

MATERIAL SAFETY DATA SHEET**PLEASE CAREFULLY READ AND UNDERSTAND THIS MATERIAL SAFETY DATA SHEET BEFORE USING THIS PRODUCT**

For Welding Consumables and Related Products

May be used to comply with OSHA's Hazards Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

SECTION I (IDENTIFICATION)

Manufacturer/Supplier Name: UNIWELD PRODUCTS, INC. Emergency Phone No.: (954) 584-2000
 2850 Ravenswood Road
 Fort Lauderdale, FL 33312

Product Name(s): **R & O 68 TURBINE OILS**
 Product Classification: **VACUUM PUMP OIL**

SECTION II (HAZARDOUS INGREDIENTS/IDENTITY INFORMATION)

Important: The BASE OIL may be a mixture of any of the following cas numbers listed in the chart below. COMPOSITION COMMENT: All the components of this material are on the Toxic Substance Control Act Chemical Substances Inventory. This product fits the ACGIH definition for mineral oil mist. The ACGIH TLV is 5 mg/m³. The OSHA PEL is 5 mg/m³.

INGREDIENT	% WEIGHT	CAS NO.	EXPOSURE LIMIT (mg/m ³)	
			OSHA PEL	ACGIH TWA/STEL
LUBRICATING BASE OIL SEVERELY REFINED PETROLEUM DISTILLATE	> 98	64741884	5 (mist)	10 (mist) 5 (mist)
		64741895		
		64741964		
		64741975		
		64742014		
		64742525		
		64742536		
		64742547		
		64742558		
		64742570		
		64742627		
		64742650		
ADDITIVES	< 2	72623837		

SECTION III (PHYSICAL DATA)

PHYSICAL DESCRIPTION: Clear, colorless liquid.
 pH: NA
 VAPOR PRESSURE: <0.01 mm Hg at 100°F
 VAPOR DENSITY (AIR=1): Heavier than air.
 BOILING POINT: >500°F (>260°C)
 FREEZING POINT: NA
 MELTING POINT: NA
 SOLUBILITY: Soluble in hydrocarbon solvents; insoluble in water.
 SPECIFIC GRAVITY: 0.86 - 0.87 @ 15.6/15.6°C
 VOLATILE ORGANIC COMPOUNDS (VOC): 1.8 (wt%); 14.94 g/l approx.
 VISCOSITY: 28.8 - 210 cSt @ 40°C (Min.)
 POUR POINT: -12°C (Max.)

SECTION IV (FIRE AND EXPLOSION HAZARD DATA)

FIRE CLASSIFICATION: Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

FIRE COMMENT: Leaks/ruptures in high pressure systems using materials of this type can create a fire hazard when in the vicinity of ignition sources (e.g. open flame, pilot lights, sparks, or electric arcs).

FLAMMABLE PROPERTIES: FLASH POINT: (COC) 349-500°F (176-260°C) Min.
 AUTOIGNITION: NDA
 FLAMMABILITY LIMITS (% by volume in air): Lower: NA Upper: NA
 EXTINGUISHING MEDIA: CO₂, Dry Chemical, Foam, Water Fog
 NFPA RATINGS: Health 0; Flammability 1; Reactivity 0

FIRE FIGHTING INSTRUCTIONS: This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

COMBUSTION PRODUCTS: Normal combustion forms carbon dioxide and water vapor; incomplete combustion can produce carbon monoxide.

SECTION V (REACTIVITY DATA)

HAZARDOUS DECOMPOSITION PRODUCTS: None known

CHEMICAL STABILITY: Stable.

CONDITIONS TO AVOID: No data available.

INCOMPATIBILITY WITH OTHER MATERIALS: May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

HAZARDOUS POLYMERIZATION: Polymerization will not occur.

SECTION VI (HEALTH HAZARD DATA)**Primary Routes of Entry to Body:** Fume inhalation, ingestion, skin, and eyes.**⚠ WARNING: DO NOT BREATHE FUMES!**

IMMEDIATE HEALTH EFFECTS EYE: Not expected to cause prolonged or significant eye irritation.

SKIN: Contact with the skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin. High-Pressure Equipment Information: Accidental high-velocity injection under the skin of materials of this type may result in serious injury. Seek medical attention at once should an accident like this occur. The

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initial wound at the injection site may not appear to be serious at first; but, if left untreated, could result in disfigurement or amputation of the affected part.

INGESTION: Not expected to be harmful if swallowed.

INHALATION: Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit.

