



SODA ASH

SECTION 1. IDENTIFICATION

Product Identifier SODA ASH

Recommended Use Drilling Fluid Additive.

Manufacturer/Supplier AES Drilling Fluids, LLC, 11767 Katy Freeway, Suite 230, Houston, TX, 77079, Sales &

Identifier Information, 281-556-5628

Emergency Phone No. AES Drilling Fluids, LLC, 1-888-556-4533

Date of Preparation October 28, 2015

SECTION 2. HAZARD IDENTIFICATION

Classification

Eye irritation - Category 2A

Label Elements



Signal Word:

Warning

Hazard Statement(s):

H319 Causes serious eye irritation.

Precautionary Statement(s):

Prevention:

P264 Wash hands thoroughly after handling. P280 Wear eye protection, protective gloves.

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.

P337 + P313 If eye irritation persists: Get medical advice or attention.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance:

Chemical Name	CAS No.	%	Other Identifiers
Sodium carbonate	497-19-8	100	

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. Get medical advice or attention if you feel unwell or are concerned.

Skin Contact

Product Identifier: SODA ASH

Date of Preparation: October 28, 2015 Page 01 of 06

Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes. Clean clothing, shoes and leather goods. If skin irritation occurs, get medical advice or attention.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

Ingestion

Rinse mouth with water. Do not induce vomiting without medical advice. Never give anything by mouth if person is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting. If vomiting occurs, have victim lean forward to reduce the risk of aspiration. Get medical advice or attention if you feel unwell or are concerned.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire.

Unsuitable Extinguishing Media

Do not use direct streams of large volumes of water as this may spread the fire.

Specific Hazards Arising from the Product

In a fire, the following hazardous materials may be generated: Oxides of carbon. toxic chemicals.

Special Protective Equipment and Precautions for Fire-fighters

When fighting chemical fires, emergency responders should wear NIOSH approved self contained breathing apparatus and appropriate protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Keep out unnecessary and unprotected personnel. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Environmental Precautions

It is good practice to prevent releases into the environment. If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas. Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Stop or reduce leak if safe to do so. Avoid generating dust. Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal. Clean up residual contamination with water and place in appropriate containers for disposal.

Other Information

Contact EH&S regarding spill as spills of certain products and certain quantities may require reporting to various authorities.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Only use where there is adequate ventilation. Avoid generating dusts. Do not get in eyes, on skin or on clothing. Do not eat, drink or smoke in areas where product is handled. Employees should wash hands after working with product and before going on breaks outside of the work area. Remove and wash contaminated clothing before re-use. See Section 8 for appropriate Personal Protective Equipment (PPE).

Conditions for Safe Storage

Store in an area that is: cool, dry, well-ventilated, separate from incompatible materials (see Section 10: Stability and Reactivity). Keep containers tightly closed when not in use. Use good housekeeping to prevent accumulation of dust.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Product Identifier: SODA ASH

Date of Preparation: October 28, 2015 Page 02 of 06

Control Parameters

	ACGIH® TLV®		OSHA PEL		AIHA® WEEL®	
Chemical Name	TWA	STEL [C]	TWA	Ceiling	8-hr TWA	Short-term TWA [C]
Sodium carbonate	Not established		Not established		Not established	

ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value. TWA = Time-Weighted Average. R = Respirable fraction. I = Inhalable fraction. A4 = Not classifiable as a human carcinogen. STEL = Short-term Exposure Limit. C = Ceiling limit. OSHA = US Occupational Safety and Health Administration. PEL = Permissible Exposure Limits. AIHA® = AIHA® Guideline Foundation. WEEL® = Workplace Environmental Exposure Limit

Appropriate Engineering Controls

Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air. An eyewash and safety shower should be within acceptable distance to the work area.

Individual Protection Measures

Eye/Face Protection

Safety glasses or goggles. Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear long sleeves, long pants and appropriate footwear while working with product. Wear gloves with appropriate chemical resistance, see manufacturers specifications for suitability.

