



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	BUNKER FUEL OIL RME180 TO RMG380
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	
Ingredient Name	Concentration
Fuel Oil, Residual	>99%
Polycyclic Aromatic Hydrocarbons (PAHs)	0.1%-0.5%
Hydrogen Sulfide	0.1%-0.5%
Additives	0%-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 burn 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 ersonnel. 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°C). Exposure to fire can generate toxic fumes, Smoke, Oxides of Carbon, Hydrogen Sulfide, Sulfur Oxides, Aldehydes,

Incomplete combustion products.

Section 6

Personal Precautions

Accidental Release Measures

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

Handling and Storage

Avoid prolonged or repeated contact with skin. Wash thoroughly after handling. Avoid mists or vapour as harmful amounts of H₂S may be present. Keep container closed and away from heat, sparks and flame. Use explosion-proof electrical equipment on handling and dissipate static electricity during transfer by grounding and bonding containers.

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 Limit Values

Exposure Controls / Personal Protection

Fuel Oil, Residual: None Assigned.

Hydrogen Sulfide: ACGIH TLV (United States, 2000)

STEL 15ppm

TWA 10ppm

Polycyclic Aromatic Hydrocarbons: None Assigned.

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

Do not breathe vapour or mist. If ventilation is inadequate, use certified respirator that will protect against organic vapour. For high airborne concentrations, use a NOSH-approved supplied-air respirator operated in positive pressure mode.

Hands

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

Section 9

Physical State

Physical and Chemical Properties

Odor

Liquid

Colour

Characteristic Hydrocarbon.

Density at 15°C kg/m³

Black

Vapour Pressure at 40°C

(max.) 0.9920

Solubility

(max.) 0.1kpa

Viscosity

Insoluble in cold water

180 to 380cst at 50°C

Section 10

Stability

Stability and Reactivity

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**Acute Toxicity**
Inhalation**Toxicological Information**

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:

Residual 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 warning of exposure. Symptoms of overwhelm sense of smell. Eliminating warning of exposure, Symptoms of over exposure to H₂S 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

Spillages may penetrate the soil causing ground water contamination.

Other Information

Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

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 Warning
(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

UN Number

Proper Shipping Name

Class / Packing Group

Information

DOT Classification

UN1268

PETROLEUM DISTILLATED, N.O.S. (FUEL OIL, RESIDUAL, Hydrogen Sulfide)

Combustible Liquid / III

TDG Classification	UN1268	PETROLEUM (FUEL OIL, Sulfide)	DISTILLATED, RESIDUAL, Hydrogen	N.O.S. 3 / III
IMDG Classification	Not Regulated	Not Regulated		
IATA Classification	Not Regulated	Not Regulated		

Section 15

U.S. Federal Regulations

Regulatory Information

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 Carcinogen. 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, ENCS, IECSC, KECI, PICCS, TSCA, AICS.

Section 16

Label Requirements

Other Information

WARNING COMBUSTIBLE

CONTAINS MATERIAL WHICH MAY CAUSE DAMAGE TO THE SKIN AND THE FOLLOWING ORGANS: LIVER, LUNG AND BLOOD SYSTEM.

Toxic Gas: Hydrogen Sulfide (H₂S) 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 from abnormal use, from any failure or from 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.