東方石油貿易有限公司
Feoso Oil Trading Limited

Material Safety Data Sheet

Section 1	**Chemical Product and Company Identification**
Product Name	**MARINE GAS OIL / DIESEL OIL**
Company Name	FEOSO OIL TRADING LIMITED
Company Address	9-11/F., Feoso Building, 877 Lai Chi Kok Road, Kowloon, Hong Kong
	Tel: (852)3162 3888 Fax: (852)3162 3600
Emergency Information	Email: feosobkr@feoso.com.hk

Section 2 **Composition / Information On Ingredients**

This product is regulated as a composition and the ingredients as follows

Diesel Oil	100 %
Naphthalene	0.5%
Ethyl Benzene	0.5%

Section 3 **Hazards Identification**

Emergency Overview	Combustible
Physical / Chemical Hazards	Material can release vapours and flammable mixture. Vapour accumulation could flash and/or explode if ignited. Thermal bum hazard- contact with hot material may cause thermal burns. Material can accumulate static charges which may cause an Incendiary electrical discharge.
Health Hazards	May cause cancer. Possible risk of harm to the unborn child. Harmful-danger of serious damage to health by prolonged exposure in contact with skin. A highly toxic gas, Hydrogen Sulfide may be present and may result in eye, skin, or respiratory irritation, signs and symptoms of over exposure to hydrogen sulfide include respiratory and eye irritation, dizziness, nausea, coughing a sensation of dryness and pain in this nose, and loss of consciousness.
Environmental Hazards	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Note: This material should not be used for any other purpose then the intended use as fuel oil. Health studies have shown that chemical exposure may cause potential human risks which may vary from person to person.

Section 4 **First Aid Measures**

Eye Contact	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical assistance.
Skin Contact	Remove contaminated clothing. Dry wipe exposed and cleanse with waterless hand cleaner and follow by washing thoroughly with soap and water. Get medical attention if irritation develops.
Inhalation	Immediately remove from further expose. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. However, get immediate medical assistance.
Ingestion	Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Section 5 **Fire-fighting Measures**

Extinguishing Media	Do not use straight streams of water. Use water fog, foam, dry chemical or carbon dioxide (CO_2) to extinguish flames.
Fire Fighting Instruction	Evacuate area. Use water spray to cool fire exposed surfaces and to protect personnel. Fire-fighters should use standard protective equipment and self-contained breathing apparatus.
Hazardous Combustion Products	The product may form flammable mixtures and can burn only when heated above the flash point (60.5℃). Exposure to fire can generate toxic fumes, Smoke, Oxides of Carbon, Hydrogen Sulfide, Sulfur Oxides, Aldehydes, Incomplete combustion products.

Section 6 **Accidental Release Measures**

Personal Precautions: Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (Section 8). Follow all fire fighting procedures (Section 5).

Spill Management: For small spills add absorbent scoop up material and place in a sealed, liquid-proof container for disposal. For large dike spilled material for later recovery and disposal.

Environmental Precautions: Minimize contact of spilled material with soils to prevent entry into waterways, sewers, basements or confined areas. See Section 13 for disposal information.

Section 7 **Handling and Storage**

Handling: Keep product away from high energy ignition sources, heat, sparks, pilot lights, static electricity, and open flame. Harmful in contact with or if absorbed through the skin. Avoid inhalation of vapors or mists. Use in well ventilated area away form all ignition sources.

Storage: Store in a cool, exclusive and well-ventilated area. Keep container tightly closed and sealed. Drums must be earthed and bonded. Avoid all possible sources of ignition (sparks or flame).

Section 8 **Exposure Controls / Personal Protection**

Exposure Limit Values

Substance Name	TWA	STEL
NAPHTHALENE	10ppm	15ppm
ETHYL BENZENE	100ppm	125ppm

Note: Consult local authorities for acceptable exposure limits.

Control Measures: Use non-spark ventilation or other engineering controls to stay below exposure limits.

Hygiene Measures: Wash hands, forearms, and face thoroughly after handling compounds before eating, smoking and using lavatory.

Personal Protection

Eyes: Safety glass with side shields.

Skin and Body: Avoid contact with skin. Wear clothing and footwear that cannot be penetrated by fuel oil.

Respiratory: Approved respiratory equipment must be used when airborne concentrations are unknown or exceed the recommended exposure limit. Self-contained breathing apparatus may be required for use in confined or enclosed spaces.

Hands: Wear gloves that cannot be penetrated by chemicals or fuel oil.

Section 9 **Physical and Chemical Properties**

Physical State: Liquid

Odor: Characteristic Hydrocarbon.

Colour: Clear (May Be Dyed)

Density at 15℃ kg/m3: 0.89-0.92

Solubility: Negligible

Viscosity: 6.0 – 14.0 at 40℃

Section 10 **Stability and Reactivity**

Stability: Material is stable under normal conditions.

Conditions to Avoid: Excessive heat. High energy sources of ignition.

