

ENERMUL II

SECTION 1. IDENTIFICATION

Product Identifier	ENERMUL II
Other Means of Identification	Secondary Emulsifier
Recommended Use	Drilling Fluid Additive.
Manufacturer / Supplier	AES Drilling Fluids, LLC, 11767 Katy Freeway, Suite 230, Houston, TX, 77079, Sales & Information, 281-556-5628
Emergency Phone No.	CHEMTREC, 1-800-424-9300, 24-hour Emergency
Date of Preparation	April 24, 2015

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquid - Category 4; Acute toxicity (Oral) - Category 5; Acute toxicity (Dermal) - Category 4; Skin corrosion/irritation - Category 3; Serious eye damage/eye irritation - Category 2B; Specific target organ toxicity (single exposure) - Category 3; Aspiration hazard - Category 2

GHS Label Elements



Signal Word:

Warning

Hazard Statement(s):

H227	Combustible liquid.
H305	May be harmful if swallowed and enters airways.
H333	May be harmful if inhaled.
H312	Harmful in contact with skin.
H336	May cause drowsiness or dizziness.

Precautionary Statement(s):

Prevention:

P210	Keep away from flames and hot surfaces. – No smoking.
P264	Wash hands and skin thoroughly after handling.
P260	Do not breathe vapours, mist, spray.
P270	Do not eat, drink or smoke when using this product.
P264	Wash hands and skin thoroughly after handling.
P280	Wear protective gloves/eye protection/face protection.

Response:

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTRE/doctor.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF ON SKIN, IN EYES: seek medical attention	

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

Other Hazards

Hazardous to the environment.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers
Trade Secret	CBI*	Confidential	
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Notes

The specific chemical identity and/or exact percentage of composition (concentration) has been withheld as a trade secret.

CBI = Confidential Business Information.

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of contaminant or move to fresh air. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor. Get medical advice/attention if irritation develops.

Skin Contact

Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. Seek medical advice/attention.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Seek medical advice/attention.

Ingestion

Immediately call a Poison Centre or doctor. Rinse mouth with water. Do not induce vomiting. If vomiting occurs, have victim lean forward to reduce the risk of aspiration.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

Specific Hazards Arising from the Chemical

Product can ignite if strongly heated and exposed to open flames. Closed containers may rupture violently when heated releasing contents.

Oxides of carbon.

Special Protective Equipment and Precautions for Fire-fighters

Use water spray to cool containers/tanks.

When fighting chemical fires, emergency responders should wear NIOSH approved self contained breathing apparatus and appropriate protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Isolate the hazard area. Keep out unnecessary and unprotected personnel. Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway. If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas. Prevent product from entering drains, soil, ditches, sewers,

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waterways and/or groundwater.

Methods and Materials for Containment and Cleaning Up

Eliminate all ignition sources. Dike spilled product to prevent runoff. Do not use absorbents. Contain spill using noncombustible material such as vermiculite, earth or sand. Place contaminated vermiculite, earth or sand into suitable, covered, labelled containers for disposal. Store recovered product in suitable containers for disposal according to local regulations.

Other Information

Contact EH&S regarding spill as spills of certain products and certain quantities may require reporting to various authorities.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Avoid breathing in this product. Avoid contact with eyes, skin and clothing. Do not eat, drink or smoke in areas where product is handled. Employees should wash hands after working with product and before going on breaks outside of the work area. Avoid generating vapours or mists. Keep containers tightly closed when not in use or empty. Keep away from heat and open flames. See Section 8 for appropriate Personal Protective Equipment (PPE).

Conditions for Safe Storage

Store in an area that is: cool, dry, well-ventilated. Away from open flames, excessive heat or sources of ignition. Separate from incompatible materials (see Section 10: Stability and Reactivity). Keep containers tightly closed when not in use.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH® TLV®		OSHA PEL		AIHA® WEEL™	
	TWA	STEL [C]	TWA	Ceiling	8-hr TWA	Short-term TWA [C]
Trade Secret	5 mg/m3	10 mg/m3	5 mg/m3	Not established	Not established	Not established
Trade Secret	5 mg/m3		Not established		Not established	

ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value. TWA = Time-Weighted Average. STEL = Short-term Exposure Limit. C = Ceiling limit. OSHA = US Occupational Safety and Health Administration. PEL = Permissible Exposure Limits. AIHA® = AIHA® Guideline Foundation. WEEL™ = Workplace Environmental Exposure Limit.

OEL values are for Oil Mist. There is no established TLV or OEL's for petroleum distillates.

