

Sodium Bicarbonate

SECTION 1. IDENTIFICATION

Product Identifier Sodium Bicarbonate
Recommended Use Drilling Fluid Additive.
Manufacturer/Supplier Identifier AES Drilling Fluids, LLC, 11767 Katy Freeway, Suite 230, Houston, TX, 77079, Sales & Information, 281-556-5628
Emergency Phone No. CHEMTREC, 1-800-424-9300, 24-hour Emergency
Date of Preparation October 30, 2015

SECTION 2. HAZARD IDENTIFICATION

Classification

Not classified under any hazard class.

Label Elements

Not applicable

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%	Other Identifiers
Sodium bicarbonate	144-55-8	99 - 100	

Notes

Concentrations are expressed in % weight/weight.

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

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

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Suitable Extinguishing Media

Carbon Dioxide, Dry chemical, Foam. Use water to keep non-leaking, fire-exposed containers cool. Water can be used if that is all that is available. Do not use in a direct spray, ideally in a fog or dispersed spray.

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

Control Parameters

Chemical Name	ACGIH® TLV®		OSHA PEL		AIHA® WEEL®	
	TWA	STEL [C]	TWA	Ceiling	8-hr TWA	Short-term TWA [C]
Sodium bicarbonate	5 mg/m3 (R)	Not established	5 mg/m3 (R)	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

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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.

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

Not normally required if product is used as directed. For non-routine or emergency situations: wear a NIOSH approved particulate respiratory equipped with an N95, R95, or P95 filter.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	White Granules.
Odour	Odourless
Odour Threshold	Not available
pH	9
Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Initial Boiling Point/Range	3038 °F (1670 °C)
Flash Point	Not available
Evaporation Rate	Not available
Flammability (solid, gas)	Not available
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	1.3
Solubility	Soluble in water; Not available (in other liquids)
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); Not available (dynamic)
Other Information	
Physical State	Solid
Bulk Density	Not available

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

Exposure to moisture may affect product quality.

Incompatible Materials

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Strong acids. Zinc, bromine.

Hazardous Decomposition Products

Carbon Monoxide and Carbon Dioxide may form under fire conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Ingestion; skin contact; eye contact.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Sodium bicarbonate	> 900 mg/m ³ (rat)	1000 mg/kg (mouse)	2630 mg/kg (rat)

Skin Corrosion/Irritation

Animal tests show very mild irritation.

Serious Eye Damage/Irritation

Animal tests show very mild irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

Prolonged or repeated exposure may cause irritation of the respiratory tract.

Skin Absorption

No information was located.

Aspiration Hazard

Not known to be an aspiration hazard.

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 bicarbonate	Not Listed	Not Listed	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.

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

Not harmful to aquatic life.

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Acute Aquatic Toxicity

Chemical Name	LC50 Fish	EC50 Crustacea	ErC50 Aquatic Plants	ErC50 Algae
Sodium bicarbonate	759 mg/L (Oncorhynchus mykiss (rainbow trout); 96-hour)	590 mg/L (Daphnia magna (water flea); 48-hour)	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: No listed components.

SARA Title III - Section 313: No listed components.

SECTION 16. OTHER INFORMATION

NFPA Rating **Health - 0** **Flammability - 0** **Instability - 0**

SDS Prepared By AES Drilling Fluids

Phone No. 281-556-5628

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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

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