



# Safety Data Sheet

## 1 PRODUCT AND COMPANY IDENTIFICATION

### DIESEL - SINGAPORE

**Product Use:** Fuel

**Company Identification**

Singapore Refining Company Private Limited  
1 Merlimau Road  
Jurong Island, Singapore 628260

**Transportation Emergency Response**

Singapore: 65-63570246 or 65-63570258

**Product Information**

Product Information: 65-63570100

## SECTION 2 HAZARDS IDENTIFICATION

**GHS CLASSIFICATION:**

Flammable liquid: Category 4. Aspiration toxicant: Category 1. Skin irritation: Category 2. Target organ toxicant (repeated exposure): Category 2. Carcinogen: Category 2. Target organ toxicant (central nervous system): Category 3. Target organ toxicant (respiratory irritant): Category 3. Acute inhalation toxicant: Category 4. Chronic aquatic toxicant: Category 2.

**GHS Symbol:**

Environment; Exclamation mark; Health Hazard



**GHS Signal Word:**

Danger

**GHS Physical Hazards:**

H227: Combustible liquid.

**GHS Health Hazards:**

H304: May be fatal if swallowed and enters airways.

H315: Causes skin irritation.

H332: Harmful if inhaled.

H336: May cause drowsiness or dizziness.

H335: May cause respiratory irritation.  
H351: Suspected of causing cancer.

**GHS Environmental Hazards:**

H411: Toxic to aquatic life with long lasting effects.

**Target Organs:**

H373: May cause damage to organs through prolonged or repeated exposure.

**GHS PRECAUTIONARY STATEMENTS:**

**General:**

P102: Keep out of reach of children.  
P103: Read label before use.

**Prevention:**

P201: Obtain special instructions before use.  
P202: Do not handle until all safety precautions have been read and understood.  
P210: Keep away from heat/sparks/open flames/hot surfaces. -- No smoking.  
P260: Do not breathe dust/fume/gas/mist/vapours/spray.  
P261: Use only outdoors or in a well-ventilated area.  
P264: Wash thoroughly after handling.  
P273: Avoid release to the environment.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P281: Use personal protective equipment as required.

**Response:**

P304: IF INHALED:  
P340: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P302: IF ON SKIN:  
P352: Wash with plenty of soap and water.  
P332: If skin irritation occurs:  
P313: Get medical advice/attention.  
P362: Take off contaminated clothing and wash before reuse.

P301: IF SWALLOWED:  
P310: Immediately call a POISON CENTER or doctor/physician  
P331: Do NOT induce vomiting.

P308: IF exposed or concerned:  
P313: Get medical advice/attention.  
P321: Specific treatment (see Notes to Physician on this label).  
P312: Call a POISON CENTER or doctor/physician if you feel unwell.  
P314: Get medical advice/attention if you feel unwell.  
P370: In case of fire:  
P378: Use media specified in the MSDS for extinction.  
P391: Collect spillage.

**Storage:**

P235: Keep cool.  
P233: Keep container tightly closed.  
P403: Store in a well-ventilated place.  
P405: Store locked up.

**Disposal:**

P501: Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

**SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS**

COMPONENTS	CAS NUMBER	AMOUNT
Fuels, diesel	68334-30-5	100 %weight
Kerosine	8008-20-6	0 - 15 %weight

**SECTION 4 FIRST AID MEASURES****Eye:**

Flush eyes with water immediately while holding the eyelids open. Remove contact lenses, if worn, after initial flushing, and continue flushing for at least 15 minutes. Get immediate medical attention. No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

**Skin:**

Wash skin with water immediately and remove contaminated clothing and shoes. Get medical attention if any symptoms develop. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

**Ingestion:**

If swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.

**Inhalation:**

Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue or if any other symptoms develop.

**Note to Physicians:**

Ingestion of this product or subsequent vomiting may result in aspiration of light hydrocarbon liquid, which may cause pneumonitis. Probable mucosal damage may contraindicate the use of gastric lavage.

