

# Safety Data Sheet

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



## MG3DF™

Version 1.4

Release Date: 08.12.2020

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

#### Product identifier

Product name : MG3DF™  
Synonyms : Distillates (petroleum), hydrotreated light  
CAS-No. : 64742-47-8  
REACH Registration : 01-2119484819-18-XXXX  
Number

#### Recommended use of the chemical and restrictions on use

Recommended use : Synthetic base fluid for drilling, completion and workover applications

#### Manufacturer or supplier's details

##### Plant Site

Company : Malaysian Refining Company Sdn. Bhd.  
Address : Persiaran Penapisan,  
76300 Sungai Udang,  
Melaka,  
Malaysia  
Emergency telephone : (+606)-352 2444 (Fire Station Radio Operator)  
number : National Poison Centre:  
+604-6570099 (Mon-Fri : 8.10 am - 5.10 pm)  
+6012-4309499 (Mon-Fri : 5.10 pm - 10.10 pm) &  
(Sat, Sun & Public holiday : 8.10 am - 5.10 pm)

### SECTION 2: Hazards identification

#### Classification of the hazardous chemical

Skin corrosion/irritation : Category 2  
Specific target organ toxicity - : Category 3 (Central Nervous System)  
single exposure  
Aspiration hazard : Category 1  
Hazardous to the aquatic : Category 4  
environment- chronic hazard

#### Label elements

Hazard pictograms :



Signal word : Danger  
Hazard statements : H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H336 May cause drowsiness or dizziness.  
H413 May cause long lasting harmful effects to aquatic life.  
Precautionary statements : **Prevention:**  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P264 Wash skin thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.



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P273 Avoid release to the environment.

P280 Wear protective gloves.

**Response:**

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

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.

P331 Do NOT induce vomiting.

P332 + P313 If skin irritation occurs: Get medical advice/ attention.

P362 Take off contaminated clothing and wash before reuse.

**Storage:**

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

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 (%)
Light Hydrotreated Distillate	64742-47-8	>= 99 -<= 100

**Other information** : Contains less than 3 % DMSO extract as measured by IP 346 'Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions — Dimethyl sulphoxide extraction refractive index method'

**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 skin contact : If on skin, rinse well with water.  
If on clothes, remove clothes.  
If skin irritation persists, call a medical doctor.

In case of eye contact : Flush eyes with water as a precaution.  
Remove contact lenses.  
Protect unharmed eye.

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If swallowed	:	<p>Keep eye wide open while rinsing. If eye irritation persists, consult a specialist. 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. Do NOT induce vomiting.</p>
General advice	:	<p>Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended. Symptoms of poisoning may appear several hours later.</p>
Most important symptoms and effects, both acute and delayed	:	<p>No information available.</p>

### SECTION 5: Firefighting measures

#### Extinguishing media

Unsuitable extinguishing media : High volume water jet

#### Physicochemical hazards arising from the chemical

Specific hazards during firefighting : 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 : Wear self-contained breathing apparatus for firefighting if necessary.

Specific extinguishing methods : 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 : Use personal protective equipment.  
Ensure adequate ventilation.

Environmental precautions : Prevent further leakage or spillage if safe to do so.  
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.  
  
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

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**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 contact with skin and eyes.  
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.

**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**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Light Hydrotreated Distillate	64742-47-8	TWA	200 mg/m <sup>3</sup> (total hydrocarbon vapor)	ACGIH

**Individual protection measures, such as personal protective equipment**

- Eye/face protection : Eye wash bottle with pure water.  
Tightly fitting safety goggles
- Skin protection : Impervious clothing Choose 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.

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Hygiene measures : When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and at the end of workday.

