

SAFETY DATA SHEET

Product Trade Name:

BE-7™

Revision Date:

18-Apr-2018

Revision Number:

3

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Trade Name:

BE-7™

Synonyms

None

Chemical Family

Inorganic

Internal ID Code

HB006370

Recommended use and restrictions on use

Application

Biocide

Uses advised against

No information available

Manufacturer's Name and Contact Details

Manufacturer/Supplier

Halliburton Energy Services

14th Floor, CitiBank Tower, Al-Qutayat Street

Dubai, UAE

Telephone Number : +971 43036666

Additional Information

Prepared By

Chemical Stewardship

Telephone: 1-281-871-6107

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Emergency Telephone Number

1-760-476-3959

Global Incident Response Access Code: 334305

Contract Number: 14012

2. HAZARDS IDENTIFICATION

Classification

Skin Corrosion / Irritation	Category 1 - H314
Serious Eye Damage / Eye Irritation	Category 1 - H318
Acute Aquatic Toxicity	Category 1 - H400
Chronic Aquatic Toxicity	Category 2 - H411
Substances/mixtures corrosive to metal	Category 1 - H290

Hazard Pictograms



Signal Word
Danger

Hazard Statements

H290 - May be corrosive to metals
 H314 - Causes severe skin burns and eye damage
 H318 - Causes serious eye damage
 H400 - Very toxic to aquatic life
 H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements

Prevention

P234 - Keep only in original packaging.
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray
 P264 - Wash face, hands and any exposed skin thoroughly after handling
 P273 - Avoid release to the environment
 P280 - Wear protective gloves/protective clothing/eye protection/face protection

Response

P390 - Absorb spillage to prevent material damage
 P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
 P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
 P363 - Wash contaminated clothing before reuse
 P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P310 - Immediately call a POISON CENTER or doctor/physician
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P391 - Collect spillage

Storage

P406 - Store in corrosive resistant container with a resistant inner liner.
 P405 - Store locked up

Disposal

P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

Contains

Substances

Sodium hypochlorite
 Sodium hydroxide

CAS Number

7681-52-9
 1310-73-2

Additional Information

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).
 This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	PERCENT (w/w)	GHS Classification
Sodium hypochlorite	7681-52-9	10 - 30%	Skin Corr. 1B (H314) Eye Corr. 1 (H318) STOT SE 3 (H335) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Ox. Liq. 2 (H272) Met. Corr. 1 (H290)

Sodium hydroxide	1310-73-2	1 - 5%	Skin Corr. 1A (H314) Eye Corr. 1 (H318) STOT SE 3 (H335) Met. Corr. 1 (H290)
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4. FIRST AID MEASURES

First-aid Measures

Inhalation

If inhaled, move victim to fresh air and seek medical attention.

Skin

In case of contact, immediately flush skin with plenty of soap and water for at least 30 minutes and remove contaminated clothing, shoes and leather goods immediately. Get medical attention immediately.

Eyes

Immediately flush eyes with large amounts of water for at least 30 minutes. Seek prompt medical attention.

Ingestion

Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

Most important symptoms and effects, both acute and delayed

Causes severe eye irritation which may damage tissue. Causes severe skin irritation with tissue destruction. May cause respiratory irritation.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

Treatment based on sound judgment of physician and individual reactions of patient.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Water fog, carbon dioxide, foam, dry chemical.

Extinguishing media which must not be used for safety reasons

None known.

Specific hazards arising from the chemical

Decomposition in fire may produce harmful gases. Reacts with metals to generate flammable hydrogen gas.

Special protective actions for fire-fighters

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use appropriate protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing vapors. Ensure adequate ventilation. Evacuate all persons from the area.

Environmental Precautions

Prevent from entering sewers, waterways, or low areas.

Methods and material for containment and cleaning up

Isolate spill and stop leak where safe. Remove ignition sources and work with non-sparking tools. Contain spill with sand or other inert materials. Scoop up and remove. Hypochlorite can be broken down by covering it with a reducing agent such as sodium sulfite or sodium thiosulfate.

