

# Safety Data Sheet



## SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

### CHEVRON (HONG KONG) BIO-DIESEL B5

**Product Use:** Fuel

**Company Identification**

Chevron Hong Kong Limited  
Unit 1501, 15/F Tower B, Manulife Financial Centre,  
No.223-231, Wai Yip Street,  
Kwun Tong, Kowloon,  
Hong Kong  
+852 2802-8338

**Transportation Emergency Response**

- a. Transportation Emergency: 999
- b. CHEMTREC: +1 (800) 424-9300 or +1 (703) 527-3887

**Health Emergency**

- a. Health Emergency: 999
- b. Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623

## SECTION 2 HAZARDS IDENTIFICATION

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



**Signal Word:** Danger

**Physical Hazards:** Combustible liquid (H227).

**Health Hazards:** May be fatal if swallowed and enters airways (H304). May cause cancer (H350). Causes skin irritation (H315). Harmful if inhaled (H332). May cause drowsiness or dizziness (H336).

**Target Organs:** May cause damage to organs (Blood/Blood Forming Organs, Liver, Thymus) through prolonged or repeated exposure (H373).

**Environmental Hazards:** Toxic to aquatic life with long lasting effects (H411).

**PRECAUTIONARY STATEMENTS:**

**General:** Keep out of reach of children (P102). Read label before use (P103).

**Prevention:** Obtain special instructions before use (P201). Do not handle until all safety precautions have been read and understood (P202). Keep away from heat/sparks/open flames/hot surfaces. -- No smoking (P210). Do not breathe dust/fume/gas/mist/vapours/spray (P260). Use only outdoors or in a well-ventilated area (P271). Wear protective gloves/protective clothing/eye protection/face protection (P280). Wash thoroughly after handling (P264). Avoid release to the environment (P273).

**Response:** In case of fire: Use media specified in the SDS for extinguish (P370+P378). IF exposed or concerned: Get medical advice/attention (P308+P313). IF INHALED: Remove person to fresh air and keep comfortable for breathing (P304+P340). Call a POISON CENTER or doctor/physician if you feel unwell (P312). IF ON SKIN: Wash with plenty of soap and water (P302+P352). If skin irritation occurs: Get medical advice/attention (P332+P313). Take off contaminated clothing and wash it before reuse (P362+P364). IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician (P301+P310). Do NOT induce vomiting (P331). Specific treatment (see Notes to Physician on this label) (P321). Collect spillage (P391).

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

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

**SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS**

COMPONENTS	CAS NUMBER	AMOUNT
DIESEL FUEL NO2	68476-34-6	95 %volume
FATTY ACID METHYL ESTERS (FAME)	Mixture	<= 5 %volume

**SECTION 4 FIRST AID MEASURES**

**Eye:** 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.

### IMMEDIATE HEALTH EFFECTS

**Eye:** Not expected to cause prolonged or significant eye irritation.

**Skin:** Contact with the skin causes irritation. Symptoms may include pain, itching, discoloration, swelling, and blistering. Contact with the skin is not expected to cause an allergic skin response.

**Ingestion:** Highly toxic; may be fatal if swallowed. 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 irritating to mouth, throat, and stomach. Symptoms may include pain, nausea, vomiting, and diarrhea.

**Inhalation:** 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.

### 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 exposure based on animal data: Liver Blood/Blood Forming Organs Thymus

See Section 11 for additional information. Risk depends on duration and level of exposure.

## SECTION 5 FIRE FIGHTING MEASURES

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

**Unusual Fire Hazards:** See Section 7 for proper handling and storage.

### 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**

**General Handling Information:** Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

**Precautionary Measures:** 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.

Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe vapor or fumes. Do not breathe mist. Wash thoroughly after handling. Keep out of the reach of children.

**Unusual Handling Hazards:** WARNING! Do not use as portable heater or appliance fuel. Toxic fumes may accumulate and cause death. Slow heat generation may occur with oil-soaked rags, spent filter aids and spent absorbent material and may cause spontaneous combustion if stored near combustibles and not handled properly. Store biodiesel soaked rags, filter aids, and spill absorbent material in approved safety disposal containers and dispose of properly. Biodiesel soaked rags may be washed with soap and water and allowed to dry in well ventilated area.

