

MATERIAL SAFETY DATA SHEET

Product Trade Name: CleanBreak LT

Revision Date: 20-Feb-2014

Revision Number: 4

1. Product and Company Identification

Product Identifier

Product Trade Name: CleanBreak LT
Synonyms: None
Chemical Family: Blend
Internal ID Code: HM007085

Product Use

Application: Breaker

Manufacturer's Name and Contact Details

Name and Address: Halliburton Energy Services
645 - 7th Ave SW Suite 2200
Calgary, AB
T2P 4G8
Canada

Emergency Telephone Number: (281) 575-5000

Prepared By

Chemical Compliance
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2. Hazard(s) Identification

WHMIS Classification

WHMIS Hazard Class: D2B Toxic Materials

WHMIS Symbol(s)



Summary of hazards of the product

Hazard Overview: May cause eye irritation

3. Composition/information on Ingredients

Substances	CAS Number	PERCENT (w/w)	HMIRA Registry Number	Filing Date
Citric acid	77-92-9	60 - 100%	Not applicable	Not applicable

4. First aid measures

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

Skin

Wash with soap and water. Get medical attention if irritation persists.

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.

Most important symptoms and effects, both acute and delayed

May cause eye irritation

Indication of any immediate medical attention and special treatment needed**Notes to Physician**

Treat symptomatically

5. Fire Fighting Measures

Extinguishing media**Suitable Extinguishing Media**

All standard fire fighting media

Extinguishing media which must not be used for safety reasons

None known.

Special hazards arising from the substance or mixture**Special Exposure Hazards**

Not applicable.

Advice for firefighters**Special Protective Equipment for Fire-Fighters**

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

Hazardous combustion products

Carbon monoxide and carbon dioxide.

6. Accidental release measures

Personal precautions and emergency procedures**Protective Equipment**

Use appropriate protective equipment. Avoid creating and breathing dust.

Environmental Precautionary Measures

Prevent from entering sewers, waterways, or low areas.

Procedure for Cleaning / Absorption

Scoop up and remove.

7. Handling and Storage

Precautions for safe handling

Avoid contact with eyes, skin, or clothing. Avoid creating or inhaling dust.

Conditions for safe storage and Incompatible materials for storage

Store in a cool, dry location. Store in a well ventilated area. Keep from excessive heat. Product has a shelf life of 24 months.

8. Exposure Controls/Personal Protection

Occupational Exposure Limits**Exposure Limits**

Substances	CAS Number	ACGIH TLV-TWA	OSHA PEL-TWA

Citric acid	77-92-9	Not applicable	Not applicable
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Appropriate engineering controls

Engineering Controls Use in a well ventilated area.

Personal Protective Equipment (PPE)

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, 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.

Hand Protection

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

Skin Protection

Normal work gloves.

Eye Protection

Normal work coveralls.

Other Precautions

Dust proof goggles.

Eyewash fountains and safety showers must be easily accessible.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical State: Granules

Color: Variable

Odor: Odorless

Odor Threshold: No information available

PropertyValues

Remarks/ - Method

pH:

3 - 6.8

pH Concentration of Solution:

5%

Freezing Point/Range

No information available.

Melting Point/Range

No information available

Boiling Point/Range (C):

No information available.

Flash Point/Range (C):

No information available.

Flash Point Method:

Not Determined

Autoignition Temperature (C):

No information available.

Flammability Limits in Air - Lower (%):

No information available.

Flammability Limits in Air - Upper (%):

No information available.

Evaporation Rate (Butyl Acetate=1):

No information available.

Vapor Pressure @ 20 C (mmHg):

No information available.

Vapor Density (Air=1):

No information available.

Specific Gravity @ 20 C (Water=1):

0.866

Solubility in Water (g/100ml):

No information available.

Solubility in other solvents

No information available.

Partition Coefficient/n-Octanol/Water:

No information available.

Decomposition Temperature (C):

No information available.

