Safety Data Sheet

According to Occupational Safety and Health(Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Malaysia Regulations 2013

PETRONAS Fuel Oil 180 (Common)

Version 1.4 Release Date: 02.06.2022

SECTION 1: Identification of the hazardous chemical and of the supplier

Product identifier

Product name : PETRONAS Fuel Oil 180 (Common)

Recommended use of the chemical and restrictions on use

Recommended use : Fuel oil

Manufacturer or supplier's details

Headquarters

Company : PETRONAS Dagangan Berhad

Address : Tower 1, PETRONAS Twin Towers,
Kuala Lumpur City Centre,
50088 Kuala Lumpur,
Malaysia

Emergency telephone number : Mesralink Contact Number: 1 300 88 8181 / 8282
24-Hour Emergency Contact: 1-800-81-5308

SECTION 2: Hazards identification

Classification of the hazardous chemical

Acute toxicity (Inhalation)	:	Category 4
Carcinogenicity	:	Category 1B
Reproductive toxicity	:	Category 2
Specific target organ toxicity - repeated exposure	:	Category 2 (Blood, Thymus, Liver)
Aspiration hazard	:	Category 1
Hazardous to the aquatic environment- acute hazard	:	Category 1
Hazardous to the aquatic environment- chronic hazard	:	Category 1

Label elements

Hazard pictograms :

Signal word : Danger

Hazard statements :
H304 May be fatal if swallowed and enters airways.
H332 Harmful if inhaled.
H350 May cause cancer.
H361d Suspected of damaging the unborn child.
H373 May cause damage to organs (Blood, Thymus, Liver) through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.

P281 Use personal protective equipment as required.
Response:
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P331 Do NOT induce vomiting.
P391 Collect spillage.
Storage:
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification
No information available.

SECTION 3: Composition and information of the ingredients of the hazardous chemical

Substance / Mixture : UVCB

Components

Chemical name	CAS-No.	Concentration (%)
Heavy Fuel Oil Component	68476-33-5	>= 99 -<= 100

SECTION 4: First aid measures

If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a medical doctor.
Move to fresh air.
Consult a medical doctor after significant exposure.

In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.
Do NOT give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
Take victim immediately to hospital.
If symptoms persist, call a medical doctor.
Induce vomiting immediately and call a medical doctor.

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

Most important symptoms : No information available.

and effects, both acute and delayed

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media	:	For mixtures containing alcohol or polar solvent, alcohol-resistant foam may be more effective.
Unsuitable extinguishing media	:	High volume water jet High Volume Water Jet/stream.

Physicochemical hazards arising from the chemical

Specific hazards during firefighting	:	Fire may produce irritating, corrosive and/or toxic gases. Containers may explode when heated. Do not allow run-off from fire fighting to enter drains or water courses.

Special protective equipment and precautions for fire-fighters

Special protective equipment for firefighters	:	Structural firefighters‘ protective clothing provide thermal protection but has a limitation to chemical protection.
Specific extinguishing methods	:	Always stay away from tank engulfed in fire. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Do not use direct water stream. May spread fire. Do not use a solid water stream as it may scatter and spread fire. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed off in accordance with local regulations.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures	:	Ensure adequate ventilation.Do not get in eyes, on skin, or on clothing.Use special care to avoid static electric charges.Use personal protective equipment. Do not handle until all safety precautions have been read and understood. Respiratory protection: half-face or full-face respirator with filter(s) for organic vapor and, when applicable, H2S or Self-Contained Breathing Apparatus (SCBA) can be used depending on the size of spill and potential level of exposure. No action shall be taken involving any personal risk or without suitable training. Evacuate personnel in surrounding areas for at least 50 meters (150 feet) in all directions if required. Consider wind direction. Do not breathe vapor, mist or spray. No smoking. Ensure adequate ventilation.
Environmental precautions	:	Prevent further leakage or spillage if safe to do so.