### SECTION 9: Physical and chemical properties

Appearance : Clear and bright liquid  
 Colour : L 0.5 Method: ASTM D 1500  
 Odour : Hydrocarbon-like  
 Odour Threshold : No data available  
 Pour point : < -42 °C  
 Method: ASTM D 97

Melting point/freezing point : Remarks :Not applicable  
 Initial boiling point and boiling range : 210 - 305 °C Method: ASTM D 2887  
 Flash point : 96 °C Method: ASTM D 93  
 Evaporation rate : No data available  
 Upper explosion limit / Upper flammability limit : Not applicable  
 Lower explosion limit / Lower flammability limit : Not applicable  
 Vapour pressure : < 0.25 kPa (37.8 °C)  
 Method: Reid vapor pressure (RVP)

Density : 0.8130 g/cm<sup>3</sup> (15 °C)  
 Method: ASTM D 4052

Solubility(ies)  
 Water solubility : Insoluble  
 Partition coefficient: n-octanol/water : log Pow: > 4  
 Auto-ignition temperature : 236 °C Method: ASTM E 659  
 Viscosity  
 Viscosity, kinematic : 2.260 mm<sup>2</sup>/s (40 °C) Method: ASTM D 445

### 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:

#### **Light Hydrotreated Distillate:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

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Acute inhalation toxicity : LC50 (Rat): > 5.28 mg/l  
Test atmosphere: vapour  
Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

### Skin corrosion/irritation

#### Components:

##### **Light Hydrotreated Distillate:**

Species : Rabbit  
Exposure time : 4 h  
Result : Skin irritation

### Serious eye damage/eye irritation

#### Components:

##### **Light Hydrotreated Distillate:**

Result : No eye irritation

### Respiratory or skin sensitisation

#### Components:

##### **Light Hydrotreated Distillate:**

Exposure routes : Skin contact  
Result : Not sensitising

### Germ cell mutagenicity

#### Components:

##### **Light Hydrotreated Distillate:**

Germ cell mutagenicity - Assessment : Not classified as a germ cell mutagen.

### Carcinogenicity

#### Components:

##### **Light Hydrotreated Distillate:**

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

### Reproductive toxicity

#### Components:

##### **Light Hydrotreated Distillate:**

Reproductive toxicity - Assessment : Not considered to be a reproductive toxicant

### STOT - single exposure

#### Components:

##### **Light Hydrotreated Distillate:**

Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

### STOT - repeated exposure

#### Components:

##### **Light Hydrotreated Distillate:**

Remarks : No data available

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### Aspiration toxicity

#### Components:

#### **Light Hydrotreated Distillate:**

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

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## SECTION 12: Ecological information

### Ecotoxicity

#### Product:

Toxicity to fish : LL50 (Cyprinodon variegatus (sheepshead minnow)): > 1,000 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Acartia tonsa (Copepod)): > 1,000 mg/l  
Exposure time: 48 h

Toxicity to algae : ErC50 (Skeletonema costatum (marine diatom)): > 1,000 mg/l  
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Remarks: No data available

Toxicity to microorganisms : Remarks: No data available

### Persistence and degradability

#### Product:

Biodegradability : Result: Inherently biodegradable.

#### Components:

#### **Light Hydrotreated Distillate:**

Biodegradability : Result: Inherently biodegradable.

### Bioaccumulative potential

#### Components:

#### **Light Hydrotreated Distillate:**

Bioaccumulation : Remarks: not determined

### Mobility in soil

#### Components:

#### **Light Hydrotreated Distillate:**

Mobility : Remarks: No data available

### Other adverse effects

#### Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

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### Components:

#### Light Hydrotreated Distillate:

Additional ecological information : No data available

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## 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.  
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.

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## SECTION 14: Transport information

### International Regulations

#### UNRTDG

Not regulated as a dangerous good

#### IATA-DGR

Not regulated as a dangerous good

#### IMDG-Code

Not regulated as a dangerous good

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

Not applicable for product as supplied.

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## 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:

REACH : This mixture contains only ingredients which have been



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	registered according to Regulation (EC) No. 1907/2006 (REACH).
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	: On the inventory, or in compliance with the inventory.
ISHL	: On the inventory, or in compliance with the inventory.
KECI	: On the inventory, or in compliance with the inventory.
PICCS	: On the inventory, or in compliance with the inventory.
IECSC	: On the inventory, or in compliance with the inventory.
TCSI	: On the inventory, or in compliance with the inventory.
TSCA	: On TSCA Inventory.

### SECTION 16: Other information

Revision Date	: 08.12.2020
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 (2017)

#### 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

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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

### Further information

Other information : Contains less than 3 % DMSO extract as measured by IP 346 'Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions — Dimethyl sulphoxide extraction refractive index method'

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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.

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