

MATERIAL SAFETY DATA SHEET

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TRADE NAME: **Bio-Turbine R & O Fluids (ISO 32, 46, 68, 100)**
CAS NO: Mixture.
SYNONYMS: None.
GENERIC/CHEMICAL NAME: Mixture.
PRODUCT TYPE: Hydraulic Oil.
PREPARATION/REVISION DATE: 05/04/2004
TRANSPORTATION EMERGENCY PH NO: 330-877-9982

NFPA CODE: HEALTH: 1 FIRE: 1 REACTIVITY: 0
HMIS CODE: HEALTH: 1 FIRE: 1 REACTIVITY: 0

SECTION 1 - HAZARDOUS INGREDIENTS

- This material does not contain any chemical listed as a carcinogen or potential carcinogen by OSHA, IARC Monographs or National Toxicology Program.
- This material has no known hazards.

SECTION 2 - PHYSICAL DATA

EVAPORATION RATE
(n-Butyl Acetate=1) Approx. 0
PERCENT VOLATILE: 0
BOILING POINT: Not Determined
VAPOR PRESSURE: <1
VAPOR DENSITY (Air = 1): <1
SPECIFIC GRAVITY (H₂O = 1): 0.874 to 0.891 @ 15.6°C
SOLUBILITY IN WATER: Insoluble
APPEARANCE AND ODOR: yellow liquid mild odor

SECTION 3 - FIRE FIGHTING MEASURES

FLASH POINT (typical): > 236°C to 280°C (COC)
UPPER FLAMMABLE LIMIT: Not Determined.
LOWER FLAMMABLE LIMIT: Not Determined.
EXTINGUISHING MEDIA: CO₂, dry chemical, alcohol foam. Water can be used to cool and protect exposed material.
SPECIAL FIRE-FIGHTING PROCEDURES: Recommend wearing self-contained breathing apparatus. Water may cause splattering. Material will float on water.

SECTION 4 - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE:	Contains vegetable oil. OSHA PEL of 5 mg per cubic meter. ACGIH STEL of 10 mg per cubic meter for mineral oil mists.
EFFECTS OF OVEREXPOSURE:	May cause eye and skin irritation. Low order of toxicity.

SECTION 5 - EMERGENCY AND FIRST AID PROCEDURES:

ORAL:	DO NOT INDUCE VOMITING. If conscious, give 2 glasses of water. Get immediate medical attention.
EYE:	Flush with water at least 15 minutes. Get medical attention if eye irritation develops or persists.
SKIN:	Wash with soap and water. Remove contaminated clothing. Get medical attention if irritation develops. Launder contaminated clothing before reuse.
INHALATION	Remove exposed person to fresh air if adverse effects are observed. If breathing is labored, administer oxygen. If breathing has stopped, apply artificial respiration. If irritation persists or if toxic symptoms are observed, get medical attention.
ADDITIONAL:	Note to physician: Treat symptomatically.

SECTION 6 - STABILITY AND REACTIVITY

STABILITY:	Material is normally stable at moderately elevated temperatures and pressures.
INCOMPATIBILITY:	Oxidizing agents.
POLYMERIZATION:	Will not occur.
THERMAL DECOMPOSITION:	Smoke, carbon monoxide, aldehydes and other products of incomplete combustion.

SECTION 7 - SPILLS OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED OR RELEASED:	Prevent entry into sewers and waterways. Pick up free liquid for recycle/disposal. Absorb small amounts on inert material for disposal.
WASTE DISPOSAL METHOD:	This material is non-hazardous for disposal under RCRA. Disposal should be in compliance with federal, state and local laws.

SECTION 8 - HANDLING AND STORAGE

HANDLING PROCEDURES:	Keep containers closed when not in use. Wash thoroughly after handling.
STORAGE PROCEDURES:	No special storage precautions required.

SECTION 9 - EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION PROCEDURES:	Use local exhaust ventilation to control mists or vapors. Additional ventilation or exhaust may be required to maintain air concentrations below recommended exposure limits.
GLOVES PROTECTION:	Use nitrile or neoprene gloves.
EYE PROTECTION:	Chemical goggles or face-shield.
RESPIRATORY PROTECTION:	Under normal use conditions, respirator is not usually required. Use NIOSH/MSHA approved disposable dust/mist mask if the recommended exposure limit is exceeded. Use self-contained breathing apparatus for entry into confined space, for other poorly ventilated areas and for large spill clean-up sites.
CLOTHING RECOMMENDATION:	Long sleeve shirt is recommended. Wear a chemically protective apron when contact with material may occur. Launder contaminated clothing before reuse.

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