

ช. ข้อมูลด้านความปลอดภัยของสารเคมี (MSDS) ที่ใช้ในการขุดเจาะและที่เก็บไว้  
บนแท่นผลิตน้ำมันดิบกลางแหล่งปลาทอง แห่งที่ 2



ภาคผนวก ช

ข้อมูลด้านความปลอดภัยของสารเคมี (MSDS) ที่ใช้ในการ  
ขุดเจาะและที่เก็บไว้บนแท่นผลิตน้ำมันดิบกลาง  
แหล่งปลาทอง แห่งที่ 2

---



## G.1 INTRODUCTION

The following tables provide details on the chemicals that are used and stored on the PLOCPP2. Table 1 is a list of chemicals used for drilling activities and Table 2 is a list of chemicals used during oil production activities. The chemicals for which Material Safety Data Sheets (MSDS) are available are noted on the tables. MSDS are available from Unocal Thailand upon request.

**Table 1. Chemicals Listed for Drilling Activities**

<i>Chemical Name</i>	<i>Application</i>	<i>MSDS Available Upon Request</i>
Anco Vert Vis	Viscosifier	X
VERSA VB	Viscosifier	X
PANDSBAR	Drilling fluid additive	X
Aquamul F	Drilling fluid additive	X
NOVATEC F	Fluid loss reducer	X
DG-55	Drilling fluid additive	X
Ecotrol RD	Fluid loss reducer	X
Calcium Chloride	Oil well completion fluid additive	X
Barite	Drilling fluid additive	X
Polyplus PHPA (Anionic polyacrylamide)	Drilling fluid additive	
Versagel HT (Organophillic clay)	Viscosifier	

**Table 2. Chemicals Listed for Oil Production Activities**

<i>Chemical Name</i>	<i>Application</i>	<i>MSDS Available Upon Request</i>
ANSULITE 3% AFFF (AFC-3-A)	fire-extinguishing agent	X
CITGO Industrial Oils SUS-5	lubricant	X
COREXIT EC9500A OIL	shoreline cleaner	X
CORTRON IR-2469	cleaner	X
Dyno EB-8403	demulsifier/solvent	X
Dyno EB-8987	demulsifier/solvent	X
Dyno PI-7132	demulsifier/solvent	X
Dyno WT-1347	water treatment polymer	X
Dyno WT-1356	water treatment polymer	X
EC5395A	polymer/solvent	X
Ferric Chloride 40% Solution	water treatment additive	X
FLEXOIL SFM-4111	wax inhibitor	X
GOLD CREW DISPERSANT	oil dispersant	X
GOLD CREW PETROLEUM SPILL AND FIRE FIGHTING AGENT	fire-extinguishing agent	X
JET BREAK 1580-I	demulsifier	X
JET COR 471	corrosion inhibitor	X
Kontrol KG-6	corrosion inhibitor	X
Methanol GR for analysis ACS, ISO, Reag. Ph Eur	laboratory reagent	X
NALCO 8702 HEAVY METAL REMOVAL	water treatment polymer	X
Nalmet	water treatment polymer	
SERVO CK 956-MA	corrosion inhibitor	X
SFM 2422	oil pour point reducer	X
Shell Omala 150	lubricant	X
SHELL RIMULA X OILS	lubricant	X
Shell Spirax ® HD	lubricant	X
Shell Spirax HD 90	lubricant	X
Shell Tellus ® Oil 37	lubricant	X
Shell Tellus-68	lubricant	X
Sodium Hypochlorite	bleach	X
SULLUBE 32	lubricant	X
Triethylene Glycol	drying of natural gas	X
THERMINOL ® 55	heat transfer fluid	X
Tol Kleen (TK-3000)	solvent	X
Turbo® T Oil 32	lubricant	X
AMINE	neutralizing agent	
CORENA H-100 & P-100	lubricant	
CYLIN OIL SUS-5 (BC)	lubricant	
GEO-1640 (BC)	lubricant	
GLYCOL	heat transfer fluid	
MOBILE JET OIL (GG)	lubricant	
MYSELLA R-40 (Gas Eng)	lubricant	
RIG WASH TK-30000	solvent	
RIMURA X-40	lubricant	
SULLAIRCOM LUBE OIL	lubricant	
TELLUS T-46 (LUBE)	lubricant	
THERMINAL-FF	heat transfer fluid	



## SAFETY DATA SHEET

### VERSACLEAN DRILLING FLUID

#### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY:

