

MATERIAL SAFETY DATA SHEET

Product Trade Name: **EB-A ACTIVATOR**

Revision Date: 03-Jan-2013

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: EB-A ACTIVATOR

Synonyms: None

Chemical Family: Amine

Application: Additive

Manufacturer/Supplier Halliburton Energy Services
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Emergency Telephone: (281) 575-5000

Prepared By Chemical Compliance
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	PERCENT	ACGIH TLV-TWA	OSHA PEL-TWA
Triethanolamine	102-71-6	60 - 100%	5 mg/m ³	Not applicable

3. HAZARDS IDENTIFICATION

Hazard Overview May cause severe eye irritation. May cause burns to the mouth, throat, and stomach. May cause skin irritation.

4. FIRST AID MEASURES

Inhalation If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.

Skin In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse.

Eyes In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

Ingestion Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

Notes to Physician Not Applicable

5. FIRE FIGHTING MEASURES

Flash Point/Range (F):	354
Flash Point/Range (C):	179
Flash Point Method:	OC
Autoignition Temperature (F):	615
Autoignition Temperature (C):	324
Flammability Limits in Air - Lower (%):	1.3
Flammability Limits in Air - Upper (%):	8.5

Fire Extinguishing Media	Carbon Dioxide, Dry Chemicals, Foam. Use water spray to cool fire exposed surfaces.
Special Exposure Hazards	Decomposition in fire may produce toxic gases.
Special Protective Equipment for Fire-Fighters	Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.
NFPA Ratings:	Health 2, Flammability 1, Reactivity 0
HMIS Ratings:	Health 2, Flammability 1, Physical Hazard 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures	Use appropriate protective equipment.
Environmental Precautionary Measures	Prevent from entering sewers, waterways, or low areas.
Procedure for Cleaning / Absorption	Contain spill with sand or other inert materials. Scoop up and remove. Isolate spill and stop leak where safe.

7. HANDLING AND STORAGE

Handling Precautions	Wash hands after use. Launder contaminated clothing before reuse. Avoid contact with eyes, skin, or clothing. Avoid breathing vapors.
Storage Information	Store away from oxidizers. Store in a cool well ventilated area. Store in a dry location. Keep container closed when not in use. Store between 60 F (16 C) and 110 F (43 C).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls	Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation.
Respiratory Protection	If engineering controls and work practices cannot keep exposure below occupational exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard EN 149, or equivalent respirator when using this product. Selection of and instruction on using all personal protective equipment, including respirators, should be performed by an Industrial Hygienist or other qualified professional. Positive pressure self-contained breathing apparatus.
Hand Protection	Impervious rubber gloves. Neoprene gloves. Polyvinylchloride gloves.
Skin Protection	Rubber apron.
Eye Protection	Chemical goggles; also wear a face shield if splashing hazard exists.
Other Precautions	Eyewash fountains and safety showers must be easily accessible.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Color:	Colorless to slight yellow
Odor:	Ammonia
pH:	10.5
Specific Gravity @ 20 C (Water=1):	1.13
Density @ 20 C (lbs./gallon):	9.41
Bulk Density @ 20 C (lbs/ft3):	Not Determined
Boiling Point/Range (F):	635
Boiling Point/Range (C):	335
Freezing Point/Range (F):	61
Freezing Point/Range (C):	16
Vapor Pressure @ 20 C (mmHg):	< 0.01
Vapor Density (Air=1):	5.1
Percent Volatiles:	0
Evaporation Rate (Butyl Acetate=1):	< 1
Solubility in Water (g/100ml):	Soluble
Solubility in Solvents (g/100ml):	Not Determined
VOCs (lbs./gallon):	Not Determined
Viscosity, Dynamic @ 20 C (centipoise):	Not Determined
Viscosity, Kinematic @ 20 C (centistokes):	Not Determined
Partition Coefficient/n-Octanol/Water:	-2.53
Molecular Weight (g/mole):	149.19