**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.

**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.

**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.

**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. 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	Country/ Agency	TWA	STEL	Ceiling	Notation
DIESEL FUEL NO2	ACGIH	100 mg/m3	--	--	Skin A3 total hydrocarbon
DIESEL FUEL NO2	CVX	100 mg/m3	--	--	Skin total hydrocarbon

Consult local authorities for appropriate values.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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

**Color:** Yellow

**Physical State:** Liquid

**Odor:** Faint or Mild

**Odor Threshold:** No data available

**pH:** Not Applicable

**Vapor Pressure:** No data available

**Vapor Density (Air = 1):** >1

**Initial Boiling Point:** 300°C (572°F)

**Solubility:** Soluble in hydrocarbons; insoluble in water

**Freezing Point:** Not Applicable

**Melting Point:** Not Applicable @ 15.6°C (60.1°F)

**Density:** 0.86 - 0.90 kg/l

**Viscosity:** 3 - 5 cSt @ 40°C (104°F)

**Evaporation Rate:** No data available

**Decomposition temperature:** No data available

**Octanol/Water Partition Coefficient:** No data available

### FLAMMABLE PROPERTIES:

**Flammability (solid, gas):** No Data Available

**Flashpoint:** 66 °C (151 °F)

**Autoignition:** 257 °C (494 °F)

**Flammability (Explosive) Limits (% by volume in air):** Lower: No data available Upper: No data available

## SECTION 10 STABILITY AND REACTIVITY

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

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

**Incompatibility With Other Materials:** Not applicable

**Hazardous Decomposition Products:** None known (None expected)

**Hazardous Polymerization:** Hazardous polymerization will not occur.

## SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

**Serious Eye Damage/Irritation:** The eye irritation hazard is based on evaluation of data for similar materials.

**Skin Corrosion/Irritation:** The skin irritation hazard is based on evaluation of data for similar materials.

**Skin Sensitization:** The skin sensitization hazard is based on evaluation of data for similar materials.

**Acute Dermal Toxicity:** The acute dermal toxicity hazard is based on evaluation of data for similar materials.

**Acute Oral Toxicity:** The acute oral toxicity hazard is based on evaluation of data for similar materials.

**Acute Inhalation Toxicity:** The acute inhalation toxicity hazard is based on evaluation of data for similar materials.

**Acute Toxicity Estimate:** Not Determined

**Germ Cell Mutagenicity:** The hazard evaluation is based on data for components or a similar material.

**Carcinogenicity:** The hazard evaluation is based on data for components or a similar material.

**Reproductive Toxicity:** The hazard evaluation is based on data for components or a similar material.

**Specific Target Organ Toxicity - Single Exposure:** The hazard evaluation is based on data for components or a similar material.

**Specific Target Organ Toxicity - Repeated Exposure:** The hazard evaluation is based on data for components or a similar material.

#### **ADDITIONAL TOXICOLOGY INFORMATION:**

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 promoter.

**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. 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.

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 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 and 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.

### MOBILITY

No data available.

### PERSISTENCE AND DEGRADABILITY

This material is not expected to be readily biodegradable. On release to the environment the lighter components of diesel fuel will generally evaporate but depending on local environmental conditions



(temperature, wind, mixing or wave action, soil type, etc.) the remainder may become dispersed in the water column or absorbed to soil or sediment. Diesel fuel would not be expected to be readily biodegradable. In a modified Strum test (OECD method 301B) approximately 40% biodegradation was recorded over 28 days. However, it has been shown that most hydrocarbon components of diesel fuel are degraded in soil in the presence of oxygen. Under anaerobic conditions, such as in anoxic sediments, rates of biodegradation are negligible. The biodegradability of this material is based on an evaluation of data for the components or a similar material.

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:** NOT REGULATED FOR TRANSPORT UNDER 49 CFR; OR OPTIONAL DISCLOSURE: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIESEL FUEL), 9, III, MARINE POLLUTANT (DIESEL FUEL) NOTE: POTENTIAL HYDROGEN SULFIDE INHALATION HAZARD

**IMO/IMDG Shipping Description:** UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIESEL FUEL), 9, III, MARINE POLLUTANT (DIESEL FUEL) NOTE: POTENTIAL HYDROGEN SULPHIDE INHALATION HAZARD

**ICAO/IATA Shipping Description:** UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIESEL FUEL), 9, III. NOTE: POTENTIAL HYDROGEN SULPHIDE INHALATION HAZARD

## 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.

**SECTION 16 OTHER INFORMATION**

**REVISION STATEMENT:** This revision updates the following sections of this Material Safety Data Sheet:  
1-16

**Revision Date:** June 12, 2018

**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
	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	SDS - Safety Data Sheet
CVX - Chevron	NTP - National Toxicology Program (USA)
DOT - Department of Transportation (USA)	
IARC - International Agency for Research on Cancer	
NCEL - New Chemical Exposure Limit	
SCBA - Self-Contained Breathing Apparatus	

Prepared according to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) by the Chevron Energy Technology Company, 6001 Bollinger Canyon Road, San Ramon, CA 94583.

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.