

# DETERGENT PLUS

## SECTION 1. IDENTIFICATION

<b>Product Identifier</b>	DETERGENT PLUS
<b>Other Means of Identification</b>	Surfactant blend
<b>Recommended Use</b>	Surfactant.
<b>Manufacturer / Supplier</b>	AES Drilling Fluids, LLC, 11767 Katy Freeway, Suite 230, Houston, TX, 77079, Sales & Information, 281-556-5628
<b>Emergency Phone No.</b>	CHEMTREC, 1-800-424-9300, 24-hour Emergency
<b>Date of Preparation</b>	May 12, 2015

## SECTION 2. HAZARDS IDENTIFICATION

### GHS Classification

Acute toxicity (Oral) - Category 4; Acute toxicity (Dermal) - Category 4; Serious eye damage/eye irritation - Category 2B; Carcinogenicity - Category 2

### GHS Label Elements



Signal Word:

Warning

Hazard Statement(s):

- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H320 Causes eye irritation.
- H351 Suspected of causing cancer.

Precautionary Statement(s):

Prevention:

- P264 Wash hands and skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:

- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTRE/doctor/
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P332 + P313 If skin irritation occurs: Get medical advice/attention.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337 + P313 If eye irritation persists: Get medical advice/attention.
- P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P308 + P313 IF exposed or concerned: Get medical advice/attention.
- P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage:

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

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers
Diethanolamine	111-42-2	1-10	
Glycol Ethers	CBI*	1-10	

#### 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 you feel unwell or are concerned.

##### Skin Contact

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Immediately wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 15-20 minutes. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely. If skin irritation occurs get 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. Remove contact lenses, if present and easy to do. If eye irritation persists, get medical advice/attention.

##### Ingestion

Rinse mouth with water. Do not induce vomiting without medical advice. If vomiting occurs, have victim lean forward to reduce the risk of aspiration. Immediately call a Poison Centre or doctor.

### SECTION 5. FIRE-FIGHTING MEASURES

#### Extinguishing Media

##### Suitable Extinguishing Media

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

##### Unsuitable Extinguishing Media

Do not use direct streams of large volumes of water as this may spread the fire.

#### Specific Hazards Arising from the Chemical

Closed containers may rupture violently when heated releasing contents. Heating increases the release of toxic vapour.

Oxides of carbon toxic fumes.

#### 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.

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## Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway. Prevent product from entering drains, soil, ditches, sewers, waterways and/or groundwater.

## Methods and Materials for Containment and Cleaning Up

Dike spilled product to prevent runoff. Pump spilled product into suitable containers. Contain and soak up spill using noncombustible material such as vermiculite, earth or sand. Store recovered product or absorbent material 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

Do not breathe in this product. Do not get in eyes, on skin or on clothing. Do not ingest product. 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. Ensure adequate ventilation. Wear personal protective equipment to avoid direct contact with this chemical. 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. Keep containers tightly closed when not in use. Protect from frost.

## 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]
Diethanolamine	1 mg/m <sup>3</sup> Skin		Not established		Not established	
Glycol Ethers	Not established	Not established	Not established	Not established	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.

### 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

Safety glasses or goggles. Use chemical goggles or a face shield if product could be splashed.

#### 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 respirator with an appropriate cartridge.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Basic Physical and Chemical Properties

**Appearance** Clear liquid.

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<b>Odour</b>	Faint
<b>pH</b>	9 - 11
<b>Melting Point/Freezing Point</b>	Not available (melting); Not available (freezing)
<b>Initial Boiling Point/Range</b>	> 212 °F (100 °C)
<b>Flash Point</b>	> 200 °F (93 °C)
<b>Evaporation Rate</b>	Not available
<b>Upper/Lower Flammability or Explosive Limit</b>	Not available (upper); Not available (lower)
<b>Vapour Pressure</b>	Not available
<b>Vapour Density (air = 1)</b>	Not available
<b>Relative Density (water = 1)</b>	0.95 - 1.05 at 77 °F
<b>Solubility</b>	Soluble in water
<b>Partition Coefficient, n-Octanol/Water (Log Kow)</b>	Not available
<b>Auto-ignition Temperature</b>	Not available
<b>Decomposition Temperature</b>	Not available
<b>Other Information</b>	
<b>Physical State</b>	Liquid

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions of use.

### Chemical Stability

Normally stable.

### Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

### Conditions to Avoid

Product is stable under normal conditions of use and storage.

### Incompatible Materials

None known.

### Hazardous Decomposition Products

Oxides of carbon.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

### Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Diethanolamine	Not available	.62 mg/kg (rat)	7.64 mg/kg (rabbit)
Glycol Ethers	Not available	Not available	Not available

### Skin Corrosion/Irritation

Prolonged contact may cause mild irritation.

### Serious Eye Damage/Irritation

May cause mild eye irritation.

### STOT (Specific Target Organ Toxicity) - Single Exposure

#### Inhalation

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Material is irritating to mucous membranes and upper respiratory tract.

**Skin Absorption**

Ingredients of this product may be absorbed through the skin.

**Ingestion**

May cause irritation of the mouth, throat and stomach.

**STOT (Specific Target Organ Toxicity) - Repeated Exposure**

Prolonged skin contact may aggravate existing skin conditions such as dermatitis.

**Respiratory and/or Skin Sensitization**

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

**Carcinogenicity**

Chemical Name	IARC	ACGIH®	NTP	OSHA
Diethanolamine	Group 2B	A3	Not Listed	Not Listed
Glycol Ethers	Not Listed	Not Listed	Not Listed	Not Listed

May cause cancer based on animal studies.

**Key to Abbreviations**

IARC = International Agency for Research on Cancer. Group 2B = Possibly carcinogenic to humans. ACGIH® = American Conference of Governmental Industrial Hygienists. A3 = Animal carcinogen. 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.

**Effects on or via Lactation**

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
Diethanolamine	55 mg/L (Daphnia magna (water flea); 48-hour; fresh water; static)	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**

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## 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

The shipping descriptions included are for non-bulk shipments only and may not apply to shipments in bulk packages (see appropriate regulatory definition).

This product contains one or more ingredients as a hazardous substance in Appendix A of 49 CFR 172.101. The product quantity, in one package, which triggers the RQ requirements under 49 CFR for each hazardous substance is shown.

Reportable quantities:

RQ substance: Diethanolamine  
RQ limit for substance: 100lb

RQ limit for product: 1000lb

Shipping information for product over in containers larger than 1000lb would be UN 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIETHANOLAMINE), CLASS 9, PG III

## 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

CERCLA: May contain <10% Diethanolamine.

SARA Title III - Section 302: No listed components.

SARA Title III - Section 311/312: Acute Hazards Chronic Health Hazard.

SARA Title III - Section 313: May contain <10% Glycol Ether.

May contain <10% Diethanolamine.

## SECTION 16. OTHER INFORMATION

**NFPA Rating**                      **Health - 2**    **Flammability - 1**                      **Instability - 0**

**SDS Prepared By**                      AES Drilling Fluids

**Phone No.**                                      281-556-5628

**Date of Preparation**                      May 12, 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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