**SECTION 5 FIRE FIGHTING MEASURES**

See Section 7 for proper handling and storage.

**EXTINGUISHING MEDIA:**

Use water fog, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish flames.

**PROTECTION OF FIRE FIGHTERS:****Fire Fighting Instructions:**

For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

**Combustion Products:**

Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### Protective Measures:

Eliminate all sources of ignition in the vicinity of the spill or released vapor. If this material is released into the work area, evacuate the area immediately. Monitor area with combustible gas indicator.

### Spill Management:

Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. All equipment used when handling the product must be grounded. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

### Reporting:

Report spills to local authorities as appropriate or required.

## SECTION 7 HANDLING AND STORAGE

### Precautionary Measures:

Do not get in eyes, on skin, or on clothing. Liquid evaporates and forms vapor (fumes) which can catch fire and burn with explosive force. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Fire hazard is greater as liquid temperature rises above 29C (85F).

Do not taste or swallow. Do not breathe vapor or fumes from heated material. Keep out of the reach of children. Wash thoroughly after handling.

### Unusual Handling Hazards:

WARNING! Do not use as portable heater or appliance fuel. Toxic fumes may accumulate and cause death.

### General Handling Information:

Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

### Static Hazard:

Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures.

### General Storage Information:

DO NOT USE OR STORE near heat, sparks, flames, or hot surfaces .

USE AND STORE ONLY IN WELL VENTILATED AREA. Keep container closed when not in use.

### Container Warnings:

Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat,

flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

**SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**

**GENERAL CONSIDERATIONS:**

Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

**ENGINEERING CONTROLS:**

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits.

**PERSONAL PROTECTIVE EQUIPMENT**

**Eye/Face Protection:**

No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

**Skin Protection:**

Wear protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted. Suggested materials for protective gloves include: Chlorinated Polyethylene (or Chlorosulfonated Polyethylene), Nitrile Rubber, Polyurethane, Viton.

**Respiratory Protection:**

Determine if airborne concentrations are below the recommended occupational exposure limits for jurisdiction of use. If airborne concentrations are above the acceptable limits, wear an approved respirator that provides adequate protection from this material, such as: Air-Purifying Respirator for Organic Vapors. If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge. When used as a fuel, this material can produce carbon monoxide in the exhaust. Determine if airborne concentrations are below the occupational exposure limit for carbon monoxide. If not, wear an approved positive-pressure air-supplying respirator. Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

**Occupational Exposure Limits:**

Component	Source	TWA	STEL	Ceiling	Notation
Kerosine	ACGIH	200 mg/m3	--	--	Skin A3 Total hydrocarbon vapor
Fuels, diesel	ACGIH	100 mg/m3	--	--	Skin A3 total hydrocarbon

ACGIH value is provided for information only. Consult your local authorities for appropriate values.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

**Attention:** the data below are typical values and do not constitute a specification.

<b>Color:</b>	Amber
<b>Physical State:</b>	Liquid
<b>Odor:</b>	Hydrocarbon odor
<b>Odor Threshold:</b>	No data available
<b>pH:</b>	Not Applicable
<b>Vapor Pressure:</b>	0.04 kPa (Approximate) @ 40 °C (104 °F)
<b>Vapor Density (Air = 1):</b>	>1
<b>Boiling Point:</b>	No data available
<b>Solubility:</b>	<b>Insoluble</b>
<b>Freezing Point:</b>	No data available
<b>Melting Point:</b>	Not Applicable @ 15°C (59°F)
<b>Density:</b>	810 - 890 kg/m <sup>3</sup> @ 15°C (59°F)
<b>Viscosity:</b>	1 cSt @ 40°C (104°F) Minimum
<b>Evaporation Rate:</b>	No data available
<b>Octanol/Water Partition Coefficient:</b>	No data available

### FLAMMABLE PROPERTIES:

**Flashpoint:**  
(Pensky-Martens Closed Cup) 62 °C (143 °F) Minimum

**Autoignition:**  
No data available

**Flammability (Explosive) Limits (% by volume in air):**  
Lower: 1 Upper: 6

## SECTION 10 STABILITY AND REACTIVITY

### Chemical Stability:

This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### Conditions to Avoid:

Avoid contact with heat, sparks, fire and oxidizing agents

### Incompatibility With Other Materials:

May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

### Hazardous Decomposition Products:

None known (None expected)

### Hazardous Polymerization:

Hazardous polymerization will not occur.