		Take precautionary measures against static discharge. Follow federal, state or local requirements for reporting environmental release where necessary. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Identify and protect nearby sensitive area. Use appropriate containment to avoid environmental contamination. Attempt to disperse the vapour or to direct the flow to a safe location for example by using fog sprays. Prevent product from entering drains. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Keep in suitable, closed containers for disposal. Confine the spill immediately with booms. Alert other neighbouring ship/facility. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist (industry/regulator) prior to any response. Note: Local regulations may prescribe or limit action to be taken. Water spill and land spill clean up recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. Eliminate sources of ignition Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

SECTION 7: Handling and storage

Handling

Precautions for safe handling

Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Advice on safe handling	:	Avoid formation of aerosol. Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations. Initiate fire preventive and protection measures e.g. boundary/equipment cooling, isolation/shut down of equipment or process etc. It is advisable for Responder or person in-charge to assess the current situation before taking any necessary actions. Avoid contact with skin and eyes.

Storage

Conditions for safe storage, including any incompatibilities

Conditions for safe storage	:	Keep container tightly closed in a dry and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Further information on storage stability	:	No decomposition if stored and applied as directed.

SECTION 8: Exposure controls and personal protection

Control parameters

Contains no substances with occupational exposure limit values.

Individual protection measures, such as personal protective equipment

Eye/face protection	:	Eye wash bottle with pure water. Tightly fitting safety goggles
Skin protection	:	Impervious clothingChoose body protection according to the amount and concentration of the dangerous substance at the work place.
Hand protection		
Remarks	:	The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Respiratory protection	:	In the case of vapour formation use a respirator with an approved filter.
Hygiene measures	:	Wash hands before breaks and at the end of workday. When using do not eat or drink. When using do not smoke.

SECTION 9: Physical and chemical properties

Appearance	:	Liquid
Colour	:	black
Odour	:	Hydrocarbon-like
Odour Threshold	:	No data available
pH	:	No data available
Melting point/range	:	-1 - 13 °C
Boiling point/boiling range	:	150 - 600 °C
Flash point	:	>= 66 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available

Vapour pressure	:	> 5 hPa (20 °C)
Relative vapour density	:	No data available
Relative density	:	0.991
Density	:	<= 0.991 g/cm3 (15 °C)
Solubility(ies)		
Water solubility	:	< 0.1 g/l Insoluble (20 °C)
Partition coefficient: n-octanol/water	:	log Pow: 4 - 6
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	<= 180 mm2/s (50 °C)

SECTION 10: Stability and reactivity

Reactivity	:	Hazardous polymerisation does not occur.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition products	:	Fumes, smoke, carbon monoxide

SECTION 11: Toxicological information

Acute toxicity

Components:
Heavy Fuel Oil Component:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 4 mg/l
Acute dermal toxicity	:	LD50 (Rabbit): > 2,000 mg/kg

Skin corrosion/irritation

Components:
Heavy Fuel Oil Component:

Result	:	No skin irritation

Serious eye damage/eye irritation

Components:

Heavy Fuel Oil Component:

Result	:	No eye irritation

Respiratory or skin sensitisation

Components:
Heavy Fuel Oil Component:

Exposure routes	:	Inhalation
Remarks	:	No data available
Exposure routes	:	Skin contact
Species	:	Guinea pig
Result	:	Not sensitising

Germ cell mutagenicity

Components:
Heavy Fuel Oil Component:

Germ cell mutagenicity - Assessment	:	In vivo tests did not show mutagenic effects

Carcinogenicity

Components:
Heavy Fuel Oil Component:

Carcinogenicity - Assessment	:	Sufficient evidence of carcinogenicity in animal experiments (dermal)

Reproductive toxicity

Components:
Heavy Fuel Oil Component:

Reproductive toxicity - Assessment	:	Clear evidence of adverse effects on development, based on animal experiments.

STOT - single exposure

Components:
Heavy Fuel Oil Component:

Assessment	:	No specific organ toxicity following single exposure.

