

# Ammonium Nitrate Solution 50%

SDS: P-19

Version: 1

# Safety Data Sheet

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:**

Code	Hazard Class	Hazard Category
H319	Serious eye damage / eye irritation	2A
H303	Aspiration Hazard	5

### **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**

Name	CAS No.	% (w/w)
Ammonium nitrate	CAS No. 6484-52-2	45 - 55
Water	CAS No. 7732-18-5	45 - 55

**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 dry 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):**

Ammonium nitrate, CAS No. 6484-52-2		
USA ACGIH (nuisance dust)	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> – Inhalable particulate
USA OSHA (nuisance dust)	OSHA PEL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> – Respirable (particulate)

### **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**

<b>Reactivity and Chemical Stability:</b>	Stable and non-reactive under normal conditions of transportation, storage, handling and use.
<b>Possibility of Hazardous Reactions:</b>	Polymerization will not occur.
<b>Conditions to Avoid:</b>	Open flame and elevated temperatures. Do not allow to dry out.
<b>Incompatible Materials:</b>	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.
<b>Hazardous Decomposition Products:</b>	No unusual fumes or decomposition products expected. However, toxic fumes will be present.

## **SECTION 11: TOXICOLOGY INFORMATION**

### **Acute Toxicity:**

<b>LD50 (derived):</b>	LD50 oral rat: 4030 mg/kg for 55% ammonium nitrate solution
<b>Skin Corrosion/Irritation:</b>	Not classified
<b>Eye Damage/Irritation:</b>	May cause serious eye irritation
<b>Respiratory or Skin Sensitization:</b>	Not classified
<b>Germ Cell Mutagenicity:</b>	Not classified
<b>Teratogenicity:</b>	Not available



**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:** Burning sensation. Abdominal pain. Abdominal cramps. Vomiting. Ammonium nitrate ingestion may cause methemoglobinemia.

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

**LD50 and LC50 Data (ingredients):**

Ammonium nitrate, CAS No. 6484-52-2	
LD50 Oral Rat	2,217 mg/kg of body weight
LC50 Inhalation Rat	> 88.8 mg/l/4h

**SECTION 12: ECOLOGY INFORMATION**

Not available

**SECTION 13: DISPOSAL CONSIDERATIONS**

Call manufacturer or CHEMTREC.

**SECTION 14: TRANSPORTATION INFORMATION**

DOT	Not regulated
TDG	Not regulated
IMDG	Not regulated
IATA	Not regulated



## **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**

SARA Section 311/312	Reactive Hazard Fire Hazard Health Hazard
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**

DSL	Listed on the Canadian DSL
WHMIS Classification	Class C – Oxidizing Substance Class D, Division 2, Subdivision B – Toxic material causing other toxic effects.

## **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.

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

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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.