## SECTION 11 TOXICOLOGICAL INFORMATION

## **IMMEDIATE HEALTH EFFECTS**

### **Eye:**

Not expected to cause prolonged or significant eye irritation.

### **Eye Irritation:**

The eye irritation hazard is based on evaluation of data for similar materials or product components.

### **Skin:**

Contact with the skin causes irritation. Skin contact may cause drying or defatting of the skin. Contact with the skin is not expected to cause an allergic skin response. Symptoms may include pain, itching, discoloration, swelling, and blistering. Not expected to be harmful to internal organs if absorbed through the skin.

### **Acute Dermal Toxicity:**

The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.

### **Skin Irritation:**

The skin irritation hazard is based on evaluation of data for similar materials or product components.

### **Skin Sensitization:**

The skin sensitization hazard is based on evaluation of data for similar materials or product components.

### **Ingestion:**

Because of its low viscosity, this material can directly enter the lungs, if swallowed, or if subsequently vomited. Once in the lungs it is very difficult to remove and can cause severe injury or death. May be severely irritating and cause permanent damage to the mouth, throat, and stomach. May be irritating to mouth, throat, and stomach. Symptoms may include pain, nausea, vomiting, and diarrhea. Symptoms may include pain, nausea, vomiting, diarrhea, and, in severe cases, collapse, shock, and death.

### **Acute Oral Toxicity:**

The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.

### **Inhalation:**

Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing. Excessive or prolonged breathing of this material may cause central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death. If this material is heated, fumes may be unpleasant and produce nausea and irritation of the eye and upper respiratory tract.

### **Acute Inhalation Toxicity:**

The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

**Acute Toxicity Estimate:** Not Determined

## **DELAYED OR OTHER HEALTH EFFECTS:**

**Cancer:**

Whole diesel engine exhaust has been classified as a Group 2A carcinogen (probably carcinogenic to humans) by the International Agency for Research on Cancer (IARC). Prolonged or repeated exposure to this material may cause cancer.

**Target Organs:**

Contains material that may cause damage to the following organ(s) following repeated skin contact based on animal data: Liver Blood/Blood Forming Organs Thymus

Risk depends on duration and level of exposure.

**ADDITIONAL TOXICOLOGY INFORMATION:**

This product contains kerosene.

CONCAWE (product dossier 94/106) has summarized current health, safety and environmental data available for a number of kerosenes (typically straight-run kerosene, CAS 8008-20-6, or hydrodesulfurized kerosene, CAS 64742-81-0).

ACUTE/SUBCHRONIC: Following acute exposure to kerosene, signs observed in rats and rabbits were of a low order of toxicity: central nervous system depression occurred following oral exposure, skin irritation (ranging from slight to severe irritation) occurred with dermal exposure, and respiratory tract irritation occurred with inhalation exposure. None of the kerosenes tested produced more than slight eye irritation and none were skin sensitizers. However, intratracheal administration or artificial aspiration of small volumes (0.1 to 0.2 ml) of kerosene into the lungs of rats, chickens and primates resulted in lung damage and/or death. In a study in which rats, mice, rabbits and cats were exposed to kerosene aerosol concentrations in the range 0.05 to 120 mg/l for up to four weeks, reductions in respiratory rate, pulmonary hyperaemia, leucocytosis, monocytosis and decreased erythrocyte sedimentation rate were observed, and histological examination revealed inflammatory changes in the respiratory tract (tracheitis, bronchitis and pneumonia).

The National Institute of Occupational Safety and Health (NIOSH) has recommended that whole diesel exhaust be regarded as potentially causing cancer. This recommendation was based on test results showing increased lung cancer in laboratory animals exposed to whole diesel exhaust.