Appropriate Engineering Controls

Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air. While working with the product an eyewash and safety shower should be within acceptable distance to the work area.

Individual Protection Measures

Eye/Face Protection

Wear safety glasses and if contact is possible wear chemical safety goggles.

Skin Protection

Wear gloves with appropriate chemical resistance, see manufacturers specifications for suitability. Wear long sleeves, long pants and appropriate footwear while working with product. If a splashing hazard exists wear chemical protective clothing e.g. gloves that extend up arms, aprons, boots.

Respiratory Protection

If conditions exist above the OEL wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance Amber liquid.

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Odour	Faint
Odour Threshold	Not available
pH	Not available
Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Initial Boiling Point/Range	Not available
Flash Point	192.5 °F (89.2 °C)
Evaporation Rate	Not available
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	0.872
Solubility	Insoluble in water
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Other Information	
Physical State	Liquid

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Stable under normal conditions.

Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

Conditions to Avoid

Open flames, sparks, static discharge, heat and other ignition sources.

Incompatible Materials

Strong Oxidizing Agents.

Hazardous Decomposition Products

Carbon oxides.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Trade Secret	Not available	>5000 mg/kg (rat)	Not available
Trade Secret	Not available	> 5000 mg/kg (rat)	> 2000 mg/kg (rabbit)

Skin Corrosion/Irritation

May cause skin irritation.

Serious Eye Damage/Irritation

May cause eye irritation. Symptoms include pain, redness and tearing.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

May cause irritation of the mucous membranes and upper respiratory tract. May cause depression of the central

nervous system.

Skin Absorption

No information was located.

Ingestion

May cause irritation of the mouth, throat and stomach. May cause depression of the central nervous system.

Aspiration Hazard

Liquid may be aspirated into the lungs during ingestion or vomiting resulting in lung injury.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

No known significant effects.

Respiratory and/or Skin Sensitization

Not known to be a respiratory sensitizer. Not known to be a skin sensitizer.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Trade Secret	Not Listed	Not Listed	Not Listed	Not Listed
Trade Secret	Not Listed	Not Listed	Not Listed	Not Listed

No information was located.

Mouse skin painting studies have shown that highly refined petroleum base oils similar to the ingredients in this product have not caused skin tumors.

Key to Abbreviations

IARC = International Agency for Research on Cancer. ACGIH® = American Conference of Governmental Industrial Hygienists. NTP = National Toxicology Program. OSHA = US Occupational Safety and Health Administration.

Reproductive Toxicity

Development of Offspring

No information was located.

Sexual Function and Fertility

No information was located.

Germ Cell Mutagenicity

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

Do not allow product to contaminate domestic or irrigation water supplies, lakes, streams, ponds or rivers.

Toxicity

No information was located.

Acute Aquatic Toxicity

Chemical Name	LC50 Fish	EC50 Crustacea	ErC50 Aquatic Plants	ErC50 Algae
Trade Secret	Not available	Not available	Not available	Not available
Trade Secret	2.9 mg/L (Oncorhynchus mykiss (rainbow trout); 96-hour)	Not available	Not available	Not available

Persistence and Degradability

No information was located.

Bioaccumulative Potential

No information was located.

Mobility in Soil

No information was located.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of in accordance with all local, state and federal regulations. Not classified as RCRA Hazardous. RCRA WASTE NUMBER: Not Applicable.

SECTION 14. TRANSPORT INFORMATION

Not regulated under US DOT Regulations.

Other Information This material does not sustain combustion when tested by ASTM-4206 and therefore meets the 49 CFR 173.120(b)(3) exemption from DOT hazmat shipping requirements.

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are on the TSCA Inventory or exempt from the TSCA.

Additional USA Regulatory Lists

Product does not contain any chemicals subject to the reporting requirement of CERCLA.

SARA Title III - Section 302: No listed components.

SARA Title III - Section 311/312: Immediate Health Hazard

SARA Title III - Section 313: May contain <2.0% Glycol Ether.

SECTION 16. OTHER INFORMATION

NFPA Rating Health - 2 Flammability - 2 Instability - 0

SDS Prepared By AES Drilling Fluids

Phone No. 281-556-5628

Date of Preparation April 24, 2015

Disclaimer Do not handle or use until precautions on MSDS are read and understood. The information on this form is furnished solely for the purpose of enabling those who transport, handle or use our products to ensure the safety and health of their employees and to comply with various laws and regulations (federal, state and local). We believe the statements, technical information and recommendations contained herein are reliable but, they are given without warranty or guarantee of any kind, express or implied and we assume no responsibility for any loss, damage, direct or consequential, arising out of their use.

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