Material Safety Data Sheet (MSDS)
DIESEL FUEL CONDITIONER 170 ML

SECTION 1 : Production Identification

- **Description :** DIESEL FUEL CONDITIONER 170 ML
- **Product information :** Diesel fuel with additive
- **Product Code :** 03-01DS-96DIESEL
- **Usage :** Diesel additive
- **CAS Number:** Not applicable for mixtures.
- **Synonyms:** None.
- **Generic Chemical Name:** Mixture.
- **Manufacturer:** FUJIZAKURA Co.,Ltd.
- **Address:** 1213/296 Ladpraw Rd., Phlap Phla, Wangthonglang, Bangkok 10310
- **Telephone:** (02) 530-7274
- **Fax:** (02) 559-3536

SECTION 2 : Hazards Identification

Component	CAS No.	EU No.	SYMBOL	Risk Phrases	Safety Phase	Weight Percent Range
Diesel Fuel	68476-34-6	270-676-1	Xn N	R40 R65 66 R51/53		79-80
DI Package	Proprietary	Proprietary	Not Applicable	Not Classified	Not Classified	0.5-1.5
Ethylhexyl nitrate	27247-96-7	248-3	Xn	R44 R20/21	S15 S23 S24/25 S36/ 7/39	18-22

SECTION 3 : HAZARDS IDENTIFICATION

- **Health Hazards:** Slightly irritating to respiratory system. Breathing of high vapour concentrations may cause central nervous system (CNS) depression resulting in dizziness, lightheadedness, headache and nausea. May cause moderate irritation to skin. Repeated exposure may cause skin dryness or cracking. Harmful: may cause lung damage if swallowed. Limited evidence of carcinogenic effect.
- **Signs and Symptoms:** If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever. The onset of respiratory symptoms may be delayed for several hours after exposure. Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance.

- **Safety Hazards:** May ignite on surfaces at temperatures above auto-ignition temperature. Vapour in the headspace of tanks and containers may ignite and explode at temperatures exceeding autoignition temperature, where vapour concentrations are within the flammability range. Not classified as flammable but will burn. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire.
- **Environmental Hazards:** Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SECTION 4 : FIRST AID MEASURES

- **Inhalation:** Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
- **Skin Contact:** Remove contaminated clothing. Immediately flush skin with large amounts of water for at least 15 minutes, and follow by washing with soap and water if available. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment.
- **Eye Contact:** Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.
- **Ingestion:** If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101 °F (37 °C), shortness of breath, chest congestion or continued coughing or wheezing.
- **Advice to Physician:** Treat symptomatically.

SECTION 5 : FIRE-FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

- **Specific Hazards:** Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Oxides of sulphur. Unidentified organic and inorganic compounds. Carbon monoxide may be evolved if incomplete combustion occurs. Will float and can be reignited on surface water. Flammable vapours may be present even at temperatures below the flash point.
- **Suitable Extinguishing Media:** Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
- **Unsuitable Extinguishing Media:** Do not use water in a jet. Protective Equipment for Firefighters: Wear full protective clothing and self-contained breathing apparatus.
- **Additional Advice:** Keep adjacent containers cool by spraying with water.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

- **Protective measures:** Do not breathe fumes, vapour. Do not operate electrical equipment. Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment (of product and fire fighting water) to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Attempt to disperse the vapour or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment.
- **Clean Up Methods:** For small liquid spills (< 1 drum), transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. For large liquid spills (>1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. Shovel into a suitable clearly marked container for disposal or reclamation in accordance with local regulations.