10. STABILITY AND REACTIVITY

Stability Data:	Stable
Hazardous Polymerization:	Will Not Occur
Conditions to Avoid	None anticipated
Incompatibility (Materials to Avoid)	Strong oxidizers. Copper and copper alloys. Prolonged contact with aluminum. Zinc.
Hazardous Decomposition Products	Carbon monoxide and carbon dioxide. Oxides of nitrogen.
Additional Guidelines	Not Applicable

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure	Eye or skin contact, inhalation.
Inhalation	Not a likely route of exposure. May cause respiratory irritation. May cause allergic respiratory reaction.
Skin Contact	May cause severe skin irritation. May cause an allergic skin reaction. Prolonged or widespread contact may result in the absorption of potentially harmful amounts of material.
Eye Contact	May cause eye burns.
Ingestion	Causes burns of the mouth, throat and stomach.
Aggravated Medical Conditions	Not determined

Chronic Effects/Carcinogenicity Amines may form nitrosamines, a suspect carcinogen, if product is mixed with nitrates, nitrites, nitrogen oxides or other nitrosamines. Repeated overexposure may cause liver and kidney effects.

Other Information None known.

Toxicity Tests

Oral Toxicity: LD50: > 4090 mg/kg (Rat)
Dermal Toxicity: LD50: > 20000 mg/kg (Rabbit)
Inhalation Toxicity: Not determined
Primary Irritation Effect: Not determined
Carcinogenicity Not determined
Genotoxicity: Not determined
Reproductive / Developmental Toxicity: Not determined

12. ECOLOGICAL INFORMATION

Mobility (Water/Soil/Air) Not determined

Persistence/Degradability Readily biodegradable

Bio-accumulation Not expected to bioaccumulate.

Ecotoxicological Information

Acute Fish Toxicity: TLM96: 11800 mg/l (Pimephales promelas)
TLM96: 400-1000 mg/l (Lepomis macrochirus)
Acute Crustaceans Toxicity: EC50(24 Hour): 1386 mg/l (Daphnia magna)
Acute Algae Toxicity: EC50(72hr): 216 mg/l (Scenedesmus subspicatus)
EC50(96hr): 169 mg/l (Scenedesmus subspicatus)

Chemical Fate Information Not determined

Other Information Microtox: (Pseudomonas putida) > 10000 mg/l

13. DISPOSAL CONSIDERATIONS

Disposal Method Disposal should be made in accordance with federal, state, and local regulations.

Contaminated Packaging Follow all applicable national or local regulations.

14. TRANSPORT INFORMATION

Land Transportation

DOT
Not restricted

Canadian TDG

Not restricted

ADR

Not restricted

Air Transportation

ICAO/IATA

Not restricted

Sea Transportation

IMDG

Not restricted

Other Transportation Information

Labels: None

15. REGULATORY INFORMATION

US Regulations

US TSCA Inventory	All components listed on inventory or are exempt.
EPA SARA Title III Extremely Hazardous Substances	Not applicable
EPA SARA (311,312) Hazard Class	Acute Health Hazard
EPA SARA (313) Chemicals	This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Section 313 (40 CFR 372).
EPA CERCLA/Superfund Reportable Spill Quantity	Not applicable.
EPA RCRA Hazardous Waste Classification	If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.
California Proposition 65	All components listed do not apply to the California Proposition 65 Regulation.
MA Right-to-Know Law	One or more components listed.
NJ Right-to-Know Law	Does not apply.
PA Right-to-Know Law	One or more components listed.

Canadian Regulations

Canadian DSL Inventory	All components listed on inventory or are exempt.
WHMIS Hazard Class	D2B Toxic Materials

16. OTHER INFORMATION

The following sections have been revised since the last issue of this MSDS

Not applicable

Additional Information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Material Safety Data Sheet for this or other Halliburton products, contact Chemical Compliance at 1-580-251-4335.

Disclaimer Statement

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*****END OF MSDS*****