

1. IDENTIFICATION

PRODUCT IDENTIFIER: CLTD50

CHEMICAL NAME: Ammonium Bisulfite Solution (NH₄HSO₃)

SYNONYMS: Ammonium Bisulphite, Ammonium Hydrogen Sulfite, Oxygen Scavenger

RECOMMENDED USE: Use only as an oxygen scavenger in drilling fluids to reduce corrosion to oilfield tubulars.

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2. HAZARDS IDENTIFICATION

CLASSIFICATION: Skin corrosion 1C
Serious eye damage 1
Sensitization, respiratory 1

SIGNAL WORD: Danger

HAZARD STATEMENTS: Causes severe skin burns and eye damage
May cause allergy or asthma symptoms or breathing difficulties if inhaled

SYMBOLS:



PRECAUTIONARY STATEMENTS: Do not breathe fumes, vapors, mist or spray.
Wash hands, forearms and other exposed areas thoroughly after handling.
Wear protective gloves, splash apron, safety glasses or chemical safety goggles.
In case of inadequate ventilation wear respiratory protection.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water.
Wash contaminated clothing before reuse.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor.
Store locked up.
Dispose of contents and container in accordance with local, state and federal regulations.

UNCLASSIFIED HAZARDS: None

UNKNOWN ACUTE TOXICITY: None

3. COMPOSITION/INFORMATION ON INGREDIENTS

NAME	SYNONYMS	PRODUCT IDENTIFIER	PERCENT BY WEIGHT
Ammonium bisulfite	Ammonium hydrogen sulfite	CAS No. 10192-30-0	50-55%
Water		CAS No. 7732-18-5	45-50%

4. FIRST-AID MEASURES

Necessary Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: When symptoms occur: go into open air, and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses if present, and easy to do. Continue rinsing. Obtain medical attention if irritation persists.

Ingestion: Rinse mouth. Do NOT induce vomiting. Get immediate medical attention.

Symptoms/Effects (Acute and Delayed)

General: Causes severe skin burns and eye damage.

Inhalation: Respiratory tract irritation. People with asthma may develop asthma symptoms.

Skin Contact: May cause severe irritation. May cause burns.

Ingestion: Causes gastrointestinal irritation. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use appropriate extinguishing media for the surrounding fire. The product is not flammable.

Unsuitable Extinguishing Media: Not applicable.

Specific Hazards

Heating this chemical will evolve sulfur dioxide, a severe respiratory irritant.

Heating to dryness may cause the release of oxides of sulfur resulting in a respiratory hazard.

Heat from fire may cause sealed containers to rupture violently due to the expansion of compressed gases.

Product is corrosive to skin and eyes.

Special Protective Equipment and Precautions for Fire-Fighters

Fire-fighters should wear full fire-fighting gear including self-contained breathing apparatus.

Keep containers cool using water spray or fog.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Avoid contact with skin, eyes and clothing. Do NOT breathe vapors, mist or spray. Use personal protective equipment specified in Section 8. Prevent entry into sewers and public waters.

Methods and Materials for Containment and Cleaning Up

Contain spills with dikes, dirt, sand or other inert absorbents. Recover as much material as possible using a portable pump into salvage containers. Absorb remaining material, and place into salvage containers. Dispose of waste in accordance with local, state and federal regulations.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Avoid contact with skin, eyes and clothing. Avoid breathing vapors. Use only in well ventilated area. Use caution when opening sealed containers. Turn face away, and open bungs, valves or other closures slowly to prevent the sudden release of pressurized gases or vapors into eyes, nose or mouth. Emergency eye wash and shower should be available in the immediate vicinity. Wash thoroughly after handling. Promptly remove contaminated clothing, and wash before reuse.

Conditions for Safe Storage

Store in tightly closed containers at moderate temperatures in dry, well-ventilated area. Keep container closed when not in use. Keep in original container. Store containers in upright position. Store away from strong oxidizers, strong acids, strong bases, ignition sources and combustible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

No occupational exposure limits have been established for this product.

*Note: Ammonium Bisulfite Solutions exhibit a small sulfur dioxide (SO₂) presence. The exposure limits for Sulfur Dioxide are listed below:

OSHA PEL TWA	NIOSH REL TWA	NIOSH REL STEL	ACGIH TLV STEL
5 ppm	2 ppm	5 ppm	0.25 ppm

Engineering Controls

Ensure adequate ventilation. If adequate ventilation cannot be maintained, respiratory protection must be available. Emergency eye wash station and safety showers should be available in the immediate vicinity of any potential exposure.

Personal Protective Equipment

Eye Protection: Wear safety glasses or chemical safety goggles.

Skin Protection: Wear chemical resistant gloves and splash apron.

Respiratory Protection: If ventilation is inadequate, a NIOSH approved air purifying or supplied air respirator should be worn.

Other Information

To avoid accidental ingestion, do NOT eat, drink or smoke while using this product.