Additional Information

See Section 8 and 13 for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling

Remove sources of ignition. Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Wash hands after use. Ensure adequate ventilation. Launder contaminated clothing before reuse. Use appropriate protective equipment.

Conditions for safe storage, including any incompatibilities

Store away from acids. Store away from reducing agents. Store in a cool well ventilated area. Store away from direct sunlight. Keep container closed when not in use. Store between 59 F (15 C) and 84 F (29 C). Keep from freezing. Product has a shelf life of up to 6 months at 60F or lower.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters**Exposure Limits**

Substances	CAS Number	United Arab Emirates	Bahrain	Kuwait	Gulf Cooperation Council
Sodium hydroxide	1310-73-2	Not applicable	Not applicable	STEL: 2.0 mg/m ³	Not applicable

Appropriate engineering controls

Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation.

Individual protection measures, such as 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.

Acid gas respirator with a dust/mist filter. In high concentrations, supplied air respirator or a self-contained breathing apparatus.

Hand Protection

Impervious rubber gloves. Nitrile gloves. Neoprene gloves. Viton gloves Butyl rubber gloves.

Skin Protection

Wear impervious protective clothing, including boots, gloves, lab coat, apron, rain jacket, pants or coverall, as appropriate, to prevent skin contact.

Eye Protection

Splashproof chemical monogoggles or safety glasses with side shields in conjunction with a face shield.

Other Precautions

Eyewash fountains and safety showers must be easily accessible.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:

Liquid

Color

Clear light yellow

Odor:

Pungent

Odor Threshold:

No information available

pH:

11-13

Specific Gravity

1.21

Freezing Point/Range (°C):

-13.6

Pour Point/Range (C):

No information available

Boiling Point/Range (C):

~110

Flash Point/Range (°C):

No information available

Flash Point Method:

Not determined

Flammability Limits in Air - Lower (%):

No information available

Flammability Limits in Air - Upper (%):

No information available

Autoignition Temperature (°C):

No information available

Evaporation Rate (Butyl Acetate=1):

No information available

Vapor Pressure @ 20 C (mmHg):

12

Vapor Density (Air=1):

No information available

Water Solubility

Soluble in water

Decomposition Temperature (C):

No information available

Viscosity, Dynamic @ 20 C (centipoise):

No information available

Viscosity, Kinematic @ 20 C (centistokes):

No information available

Partition Coefficient/n-Octanol/Water:

No information available

Molecular Weight (g/mole):

No information available

10. STABILITY AND REACTIVITY

Reactivity

Not expected to be reactive.

Chemical Stability

Stable

Possibility of hazardous reactions

Will Not Occur

Conditions to Avoid

Avoid contact with hydrochloric acid. Can react to release chlorine gas. Contact with certain metals produces hydrogen gas. Hazards increase greatly if material is allowed to dry.

Incompatible materials

Strong acids. Contact with metals. Ammonium compounds. Organic matter. Cyanides. Alcohols. Nitrogen compounds. Cellulose. Ethyleneimine.

Hazardous decomposition products

Hydrogen chloride. Chlorine. Hypochlorous acid. Flammable hydrogen gas. Sodium oxides. Oxygen. Chlorine dioxide. Sodium chlorate

Additional Guidelines

Not Applicable

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity**Inhalation**

Causes severe respiratory irritation.

Eye Contact

Causes severe eye burns.

Skin Contact

Causes severe burns.

Ingestion

Causes burns of the mouth, throat and stomach.

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
Sodium hypochlorite	7681-52-9	8200 mg/kg (Rat) 1110 mg/kg (Rat)	> 10000 mg/kg (Rabbit)	>5.25 mg/L (Rat)
Sodium hydroxide	1310-73-2	140 - 340 mg/kg (Rat)	1350 mg/kg (Rabbit)	No data available

Substances	CAS Number	Skin corrosion/irritation
Sodium hypochlorite	7681-52-9	Skin, rabbit: Solutions can cause severe and painful burns.
Sodium hydroxide	1310-73-2	Causes severe burns

Substances	CAS Number	Serious eye damage/irritation
Sodium hypochlorite	7681-52-9	Eye, rabbit: May cause moderate to severe eye irritation.
Sodium hydroxide	1310-73-2	Causes severe eye burns (Rabbit)

