

SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

CAUSTIC SODA LIQUID - 50%

Revision Date: 03-Feb-2014

Revision Number: 14

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

1.1 Product Identifier**Product Name** CAUSTIC SODA LIQUID - 50%**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Recommended Use	pH Control
Sector of use	Refer to the Annex for a listing of uses.

1.3 Details of the supplier of the safety data sheet

Halliburton Energy Services
Halliburton House, Howemoss Place
Kirkhill Industrial Estate
Dyce
Aberdeen, AB21 0GN
United Kingdom

Emergency Phone Number: +44 1224 795277 or +1 281 575 5000

www.halliburton.com

For further information, please contact

E-Mail address: fdunexchem@halliburton.com**1.4 Emergency telephone number**

+44 1224 795277 or +1 281 575 5000

Emergency telephone - §45 - (EC)1272/2008	
Europe	112
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
Spain	Poison Information Service (ES): +34 91 562 04 20
United Kingdom	NHS Direct (UK): +44 0845 46 47

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture**REGULATION (EC) No 1272/2008**

Skin Corrosion / irritation	Category 1 - (H314)
Serious Eye Damage / Eye Irritation	Category 1 - (H318)
Substances/mixtures corrosive to metal.	Category 1 - (H290)

Classification according to EU Directives 67/548/EEC or 1999/45/EC

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

Classification C - Corrosive.

Risk Phrases R35 Causes severe burns.

2.2 Label Elements

Hazard Pictograms



Signal Word Danger

Hazard Statements

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

H290 - May be corrosive to metals

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/eye protection/face protection

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/shower

P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position 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

Contains

Substances

Sodium hydroxide

CAS Number

1310-73-2

2.3 Other Hazards

None known

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	EINECS	CAS Number	PERCENT (w/w)	EEC Classification	EU - CLP Substance Classification	REACH No.
Sodium hydroxide	215-185-5	1310-73-2	30 - 60%	C; R35	Skin Corr. 1A (H314)	01-2119457892-27

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

4. FIRST AID MEASURES

4.1 Description of 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.

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

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. Destroy or properly dispose of contaminated shoes.

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.

4.2 Most Important symptoms and effects, both acute and delayed

May cause eye, skin, and respiratory burns.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

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

May form explosive mixtures with strong acids. Reaction with steel and certain other metals generates flammable hydrogen gas.

5.3 Advice for firefighters

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. Neutralize to pH of 6-8. Scoop up and remove.

6.4 Reference to other sections

See Section 8 and 13 for additional information.

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Wash hands after use. Launder contaminated clothing before reuse.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

7.2 Conditions for safe storage, including any incompatibilities

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

7.3 Specific End Use(s)

Exposure Scenario

Please refer to the attached Annex for a listing of exposure scenarios.

Other Guidelines

No information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure Limits

Substances	CAS Number	EU	UK OEL	Netherlands	France OEL
Sodium hydroxide	1310-73-2	Not applicable	STEL: 2 mg/m ³	Not applicable	2 mg/m ³

Substances	CAS Number	Germany MAK/TRK	Spain	Portugal	Finland
Sodium hydroxide	1310-73-2	2 mg/m ³	2 mg/m ³ VLA-EC	Not applicable	STEL: 2 mg/m ³
Substances	CAS Number	Austria	Ireland	Switzerland	Norway
Sodium hydroxide	1310-73-2	Not applicable	Not applicable	Not applicable	Not applicable
Substances	CAS Number	Italy	Poland	Hungary	Czech Republic
Sodium hydroxide	1310-73-2	Not applicable	NDSch: 1 mg/m ³ NDS: 0.5 mg/m ³	TWA: 2 mg/m ³ STEL: 2 mg/m ³	TWA: 1 mg/m ³
Substances	CAS Number	Denmark			
Sodium hydroxide	1310-73-2	Not applicable			

Derived No Effect Level (DNEL)**Worker**

Substances	Long-term exposure - systemic effects, Inhalation	Acute / short term exposure - systemic effects, Inhalation	Long-term exposure - local effects, Inhalation	Acute / short term exposure - local effects, Inhalation	Long-term exposure - systemic effects, Dermal	Acute / short term exposure - systemic effects, Dermal	Long-term exposure - local effects, Dermal	Acute / short term exposure - local effects, Dermal	Hazards for the eyes - local effects
Sodium hydroxide	Not available	Not available	1 mg/m ³	Not available	Not available	Not available	Not available	Not available	Not available

General Population

Substances	Long-term exposure - systemic effects, Inhalation	Acute / short term exposure - systemic effects, Inhalation	Long-term exposure - local effects, Inhalation	Acute / short term exposure - local effects, Inhalation	Long-term exposure - systemic effects, Dermal	Acute / short term exposure - systemic effects, Dermal	Long-term exposure - local effects, Dermal	Acute / short term exposure - local effects, Dermal	Long-term exposure - systemic effects, Oral	Acute / short term exposure - local effects, Oral	Hazards for the eyes - local effects
Sodium hydroxide	Not available	Not available	1 mg/m ³	Not available	Not available	Not available	Not available	Not available	Not available	Not available	Not available

Predicted No Effect Concentration (PNEC)**8.2 Exposure controls****Engineering Controls**

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

Personal protective equipment**Respiratory Protection**

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

Hand Protection

Impervious rubber gloves.

