HALLIBURTON

SAFETY DATA SHEET

Product Trade Name: **BaraVis® IE-568**

Revision Date: 18-Feb-2015 **Revision Number:** 6

1. Identification

1.1. Product Identifier

Product Trade Name: BaraVis® IE-568
Synonyms: None
Chemical Family: Polymerized Fatty Acids
Internal ID Code HM007964

1.2 Recommended use and restrictions on use

Application: Viscosifier
Uses Advised Against No information available

1.3 Manufacturer's Name and Contact Details

Manufacturer/Supplier
Baroid Fluid Services
Product Service Line of Halliburton
P.O. Box 1675
Houston, TX 77251
Telephone: (281) 871-4000
Emergency Telephone: (281) 575-5000

Prepared By
Chemical Stewardship
Telephone: 1-580-251-4335
e-mail: fdunexchem@halliburton.com

1.4. Emergency telephone number

Emergency Telephone Number (281) 575-5000

2. Hazard(s) Identification

2.1 Classification in accordance with paragraph (d) of §1910.1200

Serious Eye Damage / Eye Irritation	Category 1 - H318

2.2. Label Elements

Hazard Pictograms

Signal Word Danger

Hazard Statements H318 - Causes serious eye damage

Precautionary Statements

Prevention	P264 - Wash face, hands and any exposed skin thoroughly after handling P280 - Wear eye protection/face protection
Response	P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER or doctor/physician
Storage	None
Disposal	None

Contains

Substances	**CAS Number**
Triethylene glycol butyl ether	143-22-6

2.3 Hazards not otherwise classified

None known

3. Composition/information on Ingredients

Substances	CAS Number	PERCENT (w/w)	GHS Classification - US
Triethylene glycol butyl ether	143-22-6	10 - 30%	Eye Corr. 1 (H318)

The exact percentage (concentration) of the composition has been withheld as proprietary.

4. First-Aid Measures

4.1. Description of first aid measures

Inhalation	If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.
Eyes	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
Skin	Wash with soap and water. Get medical attention if irritation persists.
Ingestion	Get medical attention! If vomiting occurs, keep head lower than hips to prevent aspiration.

4.2 Most important symptoms/effects, acute and delayed

Causes severe eye irritation which may damage tissue.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. Fire-fighting measures

5.1. Extinguishing media

Suitable Extinguishing Media

Water fog, carbon dioxide, foam, dry chemical.

Extinguishing media which must not be used for safety reasons

None known.

5.2 Specific hazards arising from the substance or mixture

Special Exposure Hazards
Decomposition in fire may produce toxic gases.

5.3 Special protective equipment and precautions for fire-fighters

Special Protective Equipment for Fire-Fighters
Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use appropriate protective equipment.
See Section 8 for additional information

6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas.

6.3. Methods and material for containment and cleaning up

Isolate spill and stop leak where safe. Contain spill with sand or other inert materials. Scoop up and remove.

7. Handling and storage

7.1. Precautions for Safe Handling

Handling Precautions
Avoid contact with eyes, skin, or clothing.
Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Information
Store away from oxidizers. Store in a cool well ventilated area. Keep container closed when not in use. Product has a shelf life of 12 months.

8. Exposure Controls/Personal Protection

8.1 Occupational Exposure Limits

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Triethylene glycol butyl ether	143-22-6	Not applicable	Not applicable

8.2 Appropriate engineering controls

Engineering Controls Use in a well ventilated area.

8.3 Individual protection measures, such as personal protective equipment

Personal Protective Equipment If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

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, AS/NZS 1715:2009, 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.
Dust/mist respirator. (N95, P2/P3)

Hand Protection	Chemical-resistant protective gloves (EN 374) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Nitrile gloves. (>= 0.4 mm thickness) This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced. Manufacturer's directions for use should be observed because of great diversity of types.
Skin Protection	Normal work coveralls.
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

9.1. Information on basic physical and chemical properties

Physical State:	Liquid	**Color:**	Dark amber
Odor:	Slight	**Odor Threshold:**	No information available

Property Remarks/ - Method	Values
pH:	No data available
Freezing Point/Range	< 0 °C / < 32 °F
Melting Point/Range	No data available
Boiling Point/Range	> 280 °C
Flash Point	> 100 °C / PMCC
Flammability (solid, gas) Not applicable	
upper flammability limit	-
lower flammability limit	-
Evaporation rate	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Specific Gravity	0.93 - 1.03
Water Solubility	Insoluble in water
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive Properties	No information available
Oxidizing Properties	No information available

9.2. Other information

VOC Content (%)	No data available

10. Stability and Reactivity

10.1. Reactivity

Not expected to be reactive.

10.2. Chemical Stability

Stable

10.3. Possibility of Hazardous Reactions
Will Not Occur

10.4. Conditions to Avoid
None anticipated

10.5. Incompatible Materials
Strong oxidizers.

10.6. Hazardous Decomposition Products
Carbon monoxide and carbon dioxide.

11. Toxicological Information

11.1 Information on likely routes of exposure
Principle Route of Exposure Eye or skin contact, inhalation.

11.2 Symptoms related to the physical, chemical and toxicological characteristics
Acute Toxicity

Inhalation Heated vapors may cause respiratory irritation.