Viscosity

No information available

Explosive Properties

No information available

Oxidizing Properties

No information available

Other Information

Molecular Weight (g/mole):

No information available.

VOC Content (%)

No information available

10. Stability and Reactivity

Conditions of Reactivity**Conditions to Avoid****Hazardous Polymerization:**

Avoid contact with alkalis.
Will Not Occur

Chemical Stability

Stable

Sensitivity to Static Discharge

Not available

Sensitivity to Mechanical Impact

Not available

Incompatible materials

Strong alkalis. Moisture.

Hazardous Decomposition Products

Carbon monoxide and carbon dioxide.

11. Toxicological Information

Routes of entry

Eye or skin contact, inhalation.

Information on Toxicological Effects**Acute effects from exposure****Inhalation**

May cause respiratory irritation.

Eye Contact

May cause eye irritation

Skin Contact

Prolonged or repeated contact may cause skin irritation.

Ingestion

In large amounts: May cause abdominal pain, vomiting, nausea, and diarrhea.

Chronic effects from exposure**Chronic Effects/Carcinogenicity**

No data available to indicate product or components present at greater than 1% are chronic health hazards.

Irritancy of product**Irritation**

Non-irritating to the skin Irritating to eyes

Sensitization of product**Sensitization**

Not confirmed to cause skin or respiratory sensitization.

Mutagenicity**Mutagenic Effects**

Not regarded as mutagenic

Carcinogenicity**Carcinogenic Effects**

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC, NTP, or OSHA.

Reproductive Toxicity**Reproductive Toxicity**

This product does not contain any known or suspected reproductive hazards

Teratogenicity/embryotoxicity**Teratogenic**

Not a teratogen or embryotoxin.

Toxicologically synergistic material Not available**Acute Toxicity**

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
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Citric acid	77-92-9	3000 mg/kg (Rat) 11,700 mg/kg (Rat) 5400 mg/kg (Mouse)	> 2000 mg/kg	No data available
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12. Ecological Information

Toxicity

Ecotoxicity Effects

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity for Invertebrates
Citric acid	77-92-9	NOEC(8d): 425 mg/L (cell density) (Scenedesmus quadricauda)	LC50: 1516 mg/L (Lepomis macrochirus) LC50(48h): 440 mg/L (Leuciscus idus melanotus)	TT(72h): 485 mg/L (Entosiphon sulcatum)	TLM96: 100-330 ppm (Crangon crangon) EC50(24h): 1535 mg/L (Daphnia magna)

Persistence and Degradability

No information available

Bioaccumulation potential

No information available

Substances	Log Pow
Citric acid	-1.61 to -1.80

Mobility in soil

No information available

Results of PBT and vPvB assessment

No information available.

Other adverse effects

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

13. Disposal Considerations

Disposal Method Bury in a licensed landfill according to federal, state, and local regulations.

Contaminated Packaging Follow all applicable national or local regulations.

14. Transport Information

Canadian TDG

UN Number: Not restricted.
UN Proper Shipping Name: Not restricted
Transport Hazard Class(es): Not applicable

IATA/ICAO

UN Number: Not restricted.
UN Proper Shipping Name: Not restricted
Transport Hazard Class(es): Not applicable

IMDG/IMO

UN Number: Not restricted.
UN Proper Shipping Name: Not restricted

Transport Hazard Class(es): Not applicable

Special Precautions for User None

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

15. Regulatory Information

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Canadian Regulations

Canadian DSL Inventory All components listed on inventory or are exempt.

WHMIS Hazard Class D2B Toxic Materials

WHMIS Symbol(s)



US Regulations

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

16. Other Information

Preparation Information

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

Revision Date: 20-Feb-2014

Not applicable

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 Compliance at 1-580-251-4335.

Key or legend to abbreviations and acronyms

WHMIS: Workplace Hazardous Materials Information System

Key literature references and sources for data

www.ChemADVISOR.com/

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END OF MSDS