This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B). This product contains gas oils.

CONCAWE (product dossier 95/107) has summarized current health, safety and environmental data available for a number of gas oils, typically hydrodesulfurized middle distillates, CAS 64742-80-9, straight-run middle distillates, CAS 64741-44-2, and/or light cat-cracked distillate CAS 64741-59-9.

CARCINOGENICITY: All materials tested have caused the development of skin tumors in mice, but all featured severe skin irritation and sometimes a long latency period before tumors developed. Straight-run and cracked gas oil samples were studied to determine the influence of dermal irritation on the carcinogenic activity of middle distillates. At non-irritant doses the straight-run gas oil was not carcinogenic, but at irritant doses, weak activity was demonstrated. Cracked gas oils, when diluted with mineral oil, demonstrated carcinogenic activity irrespective of the occurrence of skin irritation. Gas oils were tested on male mice to study tumor initiating/promoting activity. The results demonstrated that while a straight-run gas oil sample was neither an initiator or promotor, a blend of straight-run and FCC stock was both a tumor initiator and a promotor.



**CANCER:** Chronic (3 to 24 months) mouse dermal toxicity studies of kerosenes and jet fuels produced mild to moderate skin irritation, while long-term (2+ years) studies showed moderate to severe skin damage as well as an increased incidence of tumors after long latency periods (probably due to a secondary mechanism related to skin irritancy). **DEVELOPMENTAL/REPRODUCTION:** Hydrodesulfurized kerosene was tested by the Petroleum Product Stewardship Council in a OECD Guideline 421 Reproductive/Developmental Toxicity Study. The kerosene sample was diluted to 494 (60%), 330 (40%), and 165 (20%) mg/kg/day in food grade mineral oil and applied daily during pre-mating and mating to day 19 of gestation. There was no apparent maternal, reproductive, or developmental toxicity at any dose. Males treated for eight weeks had increased relative kidney weights in the high dose group but no microscopic changes in testes or epididymides. No gross anomalies were observed in the pups.

**GENOTOXICITY:** Hydrotreated & hydrodesulfurized gas oils range in activity from inactive to weakly positive in in-vitro bacterial mutagenicity assays. Mouse lymphoma assays on straight-run gas oils without subsequent hydrodesulphurization gave positive results in the presence of S9 metabolic activation. In-vivo bone marrow cytogenetics and sister chromatic exchange assay exhibited no activity for straight-run components with or without hydrodesulphurization. Thermally or catalytically cracked gas oils tested with in-vitro bacterial mutagenicity assays in the presence of S9 metabolic activation were shown to be mutagenic. In-vitro sister chromatic exchange assays on cracked gas oil gave equivocal results both with and without S9 metabolic activation. In-vivo bone marrow cytogenetics assay was inactive for two cracked gas oil samples. Three hydrocracked gas oils were tested with in-vitro bacterial mutagenicity assays with S9, and one of the three gave positive results. Twelve distillate fuel samples were tested with in-vitro bacterial mutagenicity assays & with S9 metabolic activation and showed negative to weakly positive results. In one series, activity was shown to be related to the PCA content of samples tested. Two in-vivo studies were also conducted. A mouse dominant lethal assay was negative for a sample of diesel fuel. In the other study, 9 samples of No 2 heating oil containing 50% cracked stocks caused a slight increase in the number of chromosomal aberrations in bone marrow cytogenetics assays. These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3).

**DEVELOPMENTAL TOXICITY:** Diesel fuel vapor did not cause fetotoxic or teratogenic effects when pregnant rats were exposed on days 6-15 of pregnancy. Gas oils were applied to the skin of pregnant rats daily on days 0-19 of gestation. All but one (coker light gas oil) caused fetotoxicity (increased resorptions, reduced litter weight, reduced litter size) at dose levels that were also maternally toxic.

