

AMMONIUM CARBONATE

ACB

CAUTIONARY RESPONSE INFORMATION

Common Synonyms Hartshorn Sal volatile	Solid White Strong Ammonia Odor
Sinks and mixes with water.	
<p>Stop discharge if possible. Keep people away. Avoid contact with solid and dust; avoid inhalation. Isolate and remove discharged material. Notify local health and pollution control agencies. Protect water intakes.</p>	
Fire	Not flammable. POISONOUS GASES MAY BE PRODUCED IN FIRE. Wear goggles and self-contained breathing apparatus.
Exposure	<p>CALL FOR MEDICAL AID. DUST Irritating to eyes, nose and throat. If inhaled will cause difficult breathing. If in eyes, hold eyelids open and flush with plenty of water. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.</p> <p>SOLID Irritating to skin and eyes. If swallowed will cause nausea. Remove contaminated clothing and shoes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water. IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk. IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm.</p>
Water Pollution	Effect of low concentrations on aquatic life is unknown. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.

1. CORRECTIVE RESPONSE ACTIONS

Dilute and disperse
Stop discharge

2. CHEMICAL DESIGNATIONS

- 2.1 CG Compatibility Group: Not listed
- 2.2 Formula: $(\text{NH}_4)\text{HCO}_3 \cdot (\text{NH}_4)\text{CO}_2\text{NH}_2$
- 2.3 IMO/UN Designation: Not listed
- 2.4 DOT ID No.: Not listed
- 2.5 CAS Registry No.: 506-87-6
- 2.6 NAERG Guide No.: 154
- 2.7 Standard Industrial Trade Classification: 52371

3. HEALTH HAZARDS

- 3.1 Personal Protective Equipment: Dust respirator; protection against ammonia vapors
- 3.2 Symptoms Following Exposure: Inhalation causes irritation of nose and throat. Ingestion may cause gastric irritation. Contact with eyes or skin causes irritation.
- 3.3 Treatment of Exposure: INHALATION: leave contaminated area. INGESTION: give large amount of water. EYES: flush with copious amounts of water. SKIN: flush with water.
- 3.4 TLV-TWA: Not listed.
- 3.5 TLV-STEL: Not listed.
- 3.6 TLV-Ceiling: Not listed.
- 3.7 Toxicity by Ingestion: LD50 = 2.15 g/kg (rat)
- 3.8 Toxicity by Inhalation: Currently not available.
- 3.9 Chronic Toxicity: Currently not available
- 3.10 Vapor (Gas) Irritant Characteristics: Currently not available
- 3.11 Liquid or Solid Characteristics: Currently not available
- 3.12 Odor Threshold: < 5 ppm (as ammonia gas)
- 3.13 IDLH Value: Not listed.
- 3.14 OSHA PEL-TWA: Not listed.
- 3.15 OSHA PEL-STEL: Not listed.
- 3.16 OSHA PEL-Ceiling: Not listed.
- 3.17 EPA AEGL: Not listed

4. FIRE HAZARDS

- 4.1 Flash Point: Not flammable
- 4.2 Flammable Limits in Air: Not pertinent
- 4.3 Fire Extinguishing Agents: Use agent suitable for surrounding fire.
- 4.4 Fire Extinguishing Agents Not to Be Used: Not pertinent
- 4.5 Special Hazards of Combustion Products: Toxic ammonia gas will form in fires.
- 4.6 Behavior in Fire: Decomposes, but reaction is not explosive. Ammonia gas is formed.
- 4.7 Auto Ignition Temperature: Not pertinent
- 4.8 Electrical Hazards: Not pertinent
- 4.9 Burning Rate: Not pertinent
- 4.10 Adiabatic Flame Temperature: Not pertinent
- 4.11 Stoichiometric Air to Fuel Ratio: Not pertinent
- 4.12 Flame Temperature: Not pertinent
- 4.13 Combustion Molar Ratio (Reactant to Product): Currently not available
- 4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed

5. CHEMICAL REACTIVITY

- 5.1 Reactivity with Water: No reaction
- 5.2 Reactivity with Common Materials: Avoid contact with temperatures > 100°F; Sodium nitrite/nitrate
- 5.3 Stability During Transport: Unstable, decomposes to ammonia and CO₂ >136°F
- 5.4 Neutralizing Agents for Acids and Caustics: Not pertinent
- 5.5 Polymerization: Not pertinent
- 5.6 Inhibitor of Polymerization: Not pertinent

6. WATER POLLUTION

- 6.1 Aquatic Toxicity: 24 ppm/3.5 hr/goldfish/killed/fresh water
10 ppm/100 hr/goldfish/tolerated/fresh water
- 6.2 Waterfowl Toxicity: Currently not available
- 6.3 Biological Oxygen Demand (BOD): Currently not available
- 6.4 Food Chain Concentration Potential: None
- 6.5 GESAMP Hazard Profile: Not listed

7. SHIPPING INFORMATION

- 7.1 Grades of Purity: CP; NF; USP; Reagent; Technical
- 7.2 Storage Temperature: Ambient
- 7.3 Inert Atmosphere: No requirement
- 7.4 Venting: Open
- 7.5 IMO Pollution Category: Currently not available
- 7.6 Ship Type: Currently not available
- 7.7 Barge Hull Type: Currently not available

8. HAZARD CLASSIFICATIONS

- 8.1 49 CFR Category: Not listed
- 8.2 49 CFR Class: Not pertinent
- 8.3 49 CFR Package Group: Not listed.
- 8.4 Marine Pollutant: No
- 8.5 NFPA Hazard Classification:

Category	Classification
Health Hazard (Blue).....	3
Flammability (Red).....	0
Instability (Yellow).....	1
- 8.6 EPA Reportable Quantity: 5000
- 8.7 EPA Pollution Category: D
- 8.8 RCRA Waste Number: Not listed
- 8.9 EPA FWPCA List: Yes

9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 Physical State at 15° C and 1 atm: Solid
- 9.2 Molecular Weight: 157.1
- 9.3 Boiling Point at 1 atm: Not pertinent (decomposes)
- 9.4 Freezing Point: Not pertinent
- 9.5 Critical Temperature: Not pertinent
- 9.6 Critical Pressure: Not pertinent
- 9.7 Specific Gravity: 1.5 at 20°C (solid)
- 9.8 Liquid Surface Tension: Not pertinent
- 9.9 Liquid Water Interfacial Tension: Not pertinent
- 9.10 Vapor (Gas) Specific Gravity: 2.7
- 9.11 Ratio of Specific Heats of Vapor (Gas): Not pertinent
- 9.12 Latent Heat of Vaporization: Not pertinent
- 9.13 Heat of Combustion: Not pertinent
- 9.14 Heat of Decomposition: Not pertinent
- 9.15 Heat of Solution: Not pertinent
- 9.16 Heat of Polymerization: Not pertinent
- 9.17 Heat of Fusion: Currently not available
- 9.18 Limiting Value: Currently not available
- 9.19 Reid Vapor Pressure: Currently not available

NOTES

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9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
	N O T P E R T I N E N T		N O T P E R T I N E N T		N O T P E R T I N E N T		N O T P E R T I N E N T

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
34	91.809		N		N		N
36	92.620		O		O		O
38	93.429		T		T		T
40	94.240		P		P		P
42	95.049		E		E		E
44	95.860		R		R		R
46	96.679		T		T		T
48	97.490		I		I		I
50	98.299		N		N		N
52	99.110		E		E		E
54	99.919		N		N		N
56	100.700		T		T		T
58	101.500		P		P		P
60	102.400		E		E		E
62	103.200		R		R		R
64	104.000		T		T		T
66	104.799						
68	105.599						
70	106.400						
72	107.200						
74	108.000						
76	108.799						
78	109.700						
80	110.500						
82	111.299						
84	112.099						