated shoes and clothing. Wipe off excess material. Wash exposed skin with mild soap and water. Seek medical attention if tissue appears damaged or if pain or irritation persists. Thoroughly clean contaminated clothing before reuse. Clean or discard contaminated leather goods. If material is injected under the skin, seek medical attention immediately
- If Swallowed** Do not induce vomiting unless directed to by a physician. Do not give anything to drink unless directed to by a physician. Never give anything by mouth to a person who is not fully conscious. If significant amounts are swallowed or irritation or discomfort occurs, seek medical attention immediately
- If Inhaled** Vaporization is not expected at ambient temperatures. This material is not expected to cause inhalation-related disorders under anticipated conditions of use. In case of overexposure, move the person to fresh air

Notes to the Physician:

SKIN: In the event of injection in underlying tissue, immediate treatment should include extensive incision, debridement and saline irrigation. Inadequate treatment can result in ischemia and gangrene. Early symptoms may be minimal.
INGESTION: The viscosity range of the product(s) represented by this MSDS is greater than 100 SUS at 100°F. Careful gastric lavage may be considered to evacuate large quantities of material.

Section 5. Fire Fighting Measures

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| Hazard Type | Combustible Material |
| Hazards from combustible products | Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and oxides of sulfur and/or nitrogen. |
| Suitable Extinguishing media | Use dry chemical, foam, carbon dioxide or water fog. Water or foam may cause frothing. Carbon dioxide and inert gas can displace oxygen. Use caution when applying carbon dioxide or inert gas in confined spaces |
| Precautions for firefighters and special protective clothing | This material can burn but will not readily ignite. This material will release vapors when heated above the flash point temperature that can ignite when exposed to a source of ignition. In enclosed spaces, heated vapor can ignite with explosive force. Mists or sprays may burn at temperatures below the flash point. Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies |
| HAZCHEM CODE | Not allocated |

Section 6. Accidental Release Measures

Take proper precautions to ensure your own health and safety before attempting spill control or clean-up. For more specific information, refer to the Emergency Overview on Page 1, Exposure Controls and Personal Protection in Section 8 and Disposal Considerations in Section 13 of this MSDS.

Do not touch damaged containers or spilled material unless wearing appropriate protective equipment. Slipping hazard; do not walk through spilled material. Stop leak if you can do so without risk. For small spills, absorb or cover with dry earth, sand, or other inert non-combustible absorbent material and place into waste containers for later disposal.

Contain large spills to maximize product recovery or disposal. Prevent entry into waterways or sewers. In urban area, cleanup spill as soon as possible. In natural environments, seek cleanup advice from specialists to minimize physical habitat damage. This material will float on water. Absorbent pads and similar materials can be used. Comply with all laws and regulations.

Section 7. Handling and Storage**Handling**

Keep containers closed and do not handle or store near heat, sparks, or any other potential ignition sources. Avoid contact with oxidizing agents. Never siphon by mouth. Avoid contact with eyes, skin, and clothing. Avoid contamination and extreme temperatures.

Empty containers may contain product residues that can ignite with explosive force. Drain and purge equipment, as necessary, to remove material residues.

Follow proper entry procedures, including compliance with AS 2865:2009 prior to entering confined spaces such as tanks or pits. Use appropriate respiratory protection when concentrations exceed any established occupational exposure level (See Section 8). Promptly remove contaminated clothing. Wash exposed skin thoroughly with soap and water after handling.

Do not pressurize, cut, weld, braze solder, drill, grind or expose containers to flames, sparks, heat or other potential ignition sources. Protect containers against physical damage. Consult appropriate local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers and/or waste residues of this product.

Storage Keep container tightly closed. Store in a cool, dry, well-ventilated area. Store only in approved containers. Do not store with strong oxidizing agents. Do not store at elevated temperatures. Avoid storing product in direct sunlight for extended periods of time. Storage area must meet OSHA requirements and applicable fire codes. Consult appropriate local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers or waste residues of this product.

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| Section 8 | Exposure Controls / Personal Protection |
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WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

| Substance | TWA | | STEL | |
|-------------------|-----|-------|------|-------|
| | ppm | mg/m3 | ppm | mg/m3 |
| Oil Mist, Mineral | | 5 | | 5 |

Workplace Exposure Standard – Time Weighted Average (WES-TWA). *The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure.* Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). *The 15-minute average exposure standard.* Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply.

Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits (see below). An eye wash station and safety shower should be located near the work-station.