STOT - repeated exposure

Components:
Heavy Fuel Oil Component:

Target Organs	:	Blood, Thymus, Liver
Assessment	:	May cause damage to organs through prolonged or repeated exposure.

Aspiration toxicity

Components:
Heavy Fuel Oil Component:

Statement on Aspiration Tox.	:	May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

Ecotoxicity

Components:
Heavy Fuel Oil Component:

Toxicity to fish	:	LC50 (Fish): < 1 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Crustaceans): < 1 mg/l Exposure time: 48 h
Toxicity to algae	:	ErC50 (Algae): < 1 mg/l Exposure time: 72 h
Toxicity to fish (Chronic	:	Remarks: No data available

toxicity)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEL (Daphnia magna (Water flea)): 0.1 mg/l
Toxicity to microorganisms	:	Remarks: No data available

Persistence and degradability

Components:
Heavy Fuel Oil Component:

Biodegradability	:	Result: Inherently biodegradable.

Bioaccumulative potential

Components:

Heavy Fuel Oil Component:

Bioaccumulation	:	Remarks: Potentially bio-accumulative.
Partition coefficient: n-octanol/water	:	log Pow: 4 - 6

Mobility in soil

Components:
Heavy Fuel Oil Component:

Mobility	:	Medium: Soil Remarks: No data available

Other adverse effects

Product:

Additional ecological information	:	Very toxic to aquatic life with long lasting effects. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Components:

Heavy Fuel Oil Component:

Additional ecological information	:	No data available

SECTION 13: Disposal information

Disposal methods

Waste from residues	:	Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company. Dispose of in accordance with local regulations. The product should not be allowed to enter drains, water courses or the soil.
Contaminated packaging	:	Empty remaining contents.

Dispose of as unused product.
Do not re-use empty containers.

SECTION 14: Transport information

International Regulations

UNRTDG

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Class	:	9
Packing group	:	III
Labels	:	9

IATA-DGR

UN/ID No.	:	UN 3082
Proper shipping name	:	Environmentally hazardous substance, liquid, n.o.s.
Class	:	9
Packing group	:	III
Labels	:	Class 9 - Miscellaneous dangerous substances and articles
Packing instruction (cargo aircraft)	:	964
Packing instruction (passenger aircraft)	:	964
Environmentally hazardous	:	yes

IMDG-Code

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15: Regulatory information

Safety, health, and environmental regulations specific for the hazardous chemical

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013.

Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.

The components of this product are reported in the following inventories:

CH INV	:	On the inventory, or in compliance with the inventory.
TSCA	:	On TSCA Inventory.
DSL	:	All components of this product are on the Canadian DSL
AICS	:	On the inventory, or in compliance with the inventory.
NZIoC	:	On the inventory, or in compliance with the inventory.
ENCS	:	Not in compliance with the inventory
ISHL	:	Not in compliance with the inventory
KECI	:	Not in compliance with the inventory
PICCS	:	Not in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory.

SECTION 16: Other information

SDS preparation date	:	10.02.2015
Revision Date	:	02.06.2022
Sources of key data used to compile the Safety Data Sheet	:	CONCAWE - The oil companies' European association for Environment, Health and Safety in refining and distribution

