Ammonium Nitrate Solution 50%  Safety Data Sheet
SDS: P-19  Version: 1  Revision Date: 07/25/2018

SECTION 1: IDENTIFICATION

Product Identifier: Ammonium Nitrate Solution 50%
Product Names and Synonyms: Ammonium Nitrate Solution (Weak), weak ANS, weak ANSOL, 50% ANSOL
Intended Uses: Fertilizer solution and other industrial uses

Name, Address, and Telephone of the Responsible Party:
Austin Powder Company
25800 Science Park Dr.
Cleveland, OH  44122
216-464-2400 during normal business hours
877-836-8286 Toll Free 24/7
www.austinpowder.com

In Case of Emergency Call CHEMTREC – TOLL FREE 24/7
800-424-9300 DOMESTIC
1-703-527-3887 INTERNATIONAL AND MARINE

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture:

<table>
<thead>
<tr>
<th>Code</th>
<th>Hazard Class</th>
<th>Hazard Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>H319</td>
<td>Serious eye damage / eye irritation</td>
<td>2A</td>
</tr>
<tr>
<td>H303</td>
<td>Aspiration Hazard</td>
<td>5</td>
</tr>
</tbody>
</table>

Label Elements

Warning

Hazard Statements

Causes serious eye irritation
May be harmful if swallowed

Precautionary Statements

Wear eye protection, protective gloves recommended.

IF SWALLOWED: Get immediate medical attention. DO NOT induce vomiting.
IF ON SKIN: Wash contact area with soap and water. If irritation occurs, get medical attention.
Take off contaminated clothing and wash before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention.

If exposed or concerned, or you do not feel well: Get medical attention.

Dispose of contents/container in accordance with all applicable regulations.
Other Hazards:
Unknown Acute Toxicity: Not available

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS No.</th>
<th>% (w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium nitrate</td>
<td>CAS No. 6484-52-2</td>
<td>45 - 55</td>
</tr>
<tr>
<td>Water</td>
<td>CAS No. 7732-18-5</td>
<td>45 - 55</td>
</tr>
</tbody>
</table>

SECTION 4: FIRST AID MEASURES

Inhalation: No known significant effects. If symptoms occur: move to open air, keep at rest and in a position comfortable for breathing. Get medical attention. Ventilate suspected area.

Skin Contact: Wash contact areas with soap and water. Remove contaminated clothing. Wash contaminated clothing before reuse.

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

Ingestion: Rinse mouth. DO NOT induce vomiting. Get medical attention.

Most Important Symptoms and Effects both Acute and Delayed:

Inhalation: May cause irritation to the respiratory tract, symptoms include: sneezing, coughing, burning sensation of throat with constricting sensation of the larynx and difficulty in breathing.

Skin Contact: May cause mild skin irritation. Symptoms may include: redness, pain, swelling, itching, burning, dryness and dermatitis. May cause a more severe irritation or allergic reaction in sensitive individuals.

Eye Contact: May cause serious eye irritation. Symptoms may include redness, pain, swelling, itching, burning, tearing and blurred vision.

Ingestion: Overexposure by ingestion is unlikely under normal working conditions. If material has been swallowed give small quantities of water to a conscious person, never give anything by mouth to an unconscious person. Do not induce vomiting.

Ammonium nitrate ingestion may cause methemoglobinemia. Initial manifestation of methemoglobinemia is cyanosis, characterized by blue lips, tongue and mucous membranes, with skin color being slate grey. Further manifestation is characterized by headache, weakness, dyspnea, dizziness, stupor, respiratory distress and death due to anoxia. If ingested, nitrates may be reduced to nitrites by bacteria in the digestive tract. Signs and symptoms of nitrite poisoning include methemoglobinemia, nausea, dizziness, increased heart rate, hypotension, fainting and, possibly shock.

Indication of Any Immediate Medical Attention and Special Treatment Needed:

If exposed, concerned or you don’t feel well, get medical attention.
SECTION 5: FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Non-flammable. Material will not burn. Use an extinguishing agent suitable for the surrounding fire.