<b>PRODUCT NAME:</b>	VERSACLEAN DRILLING FLUID
<b>PART No.:</b>	EH-0034
<b>APPLICATIONS:</b>	Drilling Fluid System
<b>SUPPLIER:</b>	M-I Drilling Fluids UK Ltd, Pocra Quay, Footdee, Aberdeen, AB11 5DQ Tel: 44 (0)1224 - 584336 Fax: 44 (0)1224 - 576119
<b>EMERGENCY TELEPHONES:</b>	001 281 561 1600 (USA)

#### 2. COMPOSITION/INFORMATION ON INGREDIENTS:

NAME	CAS No.:	CONTENT	SYMBOL:	RISK:
BARITE		<40 %	-	-
WATER	7732-18-5	10-40 %	-	-
ORGANOPHILLIC CLAY	68953-58-2	<2 %	-	
EMULSIFIERS		5-10 %	Xi	R-36/38
LOW TOXIC MINERAL BASE OIL		40-70 %	Xn	R-65

**COMPOSITION COMMENTS:** This product formulation is not classified as hazardous in accordance with the EU Directives. Drilling fluid is a highly complex and variable blend of several proprietary products. Each drilling fluid is designed to meet the drilling requirements of a specific well. During the drilling process the composition and physical properties of the drilling fluid are constantly changing; therefore a complete disclosure of a particular fluid's composition is impractical.

#### 3. HAZARDS IDENTIFICATION:

Not regarded as a health hazard under current legislation. Prolonged or repeated contact may be irritating to skin.

#### 4. FIRST AID MEASURES:

**INHALATION:** Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

10676 - VERSACLEAN DRILLING FLUID

REVISION DATE:01-07-01

<b>INGESTION:</b>	Immediately give a couple of glasses of water or milk, provided the victim is fully conscious. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Get medical attention if any discomfort continues.
<b>SKIN:</b>	Promptly wash contaminated skin with soap or mild detergent and water. Promptly remove clothing if soaked through and wash as above. Get medical attention if any discomfort continues.
<b>EYES:</b>	Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

## 5. FIRE FIGHTING MEASURES:

<b>EXTINGUISHING MEDIA:</b>	Carbon dioxide (CO2). Dry chemicals. Foam. Water spray, fog or mist.
<b>SPECIAL FIRE FIGHTING PROCEDURES:</b>	NOTE! Use air-supplied respirators to protect against gases/fumes. Avoid water in straight hose stream; will scatter and spread fire.
<b>UNUSUAL FIRE &amp; EXPLOSION HAZARDS:</b>	No unusual fire or explosion hazards noted.
<b>HAZARDOUS COMBUSTION PRODUCTS:</b>	Irritating gases/vapors/fumes of: Carbon monoxide (CO). Nitrous gases (NOx). Sulphurous gases (SOx).

## 6. ACCIDENTAL RELEASE MEASURES:

<b>PERSONAL PRECAUTION IN SPILL:</b>	Wear proper personal protective equipment (see MSDS Section 8).
<b>SPILL CLEANUP METHODS:</b>	Stop leak if possible without risk. Ventilate well. Contain and recover liquid if possible. Absorb in vermiculite, dry sand or earth and place into containers. Dike far ahead of larger spills for later disposal. Runoff or release to sewer, waterway or ground is forbidden.

## 7. HANDLING AND STORAGE:

<b>USAGE PRECAUTIONS:</b>	Avoid spilling, skin and eye contact. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level.
<b>STORAGE PRECAUTIONS:</b>	Keep in original container. Keep in cool, dry, ventilated storage and closed containers.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION:

<b>INGREDIENT NAME:</b>	<b>CAS No.:</b>	<b>STD</b>	<b>LT EXP 8 Hrs</b>	<b>ST EXP 15 Min</b>
ORGANOPHILLIC CLAY	68953-58-2	NUI.	.	.
<b>INGREDIENT COMMENTS:</b>	Exposure limits are for Oil mist, mineral. LT EXP (8 hr) 5 mg/m3 TWA, 10 mg/m3 STEL.			
<b>PROTECTIVE EQUIPMENT:</b>				



<b>VENTILATION:</b>	Provide adequate general and local exhaust ventilation.
<b>RESPIRATORS:</b>	Respiratory protection must be used if air concentration exceeds acceptable level. Use chemical cartridge protection with appropriate cartridge. Gas cartridge (organic substances).

2/4



10676 - VERSACLEAN DRILLING FLUID

REVISION DATE:01-07-01

<b>PROTECTIVE GLOVES:</b>	Chemical resistant gloves required for prolonged or repeated contact. Use protective gloves made of: Polyvinyl chloride (PVC). Polyvinyl alcohol (PVA). Nitrile. Butyl rubber.
<b>EYE PROTECTION:</b>	Wear approved chemical safety goggles where eye exposure is reasonably probable.
<b>OTHER PROTECTION:</b>	Provide eyewash station. Wear appropriate clothing to prevent repeated or prolonged skin contact. Use barrier creams to prevent skin contact.