Personal Protection

Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to OSHA regulations. The following pictograms represent the minimum requirements for personal protective equipment. For certain operations, additional PPE may be required

Eyes: Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. Wear goggles if splashing or spraying is anticipated. Wear goggles and face shield if material is heated above 51°C. Have suitable eye wash water available.

Hands: None required for incidental contact. Use gloves constructed of chemical resistant materials such as heavy nitrile rubber if frequent or prolonged contact is expected. Use heat-protective gloves when handling product at elevated temperatures.

Respiratory: The need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. If elevated airborne concentrations above applicable workplace exposure levels are anticipated, an approved organic vapor respirator equipped with a dust/mist prefilter should be used (Type A filter). Protection factors vary depending upon the type of respirator used. See "A Guideline to Respiratory Protection" booklet downloadable from the NZ Dept of Labour website.

General: Use good personal hygiene practices. Wash hands and other exposed skin areas with plenty of mild soap and water before eating, drinking, smoking, use of toilet facilities, or leaving work. DO NOT use gasoline, kerosene, solvents or harsh abrasives as skin cleaners. Since specific exposure standards/control limits have not been established for this product, the "Oil Mist, Mineral" exposure limits shown below are suggested as minimum control guidelines

Section 9 Physical and Chemical Properties

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| Appearance | Light Amber Liquid |
| Odour | Mild Petroleum Odour |
| Flash Point | 220°C (cup closed) |
| Boiling Point | Not available |
| Vapour Pressure | <0.001 kPa (<0.01 mm Hg) (at 20°C) |
| Auto-ignition Temperature | |
| Percent Volatile by weight | Negligible volatility. |
| Specific Gravity | 0.87 (Water = 1) |
| Solubility in Water | Negligible solubility in cold water |

Section 10. Stability and Reactivity

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| Stability of Substance | Stable |
| Conditions to Avoid | Keep away from extreme heat, sparks, open flame, and strongly oxidizing conditions |
| Incompatible Materials | Strong oxidizers. |
| Hazardous Decomposition Products | No additional hazardous decomposition products were identified other than the combustion products identified in Section 5 of this MSDS. |

Section 11 Toxicological Information

Highly-refined petroleum lubricant oils:

ORAL (LD50): Acute: >5000 mg/kg [Rat].

DERMAL (LD50): Acute: >2000 mg/kg [Rabbit].

Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current work place exposure levels produced no significant toxicological effects. In long term studies (up to two years) no carcinogenic effects have been reported in any animal species tested.

Section 12. Ecotoxicological Information

Ecotoxicity: Analysis for ecological effects has not been conducted on this product. However, if spilled, this product and any contaminated soil or water may be harmful to human, animal, and aquatic life. Also, the coating action associated with petroleum and petroleum products can be harmful or fatal to aquatic life and waterfowl.

Environmental

Fate: **Biodegradability:** Inherently biodegradable in aerobic conditions.
Partition Coefficient (log Kow): >6 (based on similar materials)

Photodegradation: Based on similar materials, this product will have little or no tendency to partition to air. Hydrocarbons from this product which do partition to air are expected to rapidly photodegrade.

Stability in Water: Not readily susceptible to hydrolysis under aquatic conditions.

Distribution: Principally to soil and sediment. Petroleum-based (mineral) lubricating oils normally will float on water. In stagnant or slow-flowing waterways, an oil layer can cover a large surface area. As a result, this oil layer might limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway may be sufficient to cause a fish kill or create an anaerobic environment.

Section 13. Disposal Considerations

Conditions of use may cause this material to become a "hazardous waste", as defined by Local Regulations. It is the responsibility of the user to determine if the material is a "hazardous waste" at the time of disposal.

Empty drums and pails retain residue.

DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose this product's empty container to heat, flame, or other ignition sources.

DO NOT attempt to clean it. Empty drums and pails should be drained completely, properly bunged or sealed, and promptly sent to a reconditioner.

Section 14 Transport Information

The manufacturer has stated that this product is not Classified as a Dangerous Good for transport (in NZ ; NZS 5433:2007)

Section 15 Regulatory Information

The manufacturer has stated that this substance is not hazardous according to the HSNO (Minimum Degrees of Hazard) Regulations 2001

Section 16 Other Information

1. HSNO Approved Code of Practice: Preparation of Safety Data Sheets, September 2006.

Disclaimer

This document has been issued by Realcold Limited and serves as their Safety Data Sheet ('SDS'). It is based on information concerning the product which has been provided to Realcold Limited or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer. While Realcold Limited have taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, Realcold Limited accept no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS

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Please contact the New Zealand distributor, Realcold Ltd, if further information is required.

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