Ammonium Bisulphite (NH$_4$HSO$_3$)

Safety Data Sheet

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

Product Identifier

Product Form: Mixture

Product Name: Ammonium Bisulphite (NH$_4$HSO$_3$)

Synonyms: Ammonium Hydrogen Sulphite

Intended Use of the Product

Name, Address, and Telephone of the Responsible Party

Company
Dimmitt Sulfur Products, Ltd.
P.O. Box 10
100 N. 1st Street
Texline, TX 79087
T 806-362-4261

Manufacturer
Dimmitt Sulfur Products, Ltd.
1600 Hwy 194 SE
P.O. Box 1008
Dimmitt, TX 79027
T 806-647-2121

Emergency Telephone Number
1-800-424-9300 (CHEMTREC)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)
Skin Corr. 1C H314
Eye Dam. 1 H318

Label Elements

GHS-US Labeling
Hazard Pictograms (GHS-US)

Signal Word (GHS-US) : Danger

Hazard Statements (GHS-US) : H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage

Precautionary Statements (GHS-US) : P260 - Do not breathe vapors, mist, spray.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER or doctor.
P321 - Specific treatment (see section 4)
P363 - Wash contaminated clothing before reuse
P405 - Store locked up
P501 - Dispose of contents/container to local, regional, national, provincial, territorial and international regulations.

Other Hazards Not available

Unknown Acute Toxicity (GHS-US) Not available
Ammonium Bisulphite (NH₄HSO₃)

Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Substances/Mixture</th>
<th>Product identifier</th>
<th>% (w/w)</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium bisulphite</td>
<td>(CAS No) 10192-30-0</td>
<td>45 - 70</td>
<td>Skin Corr. 1C, H314 Eye Dam. 1, H318</td>
</tr>
<tr>
<td>Water</td>
<td>(CAS No) 7732-18-5</td>
<td>30 - 55</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

Description of First Aid 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.

Most Important Symptoms and Effects Both Acute and Delayed

General: Causes severe skin burns and eye damage.

Inhalation: Respiratory tract irritation.

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

Eye Contact: Prolonged exposure may cause eye damage.

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

Chronic Symptoms: Not available

Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.


Other information: Do not allow run-off from fire fighting to enter drains or water courses.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Handle in accordance with good industrial hygiene and safety practice. Do NOT breathe (vapors, mist, spray). Avoid all contact with skin, eyes, or clothing.
Ammonium Bisulphite (NH₄HSO₃)
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

For Non-Emergency Personnel
Protective Equipment: Use appropriate personal protection equipment (PPE).

For Emergency Personnel
Protective Equipment: Equip cleanup crew with proper protection. Use appropriate personal protection equipment (PPE).
Emergency Procedures: Ventilate area.

Environmental Precautions
Prevent entry to sewers and public waters.

Methods and Material for Containment and Cleaning Up
For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material, then place in suitable container. Large spill: clean up product by vacuum. Contact competent authorities after a spill.

Reference to Other Sections
See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE
Precautions for Safe Handling
Additional Hazards When Processed: When heated to decomposition, emits toxic fumes. Fire will produce irritating, corrosive and/or toxic gases.
Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.
Conditions for Safe Storage, Including Any Incompatibilities
Technical Measures: Comply with applicable regulations.
Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from extremely high or low temperatures, ignition sources, direct sunlight, incompatible materials.
Specific End Use(s) Not available

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION
Control Parameters
No Occupational Exposure Limits (OELs) have been established for this product or its chemical components.

Exposure Controls
Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Materials for Protective Clothing: Chemically resistant materials and fabrics. Corrosion proof clothing.
Hand Protection: Wear chemically resistant protective gloves.
Eye Protection: Chemical goggles or safety glasses.
Skin and Body Protection: Not available
Respiratory Protection: Use NIOSH-approved air-purifying or supplied-air respirator where airborne concentrations of vapor or mist are expected to exceed exposure limits.
Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES
Information on Basic Physical and Chemical Properties
Physical State: Liquid
Appearance: Clear, colorless to pale yellow liquid
Ammonium Bisulphite (NH₄HSO₃)

Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tbody>
<tr>
<td>Odor</td>
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<tr>
<td>Odor Threshold</td>
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<tr>
<td>pH</td>
<td>4 - 5.5</td>
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<tr>
<td>Relative Evaporation Rate (butylacetate=1)</td>
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</tr>
<tr>
<td>Melting Point</td>
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<tr>
<td>Freezing Point</td>
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<td>Boiling Point</td>
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<td>Flash Point</td>
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<td>Auto-ignition Temperature</td>
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<td>Decomposition Temperature</td>
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<tr>
<td>Flammability (solid, gas)</td>
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<td>Lower Flammable Limit</td>
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<td>Vapor Pressure</td>
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<td>Relative Vapor Density at 20 °C</td>
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<td>Relative Density</td>
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<td>Specific Gravity</td>
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<td>Solubility</td>
<td>Soluble in water.</td>
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<td>Log Pow</td>
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<tr>
<td>Log Kow</td>
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<td>Viscosity, Kinematic</td>
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<tr>
<td>Viscosity, Dynamic</td>
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<tr>
<td>Explosion Data – Sensitivity to Mechanical Impact</td>
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</tr>
<tr>
<td>Explosion Data – Sensitivity to Static Discharge</td>
<td>Not available</td>
</tr>
</tbody>
</table>

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Hazardous reactions will not occur under normal conditions.
Chemical Stability: Stable at standard temperature and pressure.
Possibility of Hazardous Reactions: Hazardous polymerization will not occur.
Conditions to Avoid: Direct sunlight. Extremely high or low temperatures. Sources of ignition. Incompatible materials.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product
Acute Toxicity: Not classified
LD50 and LC50 Data: Not available
Skin Corrosion/Irritation: Not classified
pH: 4 - 5.5
Serious Eye Damage/Irritation: Causes serious eye irritation.
pH: 4 - 5.5
Respiratory or Skin Sensitization: Not classified
Germ Cell Mutagenicity: Not classified
Teratogenicity: Not available
Carcinogenicity: Not classified
Specific Target Organ Toxicity (Repeated Exposure): Not classified
Reproductive Toxicity: Not classified
Specific Target Organ Toxicity (Single Exposure): Not classified
Aspiration Hazard: Not classified
Symptoms/Injuries After Inhalation: Respiratory tract irritation.
Ammonium Bisulphite (NH₄HSO₃)
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Symptoms/Injuries After Skin Contact: May cause severe irritation. May cause burns.
Symptoms/Injuries After Eye Contact: Prolonged exposure may cause eye damage.
Symptoms/Injuries After Ingestion: Gastrointestinal irritation. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

Information on Toxicological Effects - Ingredient(s)

LD₅₀ and LC₅₀ Data

<table>
<thead>
<tr>
<th>Substance</th>
<th>LD₅₀ Oral Rat (mg/kg)</th>
<th>ATE (dust, mist) (mg/l/4h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water (7732-18-5)</td>
<td>&gt; 90000 mg/kg</td>
<td>100000.000 mg/l/4h</td>
</tr>
</tbody>
</table>

SECTION 12: ECOLOGICAL INFORMATION

Toxicity: Not classified
Persistence and Degradability
- Ammonium Bisulphite (NH₄HSO₃): Not established.

Bioaccumulative Potential
- Ammonium Bisulphite (NH₄HSO₃): Not established.

Mobility in Soil: Not available

Other Adverse Effects
Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

SECTION 14: TRANSPORT INFORMATION

In Accordance With ICAO/IATA/DOT/TDG

UN Number
UN-No.(DOT): 2693
DOT NA no.: UN2693

UN Proper Shipping Name
DOT Proper Shipping Name: Bisulfites, aqueous solutions, n.o.s. (ammonium bisulfite)
Transport Document Description: UN2693 Bisulfites, aqueous solutions, n.o.s. (ammonium bisulfite), 8, III
Department of Transportation (DOT) Hazard Classes: 8 - Class 8 - Corrosive material 49 CFR 173.136
Hazard Labels (DOT): 8 - Corrosive substances

Packing Group (DOT): III - Minor Danger
DOT Special Provisions (49 CFR 172.102): IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 °C (1.1 bar at 122 °F), or 130 kPa at 55 °C (1.3 bar at 131 °F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T7 - 4 178.274(d)(2) Normal.................. 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / (1 + a (tr - tf)) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx) : 154
DOT Packaging Non Bulk (49 CFR 173.xxx) : 203
DOT Packaging Bulk (49 CFR 173.xxx) : 241