Unsuitable Extinguishing Media: None known

Special Hazards Arising from the Substance or Mixture

Fire Hazard: There is an extreme risk that ammonium nitrate involved in a fire may detonate. In a fire, the water portion of the solution boils off quickly, leaving solid or molten ammonium nitrate. Dangerous if allowed to try out, residue will exhibit oxidizing properties.

Advice for Firefighters

Precautionary Measures: It is recommended that the amount and location of ammonium nitrate solution stored near a fire be determined prior to committing firefighters to fight the fire.

Firefighting Instructions: When fighting the initial fire, not involving ammonium nitrate, firefighters should follow standard firefighting procedures for the materials involved.

Hazardous Combustion: No unusual combustion products are expected. However, toxic fumes will be present.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Isolate the area from unnecessary personnel.

For Emergency Personnel

Protective Equipment: Provide cleanup crew with proper PPE.

Emergency Procedures: Ventilate area.

Emergency Precautions: Stop the discharge if safe to do so. Ventilate area. Avoid dispersal of spilled material runoff and contact with soil, waterways, drains and sewers.

Methods and Material for Containment and Cleaning Up: Contact manufacturer or CHEMTREC.
**SECTION 7: HANDLING AND STORAGE**

**Precautions for Safe Handling**

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with soap and water before eating, drinking, or smoking and again when leaving work. Wash contaminated clothing before reuse.

**Conditions for Safe Storage, Including Any Incompatibilities**

**Technical Measures:** May be corrosive to metals. Smoking, open flames, and unauthorized sparking or flame-producing devices are prohibited.

**Storage Conditions:** Do not store below 45°F. Storage areas should be inspected regularly by an individual trained to identify potential hazards and ensure that all safety and security control measures are being properly implemented. All ammonium nitrate storage sites must comply with ATF, OSHA or NRCAN regulations.

**Incompatible Materials:** Avoid contamination with combustible or flammable materials, strong acids, strong bases, strong oxidizing agents, reducing agents, chlorinated compounds, copper (any alloys like bronze and brass), metal powders and peroxides.

**Special Rules on Packaging:** Not regulated.

**SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Occupational exposure limits of ingredient(s):**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>USA ACGIH (nuisance dust)</th>
<th>USA OSHA (nuisance dust)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium nitrate, CAS No. 6484-52-2</td>
<td>ACGIH TWA (mg/m³)</td>
<td>OHSA PEL (TWA) (mg/m³)</td>
</tr>
</tbody>
</table>

**Exposure Controls:**

**Appropriate Engineering Controls:** Product should be handled and used under strictly controlled conditions. Emergency eye wash fountains and safety showers should be available in the vicinity of any potential exposure, but are not required.

**Personal Protective Equipment:**

**Hand Protection:** Chemical resistant gloves are recommended but not required

**Eye Protection:** Safety glasses with side shields or safety goggles.

**Respiratory Protection:** Approved respiratory protection should be worn when recommended by a risk assessment or if irritation is experienced.
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Physical and Chemical Properties:
- Appearance: Clear liquid
- Odor: Slight ammonia odor
- Odor threshold: Not available
- Vapor density: Not relevant
- pH: 4-9
- Freezing point (Crystal point): 0°C (32°F)
- Initial boiling point and boiling range: Not available
- Flash point: Not available
- Evaporation rate: Not available
- Flammability: Will not burn
- Upper / lower flammability or explosive limits: Not available
- Vapor pressure: Not available
- Bulk Density: 1.22 g/cc (10.18 lb/gal)
- Solubility (for ammonium nitrate in water): Complete
- Partition coefficient: n-octol/water: Not available
- Auto-ignition temperature: Not available
- Decomposition temperature: 177°C (350°F)
- Viscosity: Not relevant
- Explosive properties: Mass detonation hazard when involved in a fire
- Explosion Data – Sensitivity to Mechanical Impact: Not sensitive to mechanical impact
- Explosion Data – Sensitivity to Static Discharge: Not sensitive to static discharge

SECTION 10: STABILITY AND REACTIVITY

Reactivity and Chemical Stability: Stable and non-reactive under normal conditions of transportation, storage, handling and use.

Possibility of Hazardous Reactions: Polymerization will not occur.

Conditions to Avoid: Open flame and elevated temperatures. Do not allow to dry out.

