

Defloc 2000

SECTION 1. IDENTIFICATION

Product Identifier	Defloc 2000
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

Acute toxicity (Oral) - Category 4; Skin corrosion/irritation - Category 2; Serious eye damage/eye irritation - Category 2A; Carcinogenicity - Category 2; Specific target organ toxicity (repeated exposure) - Category 2

GHS Label Elements



Signal Word:

Warning

Hazard Statement(s):

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H351	Suspected of causing cancer.

Precautionary Statement(s):

Prevention:

P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing mist, vapours, spray.
P264	Wash hands and skin thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P301 + P312	IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of water.
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.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.

Other Hazards

Hazardous to the environment.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers
Blend of Fatty Amide	CBI*	25-35	
Trade Secret	CBI*	15-25	
Acylate Copolymer	136903-34-9	5-10	
Trade Secret	CBI*	<1.5	
Silica, quartz	14808-60-7	< 1%	
Trade Secret	CBI*	0.-3.0	

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 exposure 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. Seek medical attention/contact a Poison Centre.

Skin Contact

Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes. Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). If irritation persists, get medical advice/attention. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely.

Eye Contact

Flush eyes thoroughly with lukewarm water for 15 minutes. Seek medical advice/attention.

Ingestion

Rinse mouth with water. Never give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting. Seek medical attention.

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

Can ignite if strongly heated.

Special Protective Equipment and Precautions for Fire-fighters

Dike and recover contaminated water for appropriate disposal.

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

See Section 8 for appropriate personal protective equipment.

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, waterways and/or groundwater.

Methods and Materials for Containment and Cleaning Up

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Eliminate all ignition sources. Dike and recover contaminated water for appropriate disposal. Prevent contamination of waterways or sewers.

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

It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling. Wear personal protective equipment to avoid direct contact with this chemical. See Section 8 for appropriate Personal Protective Equipment (PPE). Keep containers tightly closed when not in use or empty. Eliminate heat and ignition sources such as sparks, open flames, hot surfaces and static discharge. Post "No Smoking" signs. Avoid dust formation.

Conditions for Safe Storage

Store in an area that is: cool, dry, well-ventilated. 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]
Acylate Copolymer	Not established		Not established		Not established	
Silica, quartz	0.025 mg/m3 A2		0.1 mg/m3		Not established	
Blend of Fatty Amide	Not established		Not established		Not established	
Trade Secret	Not established		Not established		Not established	
Trade Secret	Not established		Not established		Not established	
Trade Secret	0.5 mg/m3		0.5 mg/m3		Not established	

ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value. TWA = Time-Weighted Average. OSHA = US Occupational Safety and Health Administration. PEL = Permissible Exposure Limits. AIHA® = AIHA® Guideline Foundation. WEEL™ = Workplace Environmental Exposure Limit. TLV as Metal and Cr (III) compounds.

Appropriate Engineering Controls

Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air.

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

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Basic Physical and Chemical Properties

Appearance	Red - brown fine liquid.
Odour	Odourless
pH	Not available
Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Initial Boiling Point/Range	Not available
Flash Point	> 210 °F (99 °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)	1.1 - 1.2
Solubility	Soluble in water
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Other Information	
Physical State	Liquid

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Stable under normal conditions.

Chemical Stability

Normally stable.

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 (e.g. perchloric acid).

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)
Acylate Copolymer	Not available	Not available	Not available
Silica, quartz	Not available	500 mg/kg (rat)	Not available
Blend of Fatty Amide	Not available	Not available	Not available
Trade Secret	Not available	Not available	Not available
Trade Secret	Not available	Not available	Not available
Trade Secret	Not available	2365 mg/kg (rat)	Not available

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Skin Corrosion/Irritation

May cause skin irritation.

Serious Eye Damage/Irritation

May cause eye irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure**Inhalation**

Material is irritating to mucous membranes and upper respiratory tract.

Skin Absorption

No information was located.

Ingestion

May cause irritation of the mouth, throat and stomach.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

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

Respiratory and/or Skin Sensitization

May cause skin sensitization through skin contact. Not known to be a respiratory sensitizer.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Acylate Copolymer	Not Listed	Not Listed	Not Listed	Not Listed
Silica, quartz	Group 1	A2	Known carcinogen	Not Listed
Blend of Fatty Amide	Not Listed	Not Listed	Not Listed	Not Listed
Trade Secret	Not Listed	Not Listed	Not Listed	Not Listed
Trade Secret	Not Listed	Not Listed	Not Listed	Not Listed
Trade Secret	Group 3	A4	Not Listed	Not Listed

This product contains free silica which the International Agency for Research on Cancer (IARC) has listed as causing cancer in humans.

Key to Abbreviations

IARC = International Agency for Research on Cancer. Group 1 = Carcinogenic to humans. Group 3 = Not classifiable as to its carcinogenicity to humans. ACGIH® = American Conference of Governmental Industrial Hygienists. A2 = Suspected human carcinogen. A4 = Not classifiable as a human 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.

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

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Acylate Copolymer	Not available	Not available	Not available	Not available
Silica, quartz	Not available	Not available	Not available	Not available
Blend of Fatty Amide	Not available	Not available	Not available	Not available
Trade Secret	Not available	Not available	Not available	Not available
Trade Secret	Not available	Not available	Not available	Not available
Trade Secret	Not available	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 unused product in accordance with local environmental and public health regulations. Not classified as RCRA Hazardous. RCRA WASTE NUMBER: Not Applicable.

SECTION 14. TRANSPORT INFORMATION

Not regulated under US DOT Regulations.

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 are exempt from TSCA Inventory requirements under 40 CFR 720.

Additional USA Regulatory Lists

CERCLA: May contain <1.5% Chromic acid.

SARA Title III - Section 302: No listed components.

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

SARA Title III - Section 313: May contain <1.5% Chromic acid.

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 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.