HALLIBURTON

SAFETY DATA SHEET BARO-GEL™

according to Regulation (EC) No. 2015/830

Revision Date: 14-Nov-2018

Preparation Date 14-Nov-2018

Revision Number: 7

Internal ID Code HM006621

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product Identifier

Product Name BARO-GEL™ Internal ID Code HM006621

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Viscosifier

1.3. Details of the supplier of the safety data sheet

Halliburton Energy Services

Halliburton House, Howemoss Place

Kirkhill Industrial Estate

Dvce

Aberdeen, AB21 0GN United Kingdom +44 1224 776888

www.halliburton.com

For further information, please contact

E-mail Address: fdunexchem@halliburton.com

1.4. Emergency telephone number +44 8 08 189 0979 / 1-760-476-3961

Global Incident Response Access Code: 334305

Contract Number: 14012

Emergency telephone - A	rticle 45 - (EC)1272/2008
Turkey	Ulusal Zehir Danisma Merkezi (UZEM) :114
	Acil Saglik Hizmetleri : 112
Europe	112
Bulgaria	Bulgarian poison centre: +359 2 915-44-09 or +359 2 915-43-46
Croatia	Centar za kontrolu otrovanja (CKO): (+385 1) 23-48-342 (Poison Control Center (PCC) - Institute for Medical Research and Occupational Health)
Cyprus	00357 22 88 7171
Denmark	Poison Control Hotline (DK): +45 82 12 12 12
France	ORFILA (FR): + 01 45 42 59 59
Germany	Poison Center Berlin (DE): +49 030 30686 790
Italy	Poison Center, Milan (IT): +39 02 6610 1029
Netherlands	National Poisons Information Center (NL): +31 30 274 88 88 (NB: this service is only available to health professionals)
Norway	Poisons Information (NO):+ 47 22 591300
Poland	Poison Control and Information Centre, Warsaw (PL): +48 22 619 66 54; +48 22 619 08 97
Portugal	CIAV - Centro de Informação Antivenenos (Portuguese Poison Centre): + 351 213 303 271
Romania	+40 21 318 36 06
Spain	Poison Information Service (ES): +34 91 562 04 20
United Kingdom	NHS Direct (UK): +44 0845 46 47

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

according to Regulation (EC) No. 2015/830

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Not classified

2.2. Label Elements

Not classified

Hazard Pictograms

Signal Word: None

Hazard Statements:

Not Classified

Precautionary Statements:

None

Contains

Substances CAS Number

Contains no hazardous substances in concentrations above NA

cut-off values according to the competent authority

2.3. Other Hazards

None known

SECTION 3: Composition/information on ingredients

3.2. Mixtures Mixture

Substances	EINECS	CAS	PERCENT	EU - CLP Substance	REACH Reg. No
		Number	(w/w)	Classification	
Contains no hazardous	NA	NA	60 - 100%	Not classified	No data available
substances in					
concentrations above					
cut-off values according to					
the competent authority					

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

For the full text of the H-phrases mentioned in this Section, see Section 16

SECTION 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 Under normal conditions, first aid procedures are not required.

4.2. Most important symptoms and effects, both acute and delayed

No significant hazards expected.

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

Notes to Physician Treat symptomatically

SECTION 5: Firefighting measures

according to Regulation (EC) No. 2015/830

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5.1. Extinguishing media

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Suitable Extinguishing Media

All standard fire fighting media

Extinguishing media which must not be used for safety reasons

None known.

5.2. Special hazards arising from the substance or mixture

Special exposure hazards in a fire

Not applicable

5.3. Advice for firefighters

Special protective equipment for firefighters

Not applicable

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use appropriate protective equipment. Avoid creating and breathing dust.

See Section 8 for additional information

6.2. Environmental precautions

None known.

6.3. Methods and material for containment and cleaning up

Collect using dustless method and hold for appropriate disposal. Consider possible toxic or fire hazards associated with contaminating substances and use appropriate methods for collection, storage and disposal.

6.4. Reference to other sections

See Section 8 and 13 for additional information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Use good housekeeping in storage and work areas to prevent accumulation of dust. Close container when not in use. Do not reuse empty container.

7.3. Specific end use(s)

Exposure scenario No information available Other Guidelines No information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Exposure Emilio						
Substances	CAS Number	EU	UK	Netherlands	France]
Contains no hazardous	NA	Not applicable	Not applicable	Not applicable	Not applicable	1
substances in						l
concentrations above						l
cut-off values according to						l
the competent authority					1	1

Substances	CAS Number	Germany	Spain	Portugal	Finland
Contains no hazardous substances in	NA	Not applicable	Not applicable	Not applicable	Not applicable
concentrations above cut-off values according to					
the competent authority					

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Substances	CAS Number	Austria	Ireland	Switzerland	Norway
Contains no hazardous	NA	Not applicable	Not applicable	Not applicable	Not applicable
substances in					
concentrations above					
cut-off values according to					
the competent authority					

Substances	CAS Number	Italy	Poland	Hungary	Czech Republic
Contains no hazardous	NA	Not applicable	Not applicable	Not applicable	Not applicable
substances in					
concentrations above					
cut-off values according to					
the competent authority					

Substances	CAS Number	Denmark	Romania	Croatia	Cyprus
Contains no hazardous	NA	Not applicable	Not applicable	Not applicable	Not applicable
substances in concentrations					
above cut-off values					
according to the competent					
authority					

Derived No Effect Level (DNEL)

Worker

No information available

General Population

Predicted No Effect Concentration (PNEC)

No information available.