Use good personal hygiene practices. Wash hands, forearms and other exposed skin promptly and thoroughly with soap and water after use. Promptly remove contaminated clothing, and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear to pale yellow liquid
Odor:	Pungent irritating odor of sulfur dioxide
Odor Threshold:	0.3 to 5 ppm (sulfur dioxide)
pH:	4.9 to 5.5
Melting Point/Freezing Point:	Not Available
Boiling Point:	220° – 231° F
Flash Point:	Not Applicable
Evaporation Rate:	Not Available
Flammability:	Not Applicable
Upper Flammability Limit:	Not Applicable
Lower Flammability Limit:	Not Applicable
Vapor Pressure:	Not Available
Vapor Density:	Not Available
Relative Density:	1.275 to 1.305 Specific Gravity
Solubility:	Complete in water
Partition Coefficient:	Not Available
Auto-Ignition Temperature:	Not Applicable
Decomposition Temperature:	Not Available
Viscosity:	Not Available

10. STABILITY AND REACTIVITY

Reactivity

Hazardous reactions will not occur during normal usage.

Chemical Stability

This is a stable product under normal handling conditions.

Possibility of Hazardous Reactions

Hazardous polymerization will not occur. Exposure to heat or acids will accelerate the release of sulfur dioxide.

Alkaline materials will accelerate the evolution of ammonia.

Conditions to Avoid

Exposure to high heat, ignition sources and the following incompatible materials should be avoided.

Incompatible Materials

Strong oxidizers such as nitrates, nitrites or chlorates; Acids; Alkaline materials

Ammonium Bisulfite is not compatible with copper, zinc or their alloys (i.e. bronze, brass, galvanized metals, etc.)

These materials of construction should not be used in handling systems or storage containers for this product.

Hazardous Decomposition Products

Ammonium Bisulfate, Ammonium Sulfate, Sulfur Dioxide, Nitrogen oxides, Sulfur oxides, Sulfur, Ammonia

11. TOXICOLOGICAL INFORMATION

Routes of Exposure

Eye Contact: Causes severe irritation and burns. May cause permanent eye damage.

Skin Contact: Causes severe irritation and burns. Contact may cause redness, blistering, pain, tissue destruction.

Inhalation: Vapors or mists may irritate nose, throat, respiratory tract. May cause coughing, difficulty breathing, tightness of chest. Extreme exposures may cause severe irritation and pulmonary edema. Sulfur Dioxide given off by this product has been shown to cause breathing difficulties in asthmatics. May cause severe allergic reaction in some asthmatics and sulfite sensitive individuals.

Ingestion: May be corrosive to the gastrointestinal tract. Severe irritation and burns may result. May irritate or burn mouth, throat and digestive tract. May cause nausea, vomiting and diarrhea. Small amounts of liquid aspirated into the lungs during ingestion or vomiting may cause pulmonary edema.

Other Toxicological Effects

Carcinogenicity: Not listed by NTP, IARC or OSHA as a carcinogen.

Teratology: Data not available.

Reproduction: Data not available.

Mutagenicity: Data not available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

This product is particularly toxic in aquatic environments because of its ammonium ion content that can convert to free ammonia.

Persistence and Degradability

Not established.

Bioaccumulative Potential

Not established.

Mobility in Soil

Not established

Other Adverse Effects

None

13. DISPOSAL CONSIDERATIONS

Disposal Method

Dispose of in accordance with all local, state and federal regulations. The information offered here is for the product as shipped. Use and /or alteration of the product such as mixing with other materials may significantly change the characteristics of the material, and alter the RCRA classification and the proper disposal method. Emptied containers

contain product residue. Follow label warnings even after container is emptied. Do NOT pressurize, cut, weld, solder, drill, grind or expose empty containers to heat, flame, sparks or other sources of ignition. Do NOT dump into any sewers, on the ground or into any body of water.

14. TRANSPORT INFORMATION

US DOT

Identification Number:	UN2693
Proper Shipping Name:	Bisulfites, aqueous solutions, n.o.s. (contains ammonium bisulfite)
Hazard Class:	8
Packing Group:	III
Label Required:	CORROSIVE
Reportable Quantity (RQ):	5000 lbs. (Ammonium Bisulfite) [835 gallons CLTD50]
ERG #:	154

15. REGULATORY INFORMATION

This product or all components of this product are listed on the EPA/TSCA Inventory of Chemical Substances.

SARA Title III Section 311/312 Category Hazards

Immediate (Acute):	Yes
Delayed (Chronic):	No
Fire Hazard:	No
Pressure Release:	No
Reactive:	No

Regulated Components

Component:	Ammonium Bisulfite
CAS Number:	10192-30-0
CERCLA RQ:	Yes
SARA EHS:	No
SARA 313:	Yes ^a
U.S. HAP:	No
WI HAP:	No
CA Prop 65:	No ^b

^aThis substance is reportable under Sara Title III, Section 313 as ammonia from a water disassociable ammonium salt. Total ammonia (CAS # 7664-41-7) concentration is 8.59 – 9.45%.

^bCA Prop 65 – May contain the following trace components: Sulfur Dioxide

16. OTHER INFORMATION

Revised 5/8/2015

This document has been prepared by Corrosion Ltd. in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Corrosion, Ltd. believes the information contained in this safety data sheet is accurate based on the information supplied by reputable suppliers of our raw materials. We cannot make any assertions as to its reliability or completeness; therefore, the user may rely on it only at user's risk. We have made no effort to censor or conceal deleterious aspects of this product. Since we cannot anticipate or control the conditions under which this information and product may be used, we make no guarantee that the precautions we have suggested will be adequate for all individuals and/or situations. It is the obligation of each user of this product to comply with the requirements of all applicable laws regarding use and disposal of this product. No warranty, either expressed or implied, or liability of any nature with respect to this product or to the data herein is made or incurred hereunder.