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Material Safety Data Sheet

Ammonium Carbonate TS MSDS

Section 1: Chemical Product and Company Identification

Product Name: Ammonium Carbonate TS

Catalog Codes: SLA1912

CAS#: Mixture.

RTECS: Not applicable.

TSCA: TSCA 8(b) inventory: Water; Ammonium carbonate; Ammonia, anhydrous

CI#: Not applicable.

Synonym: Ammonium Carbonate Test Solution

Chemical Name: Not applicable.

Chemical Formula: Not applicable.

Contact Information:

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14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:

1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Water	7732-18-5	78
Ammonium carbonate	506-87-6 or	20
	10361-29-2	
Ammonia, anhydrous	7664-41-7	2

Toxicological Data on Ingredients: Ammonium carbonate LD50: Not available. LC50: Not available. Ammonia, anhydrous: GAS (LC50): Acute: 2000 ppm 4 hours [Rat]. 4230 ppm 1 hours [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:

Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation (lung irritant). Slightly hazardous in case of skin contact (permeator). Severe over-exposure can result in death.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. [Ammonia, anhydrous]. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to upper respiratory tract, skin, eyes. Repeated or prolonged exposure to the substance can produce target organs damage.

Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention. Finish by rinsing thoroughly with running water to avoid a possible infection.

Skin Contact:

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation: Not available.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances: Non-explosive in presence of open flames and sparks, of shocks.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards:

Non combustible. Some oxidizers may ignite combustibles (wood, paper, oil, clothing, etc.). Contact with metals may evolve flammable hydrogen gas. When heated to decomposition it emits toxic fumes. (Ammonium Carbonate)

Special Remarks on Explosion Hazards:

A sudden increase in temperature and pressure preceded a violent explosion when heating 1-chloro-2,4-dinitrobenzene and ammonia in a direct fired autoclave. Reaction with liquid ammonia and chlorine azide gives an explosive yellow liquid. Liquid ammonia + 1,2 dichloroethane may explode. Passing ammonia gas over magnesium perchlorate dessicant causes intensive drying of ammonia gas which leads to an exotherm, followed by a violent explosion. Ammonia is capable of reacting with some heavy metal compounds (gold, silver, mercury) to produce materials, some of uncertain constitution, which may explode violently when dry. Action of ammonia or ammonium salts on gold (III) chloride, oxide or other salts under a variety of conditions gives explosive or "fulminating" gold. Halogens or interhalogens + ammonia either reacts violently or produces explosive products. Ammonia + nitrogen trichloride produces endothermic and explosive nitrogen trichloride. Reaction of

ammonia + selenium difluoride dioxide is violent and many of the products and derivatives are both shock and heat sensitive explosives. These include ammonium, potassium silver and thallium salts of the "triselenimidate" ion. Violent explosions with ammonia + nitrogen oxide can occur in ammonia synthesis gas units. Liquid ammonia + solid dinitrogen tetroxide reacts explosively. Oxygen + Platinum: oxidation of ammonia to nitric acid over platinum catalysts, substitution of oxygen for air causes fairly vigorous explosions. Thiocarbonyl azide thiocyanate reacts explosively with ammonia gas. Thiothiazyl chloride will rapidly absorb ammonia gas and then explode. Tetramethylammonium amide decomposes explosively at ambient temp. in presence of ammonia. Liquid ammonia + tellurium tetrachloride at -15 C forms tellurium nitride which explodes at 200 C. Ammonia + tellurium tetrabromide gives a mixture of tritellurium tetramitride and tellurium bromide nitride, which explodes on heating. Liquid ammonia + ethylene oxide causes violent polymerization and a vapor cloud explosion. Ammonia + picric acid forms explosive salts. (Ammonia, anhydrous) Forms explosive compounds with many heavy metals such as silver, lead, zinc and their halide salts. It can form shock sensitive compounds with halogens, mercury oxide, and silver oxide. (Ammonium Hydroxide)

Section 6: Accidental Release Measures

Small Spill:

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: Neutralize the residue with a dilute solution of acetic acid. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:

Poisonous liquid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a dilute solution of acetic acid. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Keep locked up.. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Not available.

Taste: Not available.

Molecular Weight: Not applicable.

Color: Clear Colorless.

pH (1% soln/water): Basic.

Boiling Point: The lowest known value is 100°C (212°F) (Water).