SECTION 7 : HANDLING AND STORAGE

- **General Precautions:** Avoid breathing vapours or contact with material. Only use in well ventilated areas. Wash thoroughly after handling. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material. Air-dry contaminated clothing in a well-ventilated area before laundering. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Prevent spillages.Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Never siphon by mouth. Contaminated leather articles including shoes cannot be decontaminated and should be destroyed to prevent reuse. For comprehensive advice on handling, product transfer, storage and tank cleaning refer to the product supplier. Maintenance and Fuelling Activities - Avoid inhalation of vapours and contact with skin. Classified as a C1 (COMBUSTIBLE LIQUID) for the purpose of storage and handling, in accordance with the requirements of AS 1940. Refer to State Regulations for storage and transport requirements. AS 1940:2004 The storage and handling of flammable and combustible liquids.
- **Handling:** Avoid inhaling vapour and/or mists. Avoid prolonged or repeated contact with skin. When using do not eat or drink. Extinguish any naked flames. Do not smoke. Remove

ignition sources. Avoid sparks. Earth all equipment. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. The vapour is heavier than air, spreads along the ground and distant ignition is possible.

- **Storage:** Drum and small container storage: Drums should be stacked to a maximum of 3 high. Use properly labelled and closeable containers. Tank storage: Tanks must be specifically designed for use with this product. Bulk storage tanks should be diked (bunded).Locate tanks away from heat and other sources of ignition. Must be stored in a diked (bunded) well-ventilated area, away from sunlight, ignition sources and other sources of heat. Vapours from tanks should not be released to atmosphere. Breathing losses during storage should becontrolled by a suitable vapour treatment system. The vapour is heavier than air. Beware of accumulation in pits and confined spaces. Keep in a bunded area with a sealed (low permeability) floor, to provide containment against spillage. Prevent ingress of water.
- **Product Transfer:** Avoid splash filling. Wait 2 minutes after tank filling (for tanks such as those on road tanker vehicles) before opening hatches or manholes. Wait 30 minutes after tank filling (for large storage tanks) before opening hatches or manholes. Keep containers closed when not in use. Do not use compressed air for filling, discharging or handling.Contamination resulting from product transfer may give rise to light hydrocarbon vapour in the headspace of tanks that have previously contained gasoline. This vapour may explode if there is a source of ignition. Partly filled containers present a greater hazard than those that are full, therefore handling, transfer and sampling activities need special care.
- **Recommended Materials:** For containers, or container linings use mild steel, stainless steel. Aluminium may also be used for applications where it does not present an unnecessary fire hazard. Examples of suitable materials are: high density polyethylene (HDPE) and Viton (FKM), which have been specifically tested for compatibility with this product. For container linings, use amine-adduct cured epoxy paint. For seals and gaskets use: graphite, PTFE, Viton A, Viton B.
- **Unsuitable Materials:** Some synthetic materials may be unsuitable for containers or container linings depending on the material specification and intended use. Examples of materials to avoid are: natural rubber (NR), nitrile rubber (NBR), ethylene propylene rubber (EPDM), polymethyl methacrylate (PMMA), polystyrene, polyvinyl chloride (PVC), polyisobutylene.; However, some may be suitable for glove materials.
- **Container Advice:** Containers, even those that have been emptied, can contain explosive vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers.
- **Additional Information:** Ensure that all local regulations regarding handling and storage facilities are followed.

SECTION 8 : EXPOSURE CONTROLS AND PERSONAL PROTECTION

- **Exposure Controls:** The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Use sealed systems as far as possible. Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Local exhaust ventilation is recommended. Eye washes and showers for emergency use.
- **Personal Protective Equipment:** Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.
  AS/NZS 1337: Eye protectors for industrial applications.
  AS/NZS 2161: Occupational protective gloves - Selection, use and maintenance.
  AS/NZS 1715: Selection, use and maintenance of respiratory protective devices.
  AS/NZS 1716: Respiratory protective devices.
- **Respiratory Protection:** If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus. Where airfiltering respirators are suitable, select an appropriate combination of mask and filter. All respiratory protection equipment and use must be in accordance with local regulations.
- **Hand Protection:** Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity.Always seek advice from glove suppliers. Contaminated gloves should be replaced.Select gloves tested to a relevant standard (e.g. Europe EN374, US F739). When prolonged or frequent repeated contact occurs, Nitrile gloves may be suitable. (Breakthrough time of > 240 minutes.) For incidental contact/splash protection Neoprene, PVC gloves may be suitable.
- **Eye Protection:** Chemical splash goggles (chemical monogoggles). Approved to EU Standard EN166.
- **Protective Clothing:** Chemical resistant gloves/gauntlets, boots, and apron (where risk of splashing).
- **Monitoring Methods:** Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