Materials to Avoid: Halogens, Alkalis, Strong oxidizers, Strong Acids.

Hazardous decomposition: Material does not decompose at ambient temperatures. When heated to decomposition it emits toxic fumes.

Hazardous polymerization: Will not occur.

Section 11 **Toxicological Information**

Acute Toxicity

Inhalation: Toxicity (Rat): >5000mg/M3
Minimally Toxic. Based on assessment of the components.

	Irritation: No end point data. Negligible hazard at ambient/normal handling temperatures. Based on assessment of the components.
Ingestion	Toxicity (Rat): >2000mg/kg Minimally Toxic. Based on test data for structurally similar materials.
Skin	Toxicity (Rabbit): >2000mg/kg Minimally Toxic. Based on test data for structurally similar materials. Irritation (Rabbit): Negligible irritation to skin at ambient temperatures. Based on assessment of the components.
Eye	Irritation (Rabbit): May cause mild, short-lasting discomfort to eyes.. Based on assessment of the components.

Chronic / other effects

For the product itself:	Diesel Fuel Oil: Carcinogenic in animal tests. Caused mutations in-vitro. Dermal exposure to high concentrations resulted in material toxicity, decreased fetal weight and fetal survival, and some external fetal malformations. Dermal studies in animals: Increased mortality, skin irritation, liver, kidney, thymus, bone marrow, blood and lymphoid tissue toxic effects. Possible allergen and photo allergen.
Contains:	Hydrogen Sulfide: High level (700ppm) acute exposure can result in sudden death. High concentrations will lead to cardiopulmonary arrest due to nervous system toxicity and pulmonary edema. Lower levels (150ppm) may overwhelm sense of smell, eliminating warming of exposure. Symptoms of overwhelm sense of smell. Eliminating warming of exposure, Symptoms of over exposure to H_2S include headache, fatigue, insomnia, irritability, and gastrointestinal problems. Repeated exposures to approximately 25ppm will irritate mucus membranes and the respiratory system and have been implicated in some eye damage.
Other Information	If inhaled in sufficient quantities of ash from boilers in which this product has been burned, could be harmful. The ash is also expected to cause skin irritation following extended skin contact, and the soot and tar fraction is likely to be carcinogenic.

Section 12 **Ecological Information**

The information given is based on data available for the material, the components of the material, and similar materials.

Ecotoxicity	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Persistence/degradability	This product is inherently biodegradable.
Mobility	Dissolution of higher molecular weight hydrocarbon components in water will be limited, but losses through sediment adsorption may be significant.

Section 13 **Disposal Considerations**

Recommendations	Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal. Consult your local or regional authorities.
Empty Container Warming (where applicable)	Empty containers may retain residue and can be dangerous. Do not attempt to refill or clean container. Do not expose such containers to heat, flame, static electricity, or other sources of ignition. All containers should be disposed of in an environmentally safe manner.

Section 14 **Transport Information**

International Transport Regulations

Regulatory Information	UN Number	Proper Shipping Name	Class / Packing Group
DOT Classification	UN1202	DIESEL FUEL	Combustible Liquid / III
ADR Classification	UN1202	GAS OIL	3 / III
IMO Classification	UN1202	GAS OIL	Flammable Liquid / III
IATA Classification	UN1202	GAS OIL	Flammable Liquid / III

Section 15	**Regulatory Information**
U.S. Federal Regulations	US Inventory (TSCA) SARA Title III Section 302 Extremely Hazardous Substances (40 CFR Part 355): This product not regulated under Section 302 of SARA and 40 CFR Part 355. SARA Title III Sections 311/312 Hazardous Categorization (40 CFR Part 370): Fuel Oil. Residual: Fire Hazard, Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard. CERCLA Sections 102a/103 Hazardous Substances (40 CFR Part 302.4): This material is not regulated under CERCLA Sections 103 and 107.
EU Classification	As defined by physical/chemical and health criteria of the EU Dangerous Substances/Preparations Directives: Material is dangerous. Cat. 2 Carcinogens. Cat. 3 Toxic to reproduction. Harmful. The classification of this product is based all or in part on test data.
Regulatory Status	Complies with the following national/regional chemical inventory requirements: AICS, DSL, EINECS, TSCA.
Section 16	**Other Information**
Label Requirements	WARNING COMBUSTIBLE CONTAINS MATERIAL WHICH MAY CAUSE DAMAGE TO THE SKIN AND THE FOLLOWING ORGANS: LIVER, LUNG AND BLOOD SYSTEM. Toxic Gas: Hydrogen Sulfide (H_2S) gas may accumulate in storage tanks of bulk transport compartments containing this material. BOILER ASH HARMFUL
Notice to reader	This information and recommendations are offered for the involved authorities' consideration and examination. Despite our efforts, it may not be up to date or applicable to the circumstances of any particular case. We are not responsible for any damage or injury resulting form abnormal use, from any failure or form hazards inherent in the nature of the product. It is the user's responsibility to satisfy that the product is suitable for the intended use.