



MATERIAL SAFETY DATA SHEET

Effective Date: January, 28 th, 2014

Chemical Product and Company Identification:

DIPACO INC

105 E. Parr Blvd. Reno, NV 89511

Emergency Phone: 1-800-222-1222

Information Phone: (800) 648-4720

Product Name: Diesel Boost Diesel Fuel Upgrade

Product Codes: DT2303/DT2305

Chemical Family/Class: Mixture, solvent-based

CAS Number: Not applicable

Composition Data:

Hazardous Components ^{1,5}	% range	CAS#	OSHA	ACGIH	STEL ppm
			PEL ppm	TLV ppm	
Glycol ether ^{2,3,4}	> 95	111-76-2	25-skin (TWA)	25-skin (TWA)	

¹ Components presenting a physical or health hazard or subject to CERCLA or SARA reporting requirements and found at or above 1% (0.1% if identified as a carcinogen). Other components may be listed if deemed appropriate.

² Chemical subject to reporting requirements of CERCLA (40 CFR 302.4).

³ Chemical subject to reporting requirements of SARA Section 313 (40 CFR 372).

None of the components of this product are listed as a carcinogen or potential carcinogen by OSHA, IARC Monograph or the National Toxicology Program.

Typical Physical Data (not specifications)

Boiling Point, °F (typical): > 335

Specific Gravity @ Room Temp: ca. 0.89

Vapor Pressure @ 20°C, mm Hg: approx. 0.6

Vapor Density (air =1): > 1

Evaporation Rate: < Butyl Acetate

Solubility in Water: Partially soluble

Appearance: Clear to hazy amber

Odor: Solvent-like, "Butyl"

Physical State: Liquid

Percent Volatile (approx): > 95%

Fire and Explosion Hazard Data:

Flash Point, typical (TCC): 154°F

Flammability Limits: Upper: 10.6

Autoignition Temperature: N/D (not determined)

Lower: 1.1 (% in air by volume)

Note: Although material is **Combustible**, it is **not** considered **Flammable** by current U.S. D.O.T. criteria

Extinguishing Media: Foam, CO2 or Dry Chemical. Water fog may be used only for cooling exposed material.



Special Firefighting Procedures: Avoid contact with vapors. Use of self-contained breathing apparatus with full face mask is recommended for all chemical fires. Not miscible with water when hot. May produce a floating fire hazard in extreme fire conditions.

Unusual Fire or Explosion Hazards: Toxic or noxious fumes, gases or vapors may evolve on burning. Vapors which are heavier than air may be evolved and may travel along the ground or be moved by ventilation and ignited by heat, pilot lights, other flames and ignition sources at locations distant from material handling point. Metal containers of 5 gallons or larger should be grounded and/or bonded when material is transferred.

Reactivity Data:

Stability: Stable under ordinarily expected conditions.

Hazardous Polymerization: Will not occur.

Incompatibilities: Strong oxidizing agents, strong alkalis, strong acids.

Conditions to Avoid: Prolonged reflux, elevated temperatures, open flame.

Hazardous Combustion or Decomposition Products: Combustion may produce carbon monoxide, carbon dioxide, smoke, aldehydes and other reactive hydrocarbons, and other products of incomplete combustion.

Health Hazard Data:

Primary Routes of Entry: Inhalation, , Skin Contact, Eye Contact.

Acute Exposure Effects:

Swallowing: Moderate toxicity. May cause central nervous system depression (e.g. headache, general weakness, dizziness, drowsiness, unconsciousness), irritation of the gastrointestinal lining, vomiting, nausea, diarrhea, and abdominal pain. Swallowing large amounts may be harmful. Symptoms may include blood abnormalities (red blood cell hemolysis), kidney or liver damage and coma.

Skin Absorption: Skin absorption is possible. Effects may include those described for swallowing. Prolonged or extensive contact may result in the absorption of potentially harmful amounts of material.

Inhalation: Short-term single exposure toxicity is moderate. Headache, nausea, vomiting, dizziness and drowsiness and other central nervous system effects may occur. Exposure to high vapor concentrations or prolonged exposure to lesser concentrations may be harmful. Symptoms include irritation of the respiratory tract, eyes and throat, stupor, nasal discomfort and discharge, possible chest pain and coughing. Breathing of vapors may aggravate asthma and inflammatory or fibrotic pulmonary disease.

Skin Contact: Brief contact may cause mild skin irritation, possibly with itching or local redness. Prolonged contact may cause more severe irritation, with discomfort or pain and



dermatitis (redness, edema, drying, defatting and cracking of the skin), and may also result in skin absorption.

Eye Contact: Exposure to liquid or high concentrations of vapors may be severely irritating to the eyes. Symptoms include discomfort, pain, excessive blinking and tear production, marked excess redness and swelling of the conjunctiva, and risk of irreversible damage to the eyes.

Chronic Exposure Effects:

Effects of Repeated Overexposure: Acute lethal-exposure animal studies of the glycol ether have resulted in congestion of organs including kidney, spleen and lungs. Fetal harm occurs only at exposure levels harmful to the pregnant animal. Simple animal overexposure studies of the same material have reported mild, reversible effects to liver and kidney, and red blood cell hemolysis, however humans appear resistant to this effect. Health experts may disagree as to the significance of this data.