8.2. Exposure controls

Engineering Controls

Use approved industrial ventilation and local exhaust as required to maintain exposures

below applicable exposure limits.

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 Not normally needed. But if significant exposures are possible then the following

respirator is recommended:

Dust/mist respirator. (N95, P2/P3)

Hand Protection Use gloves which are suitable for the chemicals present in this product as well as other

environmental factors in the workplace.

Wear clothing appropriate for the work environment. Dusty clothing should be laundered **Skin Protection**

before reuse. Use precautionary measures to avoid creating dust when removing or

laundering clothing.

Wear safety glasses or goggles to protect against exposure. **Eve Protection**

Other Precautions None known.

Environmental Exposure Controls No information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State: Solid Various

Odor Threshold: No information available Odorless Odor:

Property Values

Remarks/ - Method

8-10

pH:

No data available Freezing Point / Range **Melting Point / Range** No data available

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No data available Pour Point / Range **Boiling Point / Range** No data available Flash Point No data available Flammability (solid, gas) No data available Upper flammability limit No data available No data available Lower flammability limit **Evaporation rate** No data available **Vapor Pressure** No data available No data available **Vapor Density**

Specific Gravity 2.65

Water Solubility Insoluble in water Solubility in other solvents No data available Partition coefficient: n-octanol/water No data available No data available **Autoignition Temperature 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

SECTION 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

Hydrofluoric acid.

10.6. Hazardous decomposition products

Amorphous silica may transform at elevated temperatures to tridymite (870 C) or cristobalite (1470 C).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute Toxicity

Inhalation May cause mild respiratory irritation. May cause mechanical irritation to eye. **Eye Contact**

Skin Contact None known.

May cause abdominal pain, vomiting, nausea, and diarrhea. Ingestion

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

chronic health hazards.

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	No data available	No data available	No data available

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SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity effects

Product is not classified as hazardous to the environment.

Substances	CAS	Toxicity to Algae	Toxicity to Fish	Toxicity to	Toxicity to
	Number			Microorganisms	Invertebrates
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	No information available	No information available	No information available	No information available

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Contains no hazardous substances in	NA	No information available
concentrations above cut-off values according to		
the competent authority		

12.3. Bioaccumulative potential

Substances	CAS Number	Bioaccumulation
Contains no hazardous substances in	NA	No information available
concentrations above cut-off values according to		
the competent authority		

12.4. Mobility in soil

Substances	CAS Number	Mobility
Contains no hazardous substances in concentrations	NA	No information available
above cut-off values according to the competent		
authority		

12.5. Results of PBT and vPvB assessment

Substances	PBT and vPvB assessment
Contains no hazardous substances in concentrations above	Not applicable
cut-off values according to the competent authority	

12.6. Other adverse effects

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods Follow all applicable community, national or regional regulations regarding waste

management methods.

Contaminated Packaging Follow all applicable national or local regulations.

according to Regulation (EC) No. 2015/830

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SECTION 14: Transport information

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

ADN

UN Number
UN proper shipping name:
Packing Group
Environmental Hazards:
Not restricted
Not applicable
Not applicable

ADR/RID

UN Number
UN proper shipping name:
Packing Group
Environmental Hazards:
Not restricted
Not applicable
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

14.1. UN Number Not restricted

14.2. UN proper shipping name: Not restricted

14.3.

14.4. Packing Group Not applicable

14.5. Environmental Hazards: Not applicable

14.6. Special Precautions for User None

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories

US TSCA Inventory
Canadian Domestic Substances
All components listed on inventory or are exempt.
All components listed on inventory or are exempt.

List (DSL)

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

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Germany, Water Endangering

WGK 0: Generally not water endangering.

Classes (WGK)

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable. Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

15.2. Chemical safety assessment

No information available

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3

None

Key or legend to abbreviations and acronyms used in the safety data sheet

bw - body weight

CAS - Chemical Abstracts Service

 ${\sf CLP-REGULATION\ (EC)\ No\ 1272/2008\ OF\ THE\ EUROPEAN\ PARLIAMENT\ AND\ OF\ THE\ COUNCIL\ on\ Classification,}$

Labelling and Packaging of substances and mixtures

EC - European Commission

EC10 - Effective Concentration 10%

EC50 - Effective Concentration 50%

EEC - European Economic Community

ErC50 – Effective Concentration growth rate 50%

IBC Code - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

LC50 - Lethal Concentration 50%

LD50 - Lethal Dose 50%

LL0 - Lethal Loading 0%

LL50 - Lethal Loading 50%

MARPOL - International Convention for the Prevention of Pollution from Ships

mg/kg - milligram/kilogram

mg/L - milligram/liter

NIOSH - National Institute for Occupational Safety and Health

NOEC - No Observed Effect Concentration

NTP – National Toxicology Program

OEL - Occupational Exposure Limit

PBT - Persistent Bioaccumulative and Toxic

PC - Chemical Product category

PEL - Permissible Exposure Limit

ppm - parts per million

PROC - Process category

REACH - REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning the

Registration, Evaluation, Authorisation and Restriction of Chemicals

STEL - Short Term Exposure Limit

SU - Sector of Use category

Key literature references and sources for data

www.ChemADVISOR.com/

Revision Date: 14-Nov-2018

Revision Note

SDS sections updated:

2

This safety data sheet complies with the requirements of Regulation (EC) No. 2015/830

Disclaimer Statement

This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is

according to Regulation (EC) No. 2015/830

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End of Safety Data Sheet