- **Environmental Exposure Controls:** Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance:** Brown, Liquid.
- **Odour:** May contain a reodorant
- **Flash point, OC:** 75 °C/167 °F
- **Kinematic Viscosity @40OC:** 2.279
- **Pour Point, OC:** -15
- **Lower / upper Flammability:** Data not available
- **Auto-ignition temperature:** Data not available
- **Density@30 OC/86 O F:** 0.8475 g/cm^3
- **Solubility in other solvents:** Data not available

SECTION 10 : STABILITY AND REACTIVITY

- **Stability:** Stable under normal conditions of use.
- **Conditions to Avoid:** Avoid heat, sparks, open flames and other ignition sources.
- **Materials to Avoid:** Strong oxidising agents. Hazardous Hazardous decomposition products are not expected to form
- **Decomposition Products:** during normal storage. Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

SECTION 11 : TOXICOLOGICAL INFORMATION

- **Component: Diesel Fuel**
    - **Basis for Assessment:** Information given is based on product data, a knowledge of the components and the toxicology of similar products.
    - **Acute Oral Toxicity:** Low toxicity:LD50 >2000 mg/kg, Rat
      Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.
    - **Acute Dermal Toxicity:** Low toxicity:LD50 >2000 mg/kg, Rabbit
    - **Acute Inhalation Toxicity:** Low toxicity: LC50 >5 mg/l / 4 h, Rat

High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.

- **Skin Irritation:** May cause moderate skin irritation (but insufficient to classify). Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis.
- **Eye Irritation:** Slightly irritating.
- **Respiratory Irritation:** Slightly irritating.
- **Sensitisation:** Not a skin sensitiser.
- **Repeated Dose Toxicity:** Kidney: caused kidney effects in male rats which are not considered relevant to humans
- **Mutagenicity:** In-vitro mutagenicity studies show that mutagenic activity is related to 4-6 ring polycyclic aromatic content.
- **Carcinogenicity:** Limited evidence of carcinogenic effect. Repeated skin contact has resulted in irritation and skin cancer in animals.
- **Reproductive and Developmental Toxicity:** Not expected to be a developmental toxicant.

- **Component: Additives**
  - **Routes of Entry:** Absorbed through skin. Inhalation. Ingestion
  - **Target Organs:** Contains material which may cause damage to the following organs: cardiovascular system.
- **Acute Effects**
  - **Inhalation:** Harmful by inhalation
  - **Ingestion:** Aspiration hazard if swallowed- can enter lungs and cause damage.
  - **Skin Contact:** Harmful in contact with skin.
  - **Eye Contact:** Non-irritating to the eyes.
  - **Chronic Effects**
  - **Adverse Effects: 2-Ethylhexyl nitrate:** Adverse symptoms may include: Overexposure to organic nitrates by inhalation of vapor or skin contact may cause headache, dizziness, nausea, and decreased blood pressure.
- **Carcinogenic Effects:** Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.
  - **Toxicity Data**

Ingredient Name	Test	Result	Route	Species
Additive (Contain 2-Ethylhexyl nitrate >99%wt**)**	LD50	>10000 mg/kg	Oral	Rat
	LD50	>5000 mg/kg	Dermal	Rabbit

SECTION 12 : ECOLOGICAL INFORMATION

- **Component: Diesel Fuel**

Information given is based on a knowledge of the components and the ecotoxicology of similar products. Mixture are typically made from blending several refinery streams. Ecotoxicological studies have been carried out on a variety of hydrocarbon blends and streams not containing additives.

