

MATERIAL SAFETY DATA SHEET

PRODUCT TRADE NAME: **RL-3 and RL-3 Winterized**

PRODUCT TYPE: Diesel fuel combustion improver

REVISION DATE: June 1, 2011

CHEMICAL NAME: Mixture

NFPA CODE: Health: 1 Fire: 2 Reactivity: 1

SECTION 1 - HAZARDOUS INGREDIENTS

5-10 % Petroleum Naphtha - CAS # 64742-47-8 Supplier recommended TWA = 100 ppm

50-60% 2-EthylHexyl Nitrate (CAS 27247-96-7) TWA - 1ppm

1-5 % 2-Ethyl Hexanol- CAS #104-76-7

SECTION 2 - FIRE AND EXPLOSION HAZARDS

FLASH POINT: 172°F (78°C)
UPPER FLAMMABLE LIMIT: Not Determined.
LOWER FLAMMABLE LIMIT: Not Determined.
EXTINGUISHING MEDIA: CO₂, dry chemical, foam.

SPECIAL FIREFIGHTING PROCEDURES: Wear self-contained breathing apparatus with full face piece
UNUSUAL FIRE & EXPLOSION HAZARDS: Toxic fumes may be evolved on burning or exposure to heat. Vapors are heavier than air and may travel to a distant ignition source. Container may rupture on heating.

SECTION 3 - HEALTH HAZARD DATA

ORAL TOXICITY: LD 50 > 5000 mg/kg in rats. Based on data from components.
EYE IRRITATION: May cause eye irritation.
SKIN IRRITATION: May cause skin irritation. Prolonged exposure may cause dermatitis.
DERMAL TOXICITY: LD 50 in rabbits >2000 mg/kg. Based on similar materials. Components may be absorbed through skin.
OTHER: Inhalation of vapors may cause irritation of nose and throat, dizziness, weakness, headache, nausea, vomiting, blurred vision, tremors, shallow and rapid respiration, and heart ventricular irregularities.
CHRONIC TOXICITY: A 14-day dermal toxicity study of 2-ethylhexanol in rats showed blood effects, decreased spleen weight and decreased triglycerides Repeated ingestion of 2-ethylhexanol may cause injury to the liver and kidneys.
CARCINOGENICITY: Not considered to be carcinogenic under IARC
MUTAGENICITY: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
TLV: None established. Oil mist TLV 5mg/m³.

FIRST AID PROCEDURES

SKIN: Wash well with soap and water.
EYE: Flush well with water for at least 15 minutes.
INHALATION: Remove to fresh air. See a physician if irritation persists. If breathing has stopped, apply artificial respiration.
ORAL: Call a physician. Do not induce vomiting. If conscious give two glasses of water.
ADDITIONAL: None.

SECTION 4 - SPECIAL PROTECTION INFORMATION

VENTILATION PROCEDURE: Mechanical ventilation recommended.
GLOVES PROTECTION: Neoprene or nitrile rubber gloves recommended.
EYE PROTECTION: Safety glasses recommended.
OTHER PROTECTION: NIOSH-approved organic vapor respirator if TLV exceeded. Long-sleeved shirt.

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SECTION 5 - PHYSICAL DATA

VAPOR PRESSURE: <1 mmHg @ 20°C
SPECIFIC GRAVITY: 0.93
VISCOSITY @ 40°C: >15 cSt
WATER SOLUBILITY: Insoluble
PERCENT VOLATILE: Not Determined.
VAPOR DENSITY: Not Determined.
EVAPORATION RATE: Not Determined.
ODOR: Strong.
APPEARANCE: Reddish-brown liquid.

SECTION 6 - STABILITY

STABILITY: Normally stable under moderately elevated temperatures and pressures.
INCOMPATIBILITY: Strong oxidizing agents.
POLYMERIZATION: Will not occur.
THERMAL DECOMPOSITION: Smoke, and oxides of carbon, hydrogen, nitrogen.

SPILL OR LEAK PROCEDURES

SPILL PROCEDURES: Ventilate area. Remove sources of ignition. Wear self-contained breathing apparatus, rubber boots, suit, and gloves. Prevent entry into sewers and waterways. Pick up free liquid for recycle/disposal. Absorb small amounts on inert material for disposal.

WASTE DISPOSAL: If disposed of, this material is not believed to be a hazardous waste under RCRA. Waste management should be in compliance with federal, state, and local laws.

CERCLA REPORTING: None

SPECIAL PRECAUTIONS

SPECIAL PRECAUTIONS: **DO NOT HEAT!** Store in a cool (below 110°F), dry, place away from flame. Keep containers closed when not in use. Open container in a well-ventilated area. Remove contaminated clothing and laundry before reuse.

TRANSPORTATION AND LABELING

DOT PROPER SHIPPING NAME: Not Applicable.
DOT HAZARD CLASS: Not Applicable.
DOT ID NUMBER (UN NO.): Not Applicable.
EPA HAZARDOUS SUBSTANCES: Is not known to contain greater than 1% of any SARA Extremely Hazardous Substance.
SARA SECTION 313: None
U.S. TSCA INVENTORY: All components are included on the U.S. TSCA Inventory.
CANADIAN CEPA: All components are in compliance with the Canadian Environmental Protection Act.
California Proposition 65 Warning: This product may contain slight but detectable amounts of toluene, naphthalene, and ethylene oxide, chemicals known to the State of California to cause cancer.
PRECAUTIONARY LABELS: Harmful if inhaled. May cause eye irritation. May cause skin irritation. May be harmful if absorbed through skin. May cause chronic health effects. Based on data with laboratory animals.
IMDG Shipping Description: UN3082 Environmentally hazardous substance, liquid, n.o.s. (Alkyl C7-C9 nitrates), 9, III, Marine Pollutant (Alkyl C7-C9 nitrates)

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