Eye Contact Causes severe eye irritation.

Skin Contact Not irritating to skin in rabbits.

Ingestion In normal industrial use, ingestion is not considered a probable route of exposure.

Chronic Effects/Carcinogenicity No data available to indicate product or components present at greater than 0.1% are chronic health hazards.

11.3 Toxicity data

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Triethylene glycol butyl ether	143-22-6	5300 mg/kg (Rat) 5170 mg/kg (Rat)	3480 mg/kg (Rabbit) 3540 mg/kg (Rat)	> saturated concentration (Rat)

Substances	CAS Number	Skin corrosion/irritation
Triethylene glycol butyl ether	143-22-6	Non-irritating to the skin (Rabbit)

Substances	CAS Number	Eye damage/irritation
Triethylene glycol butyl ether	143-22-6	Causes severe eye irritation which may damage tissue. (Rabbit)

Substances	CAS Number	Skin Sensitization
Triethylene glycol butyl ether	143-22-6	Did not cause sensitization on laboratory animals (guinea pig) (similar substances)

Substances	CAS Number	Respiratory Sensitization
Triethylene glycol butyl ether	143-22-6	No information available

Substances	CAS Number	Mutagenic Effects
Triethylene glycol butyl ether	143-22-6	Not mutagenic in AMES Test. In vitro tests did not show mutagenic effects (similar substances)

Substances	CAS Number	Carcinogenic Effects
Triethylene glycol butyl ether	143-22-6	No information available.

Substances	CAS Number	Reproductive toxicity
Triethylene glycol butyl ether	143-22-6	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)

Substances	CAS Number	STOT - single exposure
Triethylene glycol butyl ether	143-22-6	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)

Substances	CAS Number	STOT - repeated exposure
Triethylene glycol butyl ether	143-22-6	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)

Substances	CAS Number	Aspiration hazard
Triethylene glycol butyl ether	143-22-6	Not applicable

12. Ecological Information

12.1. Toxicity

Ecotoxicity Effects

Product Ecotoxicity Data

No data available

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Triethylene glycol butyl ether	143-22-6	EC50 (72h) >500 mg/L (Desmodesmus subspicatus) EC50 (72h) >612.6 mg/L (Desmodesmus subspicatus) NOEC (72h) 62.5 mg/L (Desmodesmus subspicatus)	LC50 (96h) 2200-4600 mg/L (Leuciscus idus) LC50 (96h) 2400 mg/L (Pimephales promelas)	EC10 (30 min) > 1995 mg/L (Activated sludge, industrial) IC50 (16h) > 5000 mg/L (Activated sludge)	EC50 (48h) >500 mg/L (Daphnia magna) EC100 (48h) >5000 mg/L (Daphnia magna) LC50 (48h) 2210 ng/L (Daphnia magna)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Triethylene glycol butyl ether	143-22-6	(85% @ 28d)

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Triethylene glycol butyl ether	143-22-6	0.51

12.4. Mobility in soil

Substances	CAS Number	Mobility
Triethylene glycol butyl ether	143-22-6	KOC = 10

12.5 Other adverse effects

No information available

13. Disposal Considerations

13.1. Waste treatment methods

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

US DOT

UN Number:	Not restricted
UN Proper Shipping Name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	Not applicable

US DOT Bulk

DOT (Bulk)	Not applicable

Canadian TDG

UN Number:	Not restricted
UN Proper Shipping Name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	Not applicable

IMDG/IMO

UN Number:	Not restricted
UN Proper Shipping Name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	Not applicable

IATA/ICAO

UN Number:	Not restricted
UN Proper Shipping Name:	Not restricted
Transport Hazard Class(es):	Not applicable
Packing Group:	Not applicable
Environmental Hazards:	Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable
Special Precautions for User: None

15. Regulatory Information

US Regulations

US TSCA Inventory	Product contains one or more components not listed on the inventory.
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	Does not apply.
NJ Right-to-Know Law	Does not apply.
PA Right-to-Know Law	Does not apply.

Canadian Regulations

Canadian DSL Inventory	Product contains one or more components not listed on the inventory.

16. Other information

Preparation Information

Prepared By	Chemical Stewardship Telephone: 1-580-251-4335 e-mail: fdunexchem@halliburton.com
Revision Date:	18-Feb-2015
Reason for Revision	SDS sections updated: 2

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

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

Key or legend to abbreviations and acronyms
bw – body weight
CAS – Chemical Abstracts Service
EC50 – Effective Concentration 50%
ErC50 – Effective Concentration growth rate 50%
LC50 – Lethal Concentration 50%
LD50 – Lethal Dose 50%
LL50 – Lethal Loading 50%
mg/kg – milligram/kilogram
mg/L – milligram/liter
NIOSH – National Institute for Occupational Safety and Health
NTP – National Toxicology Program
OEL – Occupational Exposure Limit
PEL – Permissible Exposure Limit
ppm – parts per million
STEL – Short Term Exposure Limit
TWA – Time-Weighted Average
UN – United Nations
h - hour
mg/m^3 - milligram/cubic meter
mm - millimeter
mmHg - millimeter mercury
w/w - weight/weight
d - day

Key literature references and sources for data
www.ChemADVISOR.com/

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End of Safety Data Sheet