- **Acute Toxicity:** Toxic:LL/EL/IL50 1-10 mg/l(to aquatic organisms)(LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract).
- **Mobility:** Floats on water. Partly evaporates from water or soil surfaces, but significant proportion will remain after one day.Large volumes may penetrate soil and could contaminate groundwater. Contains volatile constituents.
- **Persistence/degradability:** Major constituents are inherently biodegradable. The volatile constituents will oxidize rapidly by photochemical reactions in air.
- **Bioaccumulation:** Contains constituents with the potential to bioaccumulate.
- **Other Adverse Effects:** Films formed on water may affect oxygen transfer and damageorganisms.
- **Component: Additives**
- **Environmental Hazards:** Not classified as dangerous for the environment according to EC criteria. Based on test data for this or similar products.
- **Environmental Fate:** This product contains components which may be persistent in the environment.

SECTION 13 : DISPOSAL INFORMATION

- **Material Disposal:** Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses. Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination. Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.
- **Container Disposal:** Send to drum recoverer or metal reclaimer. Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard if heated above the flash point. Do not puncture, cut or weld uncleaned drums. Do not pollute the soil, water or environment with the waste container. Comply with any local recovery or waste disposal regulations.
- **Local Legislation:** Disposal should be in accordance with applicable regional, national, and local laws and regulations.Local regulations maybe more stringent than regional or national requirements and must be complied with.

SECTION 14 : TRANSPORTATION INFORMATION

- **U.S. DEPARTMENT OF TRANSPORTATION (DOT)**
- **Shipping Name:** Not Regulated
- **Hazard Class:**
- **UN/NA #:** None
- **Packing Group:** III
- **Required Label (s):** None
- **Addition Info. :** None
- **INTERNATIONAL TRANSPORTATION REGULATIONS:** Not regulated as dangerous goods.

SECTION 15 : REGULATORY INFORMATION

- **Component: Diesel Fuel**
  The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.
- **SUSDP Schedule:** Not scheduled. When packed in containers having capacity of greater than 20 litres.
  S5. When packed in containers having capacity of less than 20 litres.
- **AICS:** All components are listed or exempt
- **Classification triggering components:** Contains fuels, V- MAX diesel.
- **Other Information:** National Code of Practice for the Preparation of Material Safety Data Sheets
  - [NOHSC:2011] List of Designated Hazardous Substances
  - [NOHSC:10005]. Approved Criteria for Classifying Hazardous Substances
  - [NOHSC:1008]. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment
  - [NOHSC:1003]. Australian Dangerous Goods Code. Standard Uniform Scheduling of Drugs and Poisons.
- **Component: Additive**
- **International Inventory Status**
  - **United States** All components on TSCA Inventory
  - **Canada** All components on DSL Europe All components on EINECS Japan All components on MITI or MOL
  - **Australia** All components on NICNAS
  - **Korea** All components on ECL China All components on IECSC
  - **Philippines** All components on PICCS

SECTION 16 : OTHER INFORMATION

- **Component: Diesel Fuel**
- **Additional Information:** This document contains important information to ensure the safe storage, handling and use of this product. The information in this document should be brought to the attention of the person in your organisation responsible for advising on safety matters.

  R-phrase(s)
  - **R40** Limited evidence of carcinogenic effect.
  - **R51/53** Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
  - **R65** Harmful: may cause lung damage if swallowed.
  - **R66** Repeated exposure may cause skin dryness or cracking. Risk
- **Component: Additive**
  - **Phrases:**

    R44- Risk of explosion if heated under confinement.
    R20/21- Harmful by inhalation and in contact with skin. Safety Phrases
    S15- Keep away from heat.
    S23- Do not breathe vapor.
    S24/25- Avoid contact with skin and eyes.
    S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.

- **DISCLAIMER OF WARRANTY:** The information contained herein is based upon data and information available to us, and reflects our best professional judgement. This product may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used, DEESO CHEMICALS Company must rely upon the hazard evaluation of such components submitted by that product' s manufacturer or importer. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent. Since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.