Respiratory Protection

If conditions exist above the OEL wear a NIOSH approved respirator with an appropriate cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

AppearanceWhite.OdourOdourlessOdour ThresholdNot available

pH 10.9 (0.1% solution)

Melting Point/Freezing Point 1564 °F (851 °C) (melting); Not available (freezing)

Initial Boiling Point/RangeNot applicableFlash PointNot availableEvaporation RateNot availableFlammability (solid, gas)Not available

Upper/Lower Flammability or

Explosive Limit

Not available (upper); Not available (lower)

Vapour PressureNot availableVapour Density (air = 1)Not availableRelative Density (water = 1)2.53 at 20 °C

Solubility Soluble (more than 10-50 g/100 mL) in water; Not available (in other liquids)

Partition Coefficient,

n-Octanol/Water (Log Kow)

Auto-ignition TemperatureNot available **Decomposition Temperature**400 °C (752 °F)

Viscosity Not available (kinematic); Not available (dynamic)

Not applicable

Other Information

Physical State Solid

Bulk Density Not available

Product Identifier: SODA ASH

Date of Preparation: October 28, 2015 Page 03 of 06

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Stable under normal conditions.

Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

Conditions to Avoid

Excess heat. Exposure to moisture may affect product quality. Acidic conditions (low pH).

Incompatible Materials

Aluminum, fluorine, magnesium, phosphorus pentoxide, sulfuric acid. Acids.

Hazardous Decomposition Products

Carbon Monoxide and Carbon Dioxide may form under fire conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Sodium carbonate	800 mg/m3 (guinea pig) (2-hour exposure)	2800 mg/m3 (rat)	> 2000 mg/kg

Skin Corrosion/Irritation

Animal tests show very mild irritation.

Serious Eye Damage/Irritation

Animal tests show serious eye irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure

Skin Absorption

No information was located.

Aspiration Hazard

Not known to be an aspiration hazard.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

No information was located.

Respiratory and/or Skin Sensitization

Not known to be a respiratory sensitizer. Not known to be a skin sensitizer.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Sodium carbonate	Not Listed	Not designated	Not Listed	Not Listed

Not known to cause cancer.

Key to Abbreviations

IARC = International Agency for Research on Cancer. ACGIH® = American Conference of Governmental Industrial Hygienists. A4 = Not classifiable as a human carcinogen. NTP = National Toxicology Program. OSHA = US Occupational Safety and Health Administration.

Reproductive Toxicity

Development of Offspring

No information was located.

Product Identifier: SODA ASH

Date of Preparation: October 28, 2015 Page 04 of 06

Sexual Function and Fertility

No information was located.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

Do not allow product to contaminate domestic or irrigation water supplies, lakes, streams, ponds or rivers.

Ecotoxicity

Acute Aquatic Toxicity

Chemical Name	LC50 Fish	EC50 Crustacea	ErC50 Aquatic Plants	ErC50 Algae
Sodium carbonate	l .	265 mg/L (Daphnia magna (water flea); 48-hour; fresh water; static)	Not available	Not available

Persistence and Degradability

No information was located.

Bioaccumulative Potential

No information was located.

Mobility in Soil

No information was located.

Other Adverse Effects

There is no information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

This product and its container must be disposed of as hazardous waste. Do NOT dump into any sewers, on the ground or into any body of water. Dispose of in accordance with all local, state and federal regulations. Not classified as RCRA Hazardous.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations.

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL/NDSL or are not required to be listed.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are on the TSCA Inventory or exempt from the TSCA.

Additional USA Regulatory Lists

CERCLA: No listed components.

SARA Title III - Section 302: No listed components.

SARA Title III - Section 311/312: Acute Hazards

SARA Title III - Section 313: No listed components.

Product Identifier: SODA ASH

Date of Preparation: October 28, 2015 Page 05 of 06

SECTION 16. OTHER INFORMATION

NFPA Rating Health - 2 Flammability - 0 Instability - 0

SDS Prepared ByAES Drilling FluidsPhone No.281-556-5628Date of PreparationOctober 28, 2015

Disclaimer Do not handle or use until precautions on MSDS are read and understood. The information on

this form is furnished solely for the purpose of enabling those who transport, handle or use our products to ensure the safety and health of their employees and to comply with various laws and regulations (federal, state and local). We believe the statements, technical information and recommendations contained herein are reliable but, they are given without warranty or quarantee of any kind, express or implied and we assume no responsibility for any loss,

damage, direct or consequential, arising out of their use.

Product Identifier: SODA ASH

Date of Preparation: October 28, 2015 Page 06 of 06