Swallowing: If patient is fully conscious, give two glasses of water. Place individual on left side with the head down. If individual is conscious, it is permissible to induce vomiting by giving syrup of ipecac or by gently placing 2 fingers at the back of the throat. Obtain immediate medical attention. Never give anything by mouth if person is unconscious or drowsy.

Skin: Remove contaminated clothing. Wash exposed skin with soap and water. If symptoms develop or persist, seek medical attention. Launder contaminated clothing before reuse and discard shoes and other leather articles saturated with the product.

Inhalation: Remove affected individual to fresh air. Immediately seek medical attention. If breathing is labored, administer oxygen. If breathing has stopped, administer artificial respiration.

Eyes: Remove individual from exposure and into fresh air. Immediately flush eyes with plenty of water until irritation subsides, but for at least 15 minutes, while holding eyelids apart. DO NOT remove contact lenses if worn. Obtain medical attention without delay, preferably from an ophthalmologist.

Notes to Physician: No specific antidote. Treat symptomatically.

TRANSPORTATION INFORMATION

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
49CFR/DOT	NA1993	Combustible liquid, n.o.s. (Ethylene glycol monobutyl ether)	Combustible.	III	
49CFR/DOT Additional information	Not regulated for road or rail shipment if packaged in non-bulk containers (450 Litres or less each). The 'label' appearing here is the placard to be used for bulk shipments.				
TDG	None	Not regulated.	Not regulated	none	
TDG Additional information	None.				



Handling and Storage:

Precautions: Keep product and container away from potential sources of ignition. Do not subject to excessive heat. Keep out of reach of children. Do not contaminate foodstuffs by storage or use of this material. Do not mix with other chemicals except under the direct supervision of a chemist or technically trained supervisor. Open container only in a well-ventilated area. Do not breathe fumes or vapors. Keep containers tightly closed when not in use. Wash thoroughly after handling, and particularly before eating, drinking or smoking. Do not transfer to unmarked containers.

WARNINGS: HARMFUL IF ABSORBED THROUGH SKIN. HARMFUL IF SWALLOWED. CAUSES EYE AND SKIN IRRITATION. COMBUSTIBLE. SWALLOWING LARGE QUANTITIES MAY CAUSE RED BLOOD CELL DAMAGE.

Special Precautions:

WARNING!! Sudden releases of hot organic vapors or mists from equipment operating elevated temperature and pressure, or sudden ingress of air into vacuum equipment may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

NOTICE: Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in this data sheet must be observed.

Accidental Release, Spill or Leak Procedures:

Spill Procedures: Evacuate all non-essential personnel. Personal Protective Equipment appropriate to the nature of the spill must be worn. Remove sources of ignition. Ventilate spill area. Stop spill at source. Prevent entry into sewers and waterways. Collect free liquid for disposal. Residual liquid may be absorbed using inert material. Transfer contaminated absorbent, soil, etc. into containers for disposal. Spills may be reportable under CERCLA, SARA or DOT criteria, depending on quantities involved.

Disposal Methods: Dispose of liquid or contaminated solid materials in conformance with all applicable Federal, State or Local regulations. Incineration of waste material may be suggested as a practical remedy.

Personal Protective Equipment and Protection Information:

Respiratory Protection: If airborne exposure limit for any component is exceeded, use a NIOSH/MSHA approved respirator for organic vapors. Self-contained or air-supplied



breathing apparatus is preferred. OSHA regulations also permit other respirators under specified conditions. Consult your Industrial Hygienist for guidance. Implement engineering or administrative controls to reduce exposure.

Ventilation: Provide sufficient mechanical (General and/or Local Exhaust) ventilation to control mists or vapors and maintain exposure below TLV's.

Protective Gloves: Wear impervious or resistant gloves such as Nitrile or Neoprene rubber. Test gloves for permeability before relying on them.

Eye protection: Chemical splash goggles or a full face shield are advised. OSHA permits other protective means as appropriate. NEVER wear contact lenses when handling chemicals of any sort.

Other Protective Clothing or Equipment: Use chemical-resistant apron or other impervious clothing if required to avoid contamination. A long-sleeved shirt is recommended. Use impervious boots (Test!) to avoid contamination of shoes. Never wear rings, watchbands or other items that may entrap materials against the skin when handling chemicals of any sort; similarly, the availability of a safety shower and eye bath in the vicinity is advised for all chemical handling operations.

Selected Regulatory & Miscellaneous Data:

TSCA: all components of this product are on the US TSCA Inventory. 1,2,4-Trimethylbenzene may be subject to export notification under TSCA Section 12(b).

EPA Hazard Categories: Immediate Health, Delayed Health, Fire.

HMIS Hazard Ratings: Health 2; Fire 2; Reactivity 0; Protection: G (Eyes, Gloves, Respirator)

NFPA Hazard Ratings: Health 2, Fire 2; Reactivity 0; Protection: G (Eyes, Gloves, Respirator)

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