Skin Protection

Full protective chemical resistant clothing.

Eye Protection

Chemical goggles; also wear a face shield if splashing hazard exists.

Other Precautions

Eyewash fountains and safety showers must be easily accessible.

Environmental Exposure Controls No information available

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical State: Liquid
Odor: Odorless

Color: Clear colorless
Odor Threshold: No information available

Property
Remarks/ - Method

Values

pH:

14

Freezing Point/Range

12 °C

Melting Point/Range

No data available

Boiling Point/Range

144 °C

Flash Point

No data available

Evaporation rate

No data available

Vapor Pressure

No data available

Vapor Density

No data available

Specific Gravity

1.52

Water Solubility

Miscible with 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
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10. STABILITY AND REACTIVITY

10.1 Reactivity

Not applicable

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 acids. Peroxides. Halogenated compounds. Amphoteric metals such as aluminum, magnesium, lead, tin, or zinc.

10.6 Hazardous Decomposition Products

None known.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects**Acute Toxicity**

Inhalation	Causes severe respiratory burns.
Eye Contact	Causes severe eye burns.
Skin Contact	Causes severe burns.
Ingestion	Causes burns of the mouth, throat and stomach.

Chronic Effects/Carcinogenicity Prolonged, excessive exposure may cause erosion of the teeth.**Toxicology data for the components**

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium hydroxide	1310-73-2	No data available	1350 mg/kg (Rabbit)	No data available

Substances	CAS Number	Skin corrosion/irritation
Sodium hydroxide	1310-73-2	Corrosive to skin (rabbit)

Substances	CAS Number	Eye damage/irritation
Sodium hydroxide	1310-73-2	Corrosive to eyes (rabbit)

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

Substances	CAS Number	Respiratory Sensitization
Sodium hydroxide	1310-73-2	No information available

Substances	CAS Number	Mutagenic Effects
Sodium hydroxide	1310-73-2	Not regarded as mutagenic

Substances	CAS Number	Carcinogenic Effects
Sodium hydroxide	1310-73-2	Did not show carcinogenic effects in animal experiments

Substances	CAS Number	Reproductive Toxicity
Sodium hydroxide	1310-73-2	No significant toxicity observed in animal studies at concentration requiring classification.
Substances	CAS Number	STOT - single exposure
Sodium hydroxide	1310-73-2	May cause respiratory irritation.
Substances	CAS Number	STOT - repeated exposure
Sodium hydroxide	1310-73-2	No significant toxicity observed in animal studies at concentration requiring classification.
Substances	CAS Number	Aspiration hazard
Sodium hydroxide	1310-73-2	Not applicable

12. ECOLOGICAL INFORMATION

12.1 Toxicity Ecotoxicity Effects

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Sodium hydroxide	1310-73-2	No information available	LC50: 45.4 mg/l (Oncorhynchus mykiss)	No information available	EC50(48 h): 40.4 mg/L (Ceriodaphnia sp.)

12.2 Persistence and degradability

The methods for determining biodegradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Does not bioaccumulate

12.4 Mobility in soil

No information available

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Other adverse effects

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Disposal Method

Contaminated Packaging

Disposal should be made in accordance with federal, state, and local regulations.
Follow all applicable national or local regulations.

14. TRANSPORT INFORMATION

IMDG/IMO

UN Number: UN1824,
UN Proper Shipping Name: Sodium Hydroxide Solution
Transport Hazard Class(es): , 8
Packing Group: , II
Environmental Hazards: Not applicable
EMS: EmS F-A, S-B

RID

UN Number: UN1824,

UN Proper Shipping Name: Sodium Hydroxide Solution
Transport Hazard Class(es): , 8
Packing Group: , II
Environmental hazard: Not applicable

ADR

UN Number: UN1824,
UN Proper Shipping Name: Sodium Hydroxide Solution
Transport Hazard Class(es): , 8
Packing Group: , II
Environmental hazard: Not applicable

IATA/ICAO

UN Number: UN1824,
UN Proper Shipping Name: Sodium Hydroxide Solution
Transport Hazard Class(es): , 8
Packing Group: , II
Environmental hazard: Not applicable

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**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****International Inventories**

All of the components in the product are on the following Inventory lists: All of the components in the product are on the following Inventory lists:.

EINECS Inventory This product, and all its components, complies with EINECS
US TSCA Inventory All components listed on inventory or are exempt.
Canadian DSL Inventory All components listed on inventory or are exempt.

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/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

Germany, Water Endangering Classes (WGK) WGK 1: Low hazard to waters.

15.2 Chemical Safety Assessment

Yes

16. OTHER INFORMATION**Full text of R-phrases referred to under Sections 2 and 3**

R35 Causes severe burns.

Key literature references and sources for data

www.ChemADVISOR.com/

Revision Date: 03-Feb-2014

Revision Note

Not applicable

This safety data sheet complies with the requirements of Regulation (EC) No. 453/2010

Disclaimer Statement

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End of Safety Data Sheet