▽ **WARNING: DO NOT BREATHE FUMES!**

(Health and Hazards) Threshold Limit Value: The ACGIH recommended general limit for welding fume NOC (Not Otherwise Classified) is 5 mg/m³. ACGIH 1984-85 preface states, "The TLV-TWA should be used as guides in the control of health hazards and should not be used as firm lines between safe and dangerous concentrations." See Section V for specific fume constituents which may modify this TLV.

Emergency and First Aid procedures:

EYE: No specific first aid measures are required because this material is not expected to cause eye irritation. As a precaution remove contact lenses, if worn, and flush eyes with water.

SKIN: No specific first aid measures are required because this material is not expected to be harmful if it contacts the skin. As a precaution, remove clothing and shoes if contaminated. Wash skin with soap and water. Wash or clean contaminated clothing and shoes before reuse.

INGESTION: No specific first aid measures are required because this material is not expected to be harmful if swallowed. Do not induce vomiting. As a precaution, give the person a glass of water or milk to drink and get medical advice. Never give anything by mouth to an unconscious person.

INHALATION: If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

NOTE TO PHYSICIANS: In an accident involving high-pressure equipment, this product may be injected under the skin. Such an accident may result in a small, sometimes bloodless, puncture wound. However, because of its driving force, material injected into a fingertip can be deposited into the palm of the hand. Within 24 hours, there is usually a great deal of swelling, discoloration, and intense throbbing pain. Immediate treatment at a surgical emergency center is recommended.

▽ **WARNING: CALIFORNIA PROPOSITION 65:** This product, when used for welding, soldering, brazing, cutting and other metal working or flame processes, produces fumes, particulates, residues and other by-products which contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. ▽ **WARNING:** This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

SECTION VII (PRECAUTIONS FOR SAFE HANDLING AND USE/APPLICABLE CONTROL MEASURES)

Read and understand the manufacturer's instructions and the precautionary label on the product. (See American National Standard Z-49.1, "Safety in Welding and Cutting," published by the American Welding Society, P.O. Box 351040, Miami, FL 33135 and OSHA Publication 2206 (29 CFR 1910), US Government Printing Office, Washington, DC 20402 for more details on the following):

PRECAUTION TO BE TAKEN IN HANDLING AND STORAGE: DO NOT USE IN HIGH PRESSURE SYSTEMS in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed. Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. 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. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner, or properly disposed of. Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS: Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS: Use in a well-ventilated area. If user operations generate an oil mist, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended mineral oil mist exposure limits.

PERSONAL PROTECTIVE EQUIPMENT EYE/FACE PROTECTION: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

SKIN PROTECTION: No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances. Suggested materials for protective gloves include: <Nitrile> <Silver Shield> <Viton>

RESPIRATORY PROTECTION: No respiratory protection is normally required. If user operations generate an oil mist, determine if airborne concentrations are below the recommended mineral oil mist exposure limits. If not wear a NIOSH approved respirator that provides adequate protection from measured concentrations of this material. Use the following elements for air-purifying respirators: particulate.

PROCEDURE FOR CLEANUP OR SPILLS OR LEAKS:

ACCIDENTAL RELEASE MEASURES: CHEMTREC EMERGENCY NUMBER (24 hr): (800)424-9300 or (703)527-3887 International Collect Calls Accepted

ACCIDENTAL RELEASE MEASURES: Stop the source of the leak or release. Clean up releases as soon as possible, observing precautions in Exposure Controls/Personal Protection. Contain liquid to prevent further contamination of soil, surface water or groundwater. Clean up small spills using appropriate techniques such as sorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Follow prescribed procedures for reporting and responding to larger releases.

WASTE DISPOSAL: Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

SPECIAL PRECAUTIONS: IMPORTANT. MAINTAIN EXPOSURE BELOW PEL/TLV. USE INDUSTRIAL HYGIENE MONITORING TO ENSURE THAT YOUR USE OF THIS MATERIAL DOES NOT CREATE EXPOSURES WHICH EXCEED PEL/TLV. Always use exhaust ventilation. Refer to the following sources for important additional information: ANSI Z-49.1. The American Welding Society, P.O. Box 351040, Miami FL 33135; OSHA (29 CFR 1910), US Dept. of Labor, Washington, DC 20210.

Uniweld Products, Inc. believes this data to be accurate and to reflect qualified expert opinion regarding current research. Uniweld Products, Inc. cannot make any expressed or implied warranty as to this information.