## 9. PHYSICAL AND CHEMICAL PROPERTIES:

<b>APPEARANCE:</b>	Liquid.		
<b>COLOUR:</b>	Brown. Grey.		
<b>ODOUR/TASTE:</b>	Hydrocarbon.		
<b>BOILING POINT (°C, interval):</b>	220	<b>Pressure:</b>	760mmHg
<b>MELT./FREEZ. POINT (°C, interval):</b>	- 20		
<b>DENSITY/SPECIFIC GRAVITY (g/ml):</b>	Dependant on Barite concentration	<b>Temperature (°C):</b>	
<b>SOLUBILITY DESCRIPTION:</b>	Slightly soluble in water. Soluble in: Organic solvents (most).		
<b>FLASH POINT (°C):</b>	> 100	<b>Method:</b>	

## 10. STABILITY AND REACTIVITY:

<b>STABILITY:</b>	Normally stable.
<b>MATERIALS TO AVOID:</b>	Strong oxidizing agents. Strong acids.
<b>HAZARDOUS DECOMP. PRODUCTS:</b>	Fire or high temperatures create: Irritating gases/vapours/fumes of: Carbon monoxide (CO). Nitrous gases (NOx). Sulphurous gases (SOx).

## 11. TOXICOLOGICAL INFORMATION:

<b>INHALATION:</b>	Gas or vapour is harmful on prolonged exposure or in high concentrations.
<b>INGESTION:</b>	May cause gastric distress, nausea and vomiting if ingested.
<b>SKIN:</b>	Prolonged or repeated contact may lead to irritation and dermatitis. May cause allergic reaction after repeated contact in some people.
<b>EYES:</b>	Spray and vapour in the eyes may cause irritation and smarting.

## 12. ECOLOGICAL INFORMATION:

<b>ECOLOGICAL INFORMATION:</b>	Contact M-I's Environmental Affairs Department for ecological information.
--------------------------------	--

## 13. DISPOSAL CONSIDERATIONS:

3/4

10676 - VERSACLEAN DRILLING FLUID

REVISION DATE:01-07-01

**GENERAL/CLEANING:**

Empty containers retain residues. All labeled precautions must be observed.

**DISPOSAL METHODS:**

Recover and reclaim or recycle, if practical. Dispose of in accordance with Local Authority requirements.

**14. TRANSPORT INFORMATION:**

**ROAD TRANSPORT NOTES:**

Not Classified

**RAIL TRANSPORT NOTES:**

Not Classified.

**SEA TRANSPORT NOTES:**

Not Classified.

**AIR TRANSPORT NOTES:**

Not Classified.

**15. REGULATORY INFORMATION:**

NC Not classified

**RISK PHRASES:**

Not classified.

**SAFETY PHRASES:**

S-24/25 Avoid contact with skin and eyes.  
S-36 Wear suitable protective clothing.

**UK REGULATORY REFERENCES:**

Classification, Packaging and Labelling Regulations 1984. The Control of Substances Hazardous to Health Regulations 1988.

**16. OTHER INFORMATION:**

**INFORMATION SOURCES:**

The Merck Index, 11. edition, 1989. Material Safety Data Sheet, Misc. manufacturers.  
Sax's Dangerous Properties of Industrial Materials, 9th ed., Lewis, R.J. Sr., (ed.), VNR, New York, New York, (1997).  
Product information provided by the commercial vendor(s).

**ISSUED BY:**

Sarah Glover

**REVISION DATE:**

01-07-01

**REV. No./REPL. SDS  
GENERATED:**

1

**DISCLAIMER:**

MSDS furnished independent of product sale. While every effort has been made to accurately describe this product, some of the data are obtained from sources beyond our direct supervision. We cannot make any assertions as to its reliability or completeness; therefore, user may rely on it only at user's risk. We have made no effort to censor or conceal deleterious aspects of this product. Since we cannot anticipate or control the conditions under which this information and product may be used, we make no guarantee that the precautions we have suggested will be adequate for all individuals and/or situations. It is the obligation of each user of this product to comply with the requirements of all applicable laws regarding use and disposal of this product. Additional information will be furnished upon request to assist the user; however, no warranty, either expressed or implied, nor liability of any nature with respect to this product or to the data herein is made or incurred hereunder.

**PRINTING DATE:**

2001-07-03