

# Safety Data Sheet

## Ammonium Chloride Granular, ACS

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Ammonium Chloride Granular, ACS

**Synonyms/Generic Names:** Ammonium Muriate, Ammonium Chloratum, Ammonium Chloridum, Sal Ammonia, Salmiac

**Product Number:** 0445

**Product Use:** Industrial, Manufacturing or Laboratory use

**Manufacturer:** Columbus Chemical Industries, Inc.  
N4335 Temkin Rd.  
Columbus, WI. 53925

**For More Information Call:** 920-623-2140 (Monday-Friday 8:00-4:30)

**In Case of Emergency Call:** CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

### 2. HAZARDS IDENTIFICATION

**OSHA Hazards:** Harmful by ingestion, Irritant

**Target Organs:** None

**Signal Words:** Warning

**Pictograms:**



**GHS Classification:**

Acute toxicity, Oral	Category 4
Eye irritation	Category 2A
Acute aquatic toxicity	Category 2

**GHS Label Elements, including precautionary statements:**

**Hazard Statements:**

H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H401	Toxic to aquatic life.

**Precautionary Statements:**

P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER/doctor/physician if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P501	Dispose of contents/container in accordance with local regulations.

#### Potential Health Effects

<b>Eyes</b>	Causes eye irritation.
<b>Inhalation</b>	May cause respiratory tract irritation.
<b>Skin</b>	May cause skin irritation.
<b>Ingestion</b>	May be harmful if swallowed.

#### NFPA Ratings

<b>Health</b>	2
<b>Flammability</b>	0
<b>Reactivity</b>	0
<b>Specific hazard</b>	Not Available

#### HMIS Ratings

<b>Health</b>	2
<b>Fire</b>	0
<b>Reactivity</b>	0
<b>Personal</b>	E

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Ammonium Chloride	>98	12125-02-9	235-186-4	NH <sub>4</sub> Cl	53.49 g/mol

### 4. FIRST-AID MEASURES

<b>Eyes</b>	Rinse with plenty of water for at least 15 minutes and seek medical attention.
<b>Inhalation</b>	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
<b>Skin</b>	Flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention.
<b>Ingestion</b>	<b>Do Not Induce Vomiting!</b> Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention.

### 5. FIRE-FIGHTING MEASURES

<b>Suitable (and unsuitable) extinguishing media</b>	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.
<b>Special protective equipment and precautions for firefighters</b>	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
<b>Specific hazards arising from the chemical</b>	Emits toxic fumes (nitrogen oxides, hydrogen chloride gas, ammonia) under fire conditions. (See also Stability and Reactivity section)

### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions, protective equipment and emergency procedures</b>	See section 8 for recommendations on the use of personal protective equipment.
<b>Environmental precautions</b>	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.

<b>Methods and materials for containment and cleaning up</b>	Sweep up and place in suitable, closed containers for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.
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## 7. HANDLING AND STORAGE

### Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Avoid formation of dust. Use with adequate ventilation where dust is formed. Wash thoroughly after using. Keep container closed when not in use.

### Conditions for safe storage, including any incompatibilities

Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Occupational exposure controls:

Component	Exposure Limits	Basis	Entity
Ammonium Chloride	10 mg/m <sup>3</sup>	TLV	ACGIH
	20 mg/m <sup>3</sup>	STEL	ACGIH
	10 mg/m <sup>3</sup>	PEL	OSHA
	20 mg/m <sup>3</sup>	STEL	OSHA
	10 mg/m <sup>3</sup>	REL	NIOSH
	20 mg/m <sup>3</sup>	STEL	NIOSH

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

### Personal Protection

<b>Eyes</b>	Wear chemical safety glasses or goggles.
<b>Inhalation</b>	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
<b>Skin</b>	Wear nitrile or rubber gloves, apron or lab coat.
<b>Other</b>	Not Available

### Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Solid, crystalline powder.
Odor	Not Available
Odor threshold	Not Available
pH	4.5 – 5.5 at 50 g/L at 20 °C (68 °F)
Melting point/freezing point	340 °C (644 °F)
Initial boiling point and boiling range	Not Available
Flash point	Not Flammable

Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Explosive
Vapor pressure	Not Available
Vapor density	Not Available
Relative density	1.53
Solubility (ies)	Completely soluble in water and methanol.
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

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## 10. STABILITY AND REACTIVITY

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<b>Chemical Stability</b>	Stable
<b>Possibility of Hazardous Reactions</b>	Will not occur.
<b>Conditions to Avoid</b>	Moisture may affect quality.
<b>Incompatible Materials</b>	Strong acids, strong bases, strong oxidizing agents.
<b>Hazardous Decomposition Products</b>	Nitrogen oxides, hydrogen chloride gas, ammonia.

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## 11. TOXICOLOGICAL INFORMATION

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### Acute Toxicity

*Ammonium Chloride*

<b>Skin</b>	LD50 – Oral – Rat – 1650 mg/kg
<b>Eyes</b>	Not Available
<b>Respiratory</b>	Not Available
<b>Ingestion</b>	Not Available

### Carcinogenicity

<b>IARC</b>	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
<b>ACGIH</b>	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
<b>NTP</b>	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
<b>OSHA</b>	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### Signs & Symptoms of Exposure

<b>Skin</b>	Mild irritation.
<b>Eyes</b>	Irritation.
<b>Respiratory</b>	Respiratory tract and mucous membrane irritation.
<b>Ingestion</b>	Nausea, vomiting, thirst.

<b>Chronic Toxicity</b>	Not Available
<b>Teratogenicity</b>	Not Available
<b>Mutagenicity</b>	Not Available
<b>Embryotoxicity</b>	Not Available
<b>Specific Target Organ Toxicity</b>	Not Available
<b>Reproductive Toxicity</b>	Not Available
<b>Respiratory/Skin Sensitization</b>	Not Available

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## 12. ECOLOGICAL INFORMATION

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### Ecotoxicity

*Ammonium Chloride*

<b>Aquatic Vertebrate</b>	LC50 – Cyprinus carpio – 209 mg/L – 96 hr LC50 – Oncorhynchus mykiss – 4 mg/L – 96 hr NOEC – Oncorhynchus mykiss – 57 mg/L – 96 hr
<b>Aquatic Invertebrate</b>	LC50 – Daphnia magna – 161 mg/L – 48 hr
<b>Terrestrial</b>	Not Available

<b>Persistence and Degradability</b>	Not Available
<b>Bioaccumulative Potential</b>	Not Available
<b>Mobility in Soil</b>	Not Available
<b>PBT and vPvB Assessment</b>	Not Available
<b>Other Adverse Effects</b>	Not Available

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## 13. DISPOSAL CONSIDERATIONS

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<b>Waste Product or Residues</b>	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residue.
<b>Product Containers</b>	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

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## 14. TRANSPORTATION INFORMATION

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US DOT	Not Dangerous Goods
TDG	Not Dangerous Goods
IMDG	Not Dangerous Goods
Marine Pollutant	No
IATA/ICAO	Not Dangerous Goods

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## 15. REGULATORY INFORMATION

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TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Not Listed
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Acute Health Hazard
SARA 312	Acute Health Hazard
SARA 313	Listed: Ammonium Chloride
WHMIS Canada	Class D-2B: Poisonous and infectious material- Other effects- Toxic

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## 16. OTHER INFORMATION

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Revision	Date
Revision 1	06-08-2012
Revision 2	05/08/2015

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