

## MATERIAL SAFETY DATA SHEET

PRODUCT TRADE NAME: **Diesel Fuel Catalyst (DFC) and Diesel Fuel Catalyst Winterized**  
PRODUCT TYPE: Diesel fuel combustion improver  
REVISION DATE: December 16, 2011  
CHEMICAL NAME: Mixture  
NFPA CODE: Health: 1 Fire: 2 Reactivity: 1

### SECTION 1 - HAZARDOUS INGREDIENTS

40-49.9% Petroleum Naphtha - CAS # 64742-47-8 Supplier recommended TWA = 100 ppm  
20-30% 2-EthylHexyl Nitrate (CAS 27247-96-7) TWA - 1ppm  
5-10% 2-Ethyl Hexanol- CAS #104-76-7

### SECTION 2 - FIRE AND EXPLOSION HAZARDS

FLASH POINT: 190°F (88°C)  
UPPER FLAMMABLE LIMIT: Not Determined.  
LOWER FLAMMABLE LIMIT: Not Determined.  
EXTINGUISHING MEDIA: CO<sub>2</sub>, 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/m<sup>3</sup>.

### 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

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VAPOR PRESSURE: <1 mmHg @ 20°C  
SPECIFIC GRAVITY: 0.93  
VISCOSITY @ 40°C: 51 cSt  
WATER SOLUBILITY: Insoluble  
PERCENT VOLATILE: Not Determined.  
VAPOR DENSITY: Not Determined.  
EVAPORATION RATE: Not Determined.  
ODOR: Strong.  
APPEARANCE: Reddish-brown liquid.

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#### SECTION 6 - STABILITY

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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.

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#### SPILL OR LEAK PROCEDURES

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**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

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#### SPECIAL PRECAUTIONS

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**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.

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#### TRANSPORTATION AND LABELING

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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:** May cause eye irritation. May cause skin irritation. May be harmful if absorbed through skin or inhaled. May cause chronic health effects. Based on data with laboratory animals.  
**IMDG Shipping Description:** UN3082 Environmentally hazardous substance, liquids, n.o.s. (Alkyl C7-C9 nitrates), 9, III, Marine Pollutant (Alkyl C7-C9 nitrates)

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