Additional Information
Emergency Response Guide (ERG) Number : 154

Transport by sea
DOT Vessel Stowage Location : A - The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other : 40 - Stow “clear of living quarters”, 52 - Stow “separated from” acids

Air transport
DOT Quantity Limitations Passenger Aircraft/Rail (49 CFR 173.27) : 5 L
DOT Quantity Limitations Cargo Aircraft Only (49 CFR 175.75) : 60 L

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

<table>
<thead>
<tr>
<th>Ammonium Bisulphite (NH₄HSO₃)</th>
<th>SARA Section 311/312 Hazard Classes</th>
<th>Immediate (acute) health hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium bisulphite (10192-30-0)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
<td></td>
</tr>
<tr>
<td>Water (7732-18-5)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
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</tbody>
</table>

US State Regulations

<table>
<thead>
<tr>
<th>Ammonium bisulphite (10192-30-0)</th>
<th>U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. - Louisiana - Reportable Quantity List for Pollutants</td>
<td></td>
</tr>
<tr>
<td>U.S. - Massachusetts - Oil &amp; Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1</td>
<td></td>
</tr>
<tr>
<td>U.S. - Massachusetts - Oil &amp; Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2</td>
<td></td>
</tr>
<tr>
<td>U.S. - Massachusetts - Oil &amp; Hazardous Material List - Reportable Quantity</td>
<td></td>
</tr>
<tr>
<td>U.S. - Massachusetts - Oil &amp; Hazardous Material List - Soil Reportable Concentration - Reporting Category 1</td>
<td></td>
</tr>
<tr>
<td>U.S. - Massachusetts - Oil &amp; Hazardous Material List - Soil Reportable Concentration - Reporting Category 2</td>
<td></td>
</tr>
<tr>
<td>U.S. - Massachusetts - Right To Know List</td>
<td></td>
</tr>
<tr>
<td>U.S. - Massachusetts - Toxics Use Reduction Act</td>
<td></td>
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<tr>
<td>U.S. - Michigan - Polluting Materials List</td>
<td></td>
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<tr>
<td>U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances</td>
<td></td>
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<tr>
<td>U.S. - New Jersey - Right to Know Hazardous Substance List</td>
<td></td>
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<tr>
<td>U.S. - New Jersey - Special Health Hazards Substances List</td>
<td></td>
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<tr>
<td>U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances</td>
<td></td>
</tr>
<tr>
<td>U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List</td>
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<tr>
<td>U.S. - Pennsylvania - RTK (Right to Know) List</td>
<td></td>
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<tr>
<td>U.S. - Texas - Effects Screening Levels - Long Term</td>
<td></td>
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<tr>
<td>U.S. - Texas - Effects Screening Levels - Short Term</td>
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Canadian Regulations

<table>
<thead>
<tr>
<th>Ammonium Bisulphite (NH₄HSO₃)</th>
<th>WHMIS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class D Division 2 Subdivision B - Toxic material causing other toxic effects</td>
<td></td>
</tr>
</tbody>
</table>
Ammonium Bisulphite (NH₄HSO₃) Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**Ammonium bisulfite (10192-30-0)**

**WHMIS Classification**  
Class E - Corrosive Material

Listed on the Canadian DSL (Domestic Substances List) inventory.
Listed on the Canadian Ingredient Disclosure List

**Water (7732-18-5)**

Listed on the Canadian DSL (Domestic Substances List) inventory.

**WHMIS Classification**  
Uncontrolled product according to WHMIS classification criteria

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by CPR.

**SECTION 16: OTHER INFORMATION**

**Revision date** : 08/19/2014  
**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

**GHS Full Text Phrases:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Irrit. 2A</td>
<td>Serious eye damage/eye irritation Category 2A</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
</tbody>
</table>

**Party Responsible for the Preparation of This Document**

Dimmitt Sulfur Products, Ltd.  
P.O. Box 10  
100 N. 1st Street  
Texline, TX 79087  
806-362-4261

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

North America GHS US 2012 & WHMIS