Full text of other abbreviations

(Q)SAR	-	(Quantitative) Structure Activity Relationship
ACGIH	-	American Conference of Governmental Industrial Hygienists
AICS	-	Australian Inventory of Chemical Substances
ANTT	-	National Agency for Transport by Land of Brazil
ASTM	-	American Society for the Testing of Materials
bw	-	Body weight
C	-	Ceiling
CCHC	-	Chemicals Classification and Hazard Communication
CEIL	-	Ceiling
ChV	-	Chronic Toxicity Value
CMR	-	Carcinogen, Mutagen or Reproductive Toxicant
CPR	-	Controlled Products Regulations
DIN	-	Standard of the German Institute for Standardisation
DSL	-	Domestic Substances List (Canada)
ECx	-	Concentration associated with x% response
ELx	-	Loading rate associated with x% response
EmS	-	Emergency Schedule
ENCS	-	Existing and New Chemical Substances (Japan)
ErCx	-	Concentration associated with x% growth rate response
ERG	-	Emergency Response Guide
GHS	-	Globally Harmonized System of Classification and Labelling of Chemicals
GLP	-	Good Laboratory Practice
IARC	-	International Agency for Research on Cancer
IATA	-	International Air Transport Association
IBC	-	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50	-	Half maximal inhibitory concentration
ICAO	-	International Civil Aviation Organization

ICOP	-	Industry Code of Practice on Chemicals Classification and Hazard Communication
IECSC	-	Inventory of Existing Chemical Substances in China
IMDG	-	International Maritime Dangerous Goods
IMO	-	International Maritime Organization
ISHL	-	Industrial Safety and Health Law (Japan)
ISO	-	International Organisation for Standardization
KECI	-	Korea Existing Chemicals Inventory
LC50	-	Lethal Concentration to 50 % of a test population
LD50	-	Lethal Dose to 50% of a test population (Median Lethal Dose)
MARPOL	-	International Convention for the Prevention of Pollution from Ships
MY PEL	-	Malaysian Permissible Exposure Limit
n.o.s.	-	Not Otherwise Specified
Nch	-	Chilean Norm
NITE	-	National Institute of Technology and Evaluation
NO(A)EC	-	No Observed (Adverse) Effect Concentration
NO(A)EL	-	No Observed (Adverse) Effect Level
NOELR	-	No Observable Effect Loading Rate
NOM	-	Official Mexican Norm
NTP	-	National Toxicology Program
NZIoC	-	New Zealand Inventory of Chemicals
OCSPP	-	Office of Chemical Safety and Pollution Prevention
OECD	-	Organization for Economic Co-operation and Development
PBT	-	Persistent, Bioaccumulative and Toxic
PICCS	-	Philippines Inventory of Chemicals and Chemical Substances
REACH	-	Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
SADT	-	Self-Accelerating Decomposition Temperature
SDS	-	Safety Data Sheet
STEL	-	Short Term Exposure Limit
TCSI	-	Taiwan Chemical Substance Inventory
TDG	-	Transportation of Dangerous Goods
TSCA	-	Toxic Substances Control Act (United States)
TWA	-	Time Weighted Average
UN	-	United Nations
UNRTDG	-	United Nations Recommendations on the Transport of Dangerous Goods
UVCB	-	Unknown or Variable Composition, Complex Reaction Products and Biological Materials
vPvB	-	Very Persistent and Very Bioaccumulative
WHMIS	-	Workplace Hazardous Materials Information System
LLx	-	Loading rate associated with x% lethality effect

Disclaimer

To the best of PETRONAS knowledge, the information contained herein is accurate and reliable as of the date of publication. Any use of information provided should be undertaken in consultation with a professional with the appropriate expertise, as necessary in the circumstances. No warranty, express or implied, is given as to the quality, accuracy, reliability, applicability or completeness of the contents of this SDS. The information presented here pertains only to the product as shipped. It is the responsibility of the customer to ensure that any activities relating to the product comply with all federal, state or local laws. Any hazards associated with any product regulatory requirements are subject to change and may differ between various locations. Except to the extent required by law, re-publication or retransmission of this SDS, in whole or in part, is strictly prohibited. PETRONAS does not take

responsibility for use, transportation, storage, handling, packaging or disposal of the product that is beyond our knowledge and recommendation by this SDS.

Product Stewardship Advisory:
PETRONAS aims to increase awareness of all the hazards associated with the storage, handling and use of its products. Thoroughly reviewing the accompanying Safety Data Sheets and disseminating the information to all dependent and interested parties is an essential part of any 'Responsible Care' programme.

MY / EN