This product may contain significant amounts of Polynuclear Aromatic Hydrocarbons (PAH's) which have been shown to cause skin cancer after prolonged and frequent contact with the skin of test animals. Brief or intermittent skin contact with this product is not expected to have serious effects if it is washed from the skin. While skin cancer is unlikely to occur in human beings following use of this product, skin contact and breathing, of mists, vapors or dusts should be reduced to a minimum.

## **SECTION 12 ECOLOGICAL INFORMATION**

### **ECOTOXICITY**

This material is expected to be toxic to aquatic organisms. The product has not been tested. The statement has been derived from products of a similar structure and composition.

### **MOBILITY**

No data available.

## PERSISTENCE AND DEGRADABILITY

May cause long-term adverse effects in the aquatic environment. The product has not been tested. The statement has been derived from products of a similar structure and composition.

## POTENTIAL TO BIOACCUMULATE

Bioconcentration Factor: No data available.

Octanol/Water Partition Coefficient: No data available

## SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by international, country, or local laws and regulations.

## SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

### DOT Shipping Description:

For packages with a Flash Point (PM Closed Cup)  $\geq 23$  deg C but  $\leq 60$  deg C: UN1202, GAS OIL, 3, III; OPTIONAL DISCLOSURE: UN1202, GAS OIL, 3, III MARINE POLLUTANT (DIESEL FUEL, KEROSENE)

Optional disclosure per 49 CFR when Flash Point (PM Closed Cup)  $> 38$  deg C  $< 93$  deg C per 49 173.150 (f): UN1202, GAS OIL, COMBUSTIBLE LIQUID, III; NON-BULK PACKAGES ARE NOT REGULATED IN USA JURISDICTIONS

Optional disclosure as a GHS Environmental Hazard/Marine Pollutant when Flash Point (PM Closed Cup)  $> 60$  deg C: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, N.O.S.( DIESEL FUEL, KEROSENE), 9, III, MARINE POLLUTANT (DIESEL FUEL, KEROSENE)

### IMO/IMDG Shipping Description:

For packages with a Flash Point (PM Closed Cup)  $\geq 23$  deg but  $\leq 60$  deg C: UN1202, GAS OIL, 3, III, FLASH POINT SEE SECTION 5 OR 9, MARINE POLLUTANT (DIESEL FUEL, KEROSENE); OPTIONAL DISCLOSURE: UN1268, PETROLEUM DISTILLATES, N.O.S. (DIESEL FUEL, KEROSENE), 3, III, FLASH POINT SEE SECTION 5 OR 9, MARINE POLLUTANT (DIESEL FUEL, KEROSENE)

For packages with a Flash Point (PM Closed Cup)  $> 60$  deg C: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, N.O.S. (DIESEL FUEL, KEROSENE), 9, III, MARINE POLLUTANT (DIESEL FUEL, KEROSENE)

### ICAO/IATA Shipping Description:

For packages with a Flash Point (PM Closed Cup)  $\geq 23$  deg C,  $\leq 60$  deg C: UN1202, GAS OIL, 3, III

For packages with a Flash Point (PM Closed Cup)  $> 60$  deg C: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, N.O.S. (DIESEL FUEL, KEROSENE), 9, III, MARINE POLLUTANT (DIESEL FUEL, KEROSENE)

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:** Not available.

## SECTION 15 REGULATORY INFORMATION

### REGULATORY LISTS SEARCHED:

01-1=IARC Group 1  
01-2A=IARC Group 2A  
01-2B=IARC Group 2B

No components of this material were found on the regulatory lists above.

### CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), EINECS (European Union), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).

## SECTION 16 OTHER INFORMATION

**REVISION STATEMENT:** This revision updates the following sections of this Material Safety Data Sheet: 14

**Revision Date:** JUNE 13, 2012

### ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
OSHA - Occupational Safety and Health Administration	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
IARC - International Agency for Research on Cancer	NFPA - National Fire Protection Association (USA)
DOT (USA) - Department of Transportation	NTP - National Toxicology Program (USA)

Prepared in accordance with Singapore Standard SS 586: Part 3: 2008.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.