Substances	CAS Number	Skin Sensitization
Sodium hypochlorite	7681-52-9	Did not cause sensitization on laboratory animals (guinea pig)
Sodium hydroxide	1310-73-2	Did not cause sensitization on laboratory animals (guinea pig)

Substances	CAS Number	Respiratory Sensitization
Sodium hypochlorite	7681-52-9	No information available
Sodium hydroxide	1310-73-2	No information available

Substances	CAS Number	Mutagenic Effects
Sodium hypochlorite	7681-52-9	In vivo tests did not show mutagenic effects.
Sodium hydroxide	1310-73-2	Did not show mutagenic effects in animal experiments In vitro tests did not show mutagenic effects.

Substances	CAS Number	Carcinogenic Effects
Sodium hypochlorite	7681-52-9	Did not show carcinogenic effects in animal experiments
Sodium hydroxide	1310-73-2	No data of sufficient quality are available.

Substances	CAS Number	Reproductive toxicity
Sodium hypochlorite	7681-52-9	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.
Sodium hydroxide	1310-73-2	No information available

Substances	CAS Number	STOT - single exposure
Sodium hypochlorite	7681-52-9	May cause disorder and damage to the Respiratory system. Mucous Membrane Gastrointestinal tract (GI)
Sodium hydroxide	1310-73-2	May cause respiratory irritation.

Substances	CAS Number	STOT - repeated exposure
Sodium hypochlorite	7681-52-9	No significant toxicity observed in animal studies at concentration requiring classification.
Sodium hydroxide	1310-73-2	No significant toxicity observed in animal studies at concentration requiring classification. Not applicable due to corrosivity of the substance.

Substances	CAS Number	Aspiration hazard
Sodium hypochlorite	7681-52-9	Not applicable

Sodium hydroxide	1310-73-2	Not applicable
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12. ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity effects Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Sodium hypochlorite	7681-52-9	EC50 0.095 mg/L (Skeletonema costatum) EC50 (72h) 0.03565 mg/L (Pserdokirchnerella subcapitata)	LC50 0.06 - 0.11 mg/L (Pimephales promelas) LC50 (96h) 0.2 mg/L (Salmo gairdneri) NOEC (28d) 0.04 mg CPO/L (Menidia peninsulae)	EC50 (3h) 563 mg/L (Activated sludge, domestic)	No information available
Sodium hydroxide	1310-73-2	No information available	LC50(48h) 189 mg/L (Leuciscus idus melanotus) LLC50(48h) 189 mg/L (Leuciscus melanotus) LC50(24h) 145 mg/L (Poecilia reticulata) LC50(96h) 125 mg/L (Gambusia affinis) LOEL(150 d) = 25 mg/L (Lebistes reticulatus)	No information available	EC50 (48h) 40.4 mg/L (Ceriodaphnia sp.)

Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Sodium hypochlorite	7681-52-9	The methods for determining biodegradability are not applicable to inorganic substances.
Sodium hydroxide	1310-73-2	The methods for determining biodegradability are not applicable to inorganic substances.

Bioaccumulation potential

Substances	CAS Number	Bioaccumulation
Sodium hypochlorite	7681-52-9	Log Kow = -3.42
Sodium hydroxide	1310-73-2	No information available

Mobility in soil

Substances	CAS Number	Mobility
Sodium hypochlorite	7681-52-9	No information available
Sodium hydroxide	1310-73-2	No information available

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

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.

Other Information

No information available

14. TRANSPORT INFORMATION**UN Number**

UN1791

UN proper shipping name:

Hypochlorite Solution

Transport Hazard Class(es):

8

Packing Group:

III

Environmental Hazards:

Marine Pollutant

Special Precautions for User

None

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

Not applicable

15. REGULATORY INFORMATION**Regulatory Information**

This SDS was prepared in accordance with United Nations "Globally Harmonized System of Classification and Labelling of Chemicals (GHS)" and its revisions.

16. OTHER INFORMATION**Key literature references and sources for data**www.ChemADVISOR.com/**Revision Date:**

18-Apr-2018

Revision Note

SDS sections updated:

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End of Safety Data Sheet