Melting Point: Not available.

Critical Temperature: Not available.

Specific Gravity: Weighted average: 1.06 (Water = 1)

Vapor Pressure: The highest known value is 2.3 kPa (@ 20°C) (Water).

Vapor Density: The highest known value is 0.62 (Air = 1) (Water).

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, methanol, diethyl ether.

Solubility:

Easily soluble in cold water. Soluble in hot water, methanol, diethyl ether.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials

Incompatibility with various substances: Slightly reactive to reactive with oxidizing agents, metals, acids.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:

Decomposes in hot water, yielding ammonia and carbon dioxide. Air sensitive. Decomposes on exposure to air with loss of ammonia and carbon dioxide becoming white and powdery and converting to ammonium bicarbonate. Sensitive to light. (Ammonium carbonate) Incompatible with the following: Organic acids, amides, organic anhydrides, isocyanates, vinyl acetate, epichlorhydrin, aldehydes, Acrolein, Acrylic acid, chlorosulfonic acid, dimethyl sulfate, fluorine, gold + aqua regia, hydrochloric acid, hydrofluoric acid, hydrogen peroxide, iodine, nitric acid, oleum, propiolactone, propylene oxide, silver nitrate, silver oxide, silver oxide + ethyl alcohol, nitromethane, silver permanganate, sulfuric acid, halogens. Forms explosive compounds with many heavy metals (silver, lead, zinc) and halide salts. (Ammonium Hydroxide)

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Eye contact. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 350 mg/kg [Rat] (Ammonium Hydroxide)

Chronic Effects on Humans: MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. [Ammonia, anhydrous].

Other Toxic Effects on Humans:

Hazardous in case of skin contact (irritant), of ingestion, of inhalation (lung irritant). Slightly hazardous in case of skin contact (permeator).

Special Remarks on Toxicity to Animals:

Lowest Published Lethal Dose LCL [Human] - Route: Inhalation; Dose: 5000 ppm/5M (Ammonia, anhydrous)

Special Remarks on Chronic Effects on Humans:

May affect genetic material based on tests with microorganisms and animals. May cause cancer (tumorigenic) based on animal data. No human data found at this time. (Ammonia, anhydrous)

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: It causes skin irritation with burning pain, itching and redness. Eyes: It causes eye irritation. It may cause chemical conjunctivitis Inhalation: It may cause respiratory tract (nose and throat) irritation and cause coughing and wheezing. It may produce delayed pulmonary edema, pneumoconiosis, fibrosis Ingestion: It may cause gastrointestinal tract irritation with nausea, vomiting, and diarrhea. May affect behavior (convulsions, seizures, ataxia, tremor, excitement), liver, urinary tract, and respiration, liver, and urinary tract.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:

Connecticut carcinogen reporting list.: Ammonia, anhydrous Connecticut hazardous material survey.: Ammonium carbonate Illinois toxic substances disclosure to employee act: Ammonia, anhydrous Illinois chemical safety act: Ammonium carbonate; Ammonia, anhydrous New York release reporting list: Ammonium carbonate New York acutely hazardous substances: Ammonia, anhydrous Rhode Island RTK hazardous substances: Ammonia, anhydrous Pennsylvania RTK: Ammonium carbonate; Ammonia, anhydrous: (environmental hazard) Minnesota: Ammonia, anhydrous Massachusetts RTK: Ammonium carbonate; Ammonia, anhydrous Massachusetts spill list: Ammonium carbonate New Jersey: Ammonium carbonate; Ammonia, anhydrous New Jersey spill list: Ammonium carbonate; Ammonia, anhydrous Louisiana RTK reporting list: Ammonia, anhydrous Louisiana spill reporting: Ammonium carbonate; Ammonia, anhydrous TSCA 8(b) inventory: Water; Ammonium carbonate; Ammonia, anhydrous SARA 302/304/311/312 extremely hazardous substances: Ammonia, anhydrous

SARA 313 toxic chemical notification and release reporting: Ammonia, anhydrous 2% CERCLA: Hazardous substances.: Ammonium carbonate: 5000 lbs. (2268 kg); Ammonia, anhydrous;

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):

R36/37/38- Irritating to eyes, respiratory system and skin. S2- Keep out of the reach of children. S46- If swallowed, seek medical advice immediately and show this container or label.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 0

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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