Incompatible Materials: Avoid contamination with combustible or flammable materials, strong acids, strong bases, strong oxidizing agents, reducing agents, chlorinated compounds, copper (any alloys like bronze and brass), metal powders and peroxides.

Hazardous Decomposition Products: No unusual fumes or decomposition products expected. However, toxic fumes will be present.

SECTION 11: TOXICOLOGY INFORMATION

Acute Toxicity:
- LD50 (derived): LD50 oral rat: 4030 mg/kg for 55% ammonium nitrate solution

Skin Corrosion/Irritation: Not classified

Eye Damage/Irritation: May cause serious eye irritation

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not available
Ammonium Nitrate Solution 50% (SDS: P-19)  

Carcinogenicity:  
Not classified

Reproductive Toxicity:  
Not classified

Specific Target Organ Toxicity (Single Exposure):  
Not classified

Specific Target Organ Toxicity (Repeated Exposure):  
Not classified.

Aspiration Hazard:  
Not classified

Symptoms/Injuries after Inhalation:  
Harmful if inhaled, causes methemoglobinemia. Symptoms may include headache, dizziness, nausea and a loss of coordination.

Symptoms/Injuries after Skin Contact:  
May cause mild skin irritation. Symptoms may include: redness, pain, swelling, itching, burning, dryness and dermatitis. May cause a more severe or allergic reaction in sensitive individuals.

Symptoms/Injuries after Eye Contact:  
May cause serious eye irritation. Symptoms may include redness, pain, swelling, itching, burning, tearing and blurred vision.

Symptoms/Injuries after Ingestion:  

Chronic Symptoms:  
Although none are expected under normal conditions, inhalation exposure may cause methemoglobinemia and may damage respiratory tract.

LD50 and LC50 Data (ingredients):

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>LD50 Oral Rat</th>
<th>LC50 Inhalation Rat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium nitrate, CAS No. 6484-52-2</td>
<td>2,217 mg/kg of body weight</td>
<td>&gt; 88.8 mg/l/4h</td>
</tr>
</tbody>
</table>

SECTION 12: ECOLOGY INFORMATION

Not available

SECTION 13: DISPOSAL CONSIDERATIONS

Call manufacturer or CHEMTREC.

SECTION 14: TRANSPORTATION INFORMATION

<table>
<thead>
<tr>
<th>DOT</th>
<th>Not regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDG</td>
<td>Not regulated</td>
</tr>
<tr>
<td>IMDG</td>
<td>Not regulated</td>
</tr>
<tr>
<td>IATA</td>
<td>Not regulated</td>
</tr>
</tbody>
</table>
SECTION 15: REGULATORY INFORMATION

US Federal Regulations:
Emergency Planning and Community Right-To-Know Act (EPCRA), a/k/a Superfund Amendments and Reauthorization Act (SARA) Title III
Toxic Substances Control Act (TSCA)
TSCA Section 8

**Ammonium nitrate, CAS No. 6484-52-2**

<table>
<thead>
<tr>
<th>SARA Section 311/312</th>
<th>Reactive Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fire Hazard</td>
</tr>
<tr>
<td></td>
<td>Health Hazard</td>
</tr>
</tbody>
</table>

| TSCA                  | Listed on the United States TSCA inventory |

**Canadian Regulations:**

Domestic Substances List (DSL)
Workplace Hazardous Materials Information System (WHMIS)

**Ammonium nitrate, CAS No. 6484-52-2**

<table>
<thead>
<tr>
<th>DSL</th>
<th>Listed on the Canadian DSL</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHMIS Classification</td>
<td>Class C – Oxidizing Substance</td>
</tr>
<tr>
<td></td>
<td>Class D, Division 2, Subdivision B – Toxic material causing other toxic effects.</td>
</tr>
</tbody>
</table>

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF LAST REVISION

This SDS was prepared in accordance with US (29 CFR 1900.1200) and Canadian (WHMIS 2015) requirements.

SDS: P-19 Initial Issue Date: 07/25/2018 Last Revision Date: n/a Version: 1

**Party Responsible for the Preparation of this Document:**

Austin Powder Company
Cleveland, OH 44122
216-464-2400

This information is based on Austin Powder Company's current knowledge and is intended to describe the product for the purposes of health and safety requirements only. It should not be construed as guaranteeing any specific property of the product.