Ammonium Bicarbonate MSDS

1. Product Name and Identification

Product Name: Ammonium Bicarbonate
CAS Number: 1066-33-7
Synonyms: Ammonium Hydrogen Carbonate, Bicarbonate of Ammonia
Chemical Formula: NH_4HCO_3
Molecular Weight: 79.06 g/mol
Manufacturer/Supplier: [Enter manufacturer/supplier details]
Emergency Contact Number: [Insert emergency contact details]

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2. Composition/Ingredients

Chemical Name: Ammonium Bicarbonate
CAS Number: 1066-33-7
EC Number: 213-911-5
Concentration: 99–100%

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3. Hazards Identification

Classification:

- Eye Irritation (Category 2B)
- Specific Target Organ Toxicity - Single Exposure (Category 3)

Label Elements:

- **Pictograms:** ![Exclamation Mark]
- **Signal Word:** Warning
- **Hazard Statements:**
  - H320: Causes eye irritation.
  - H335: May cause respiratory irritation.

Precautionary Statements:

- P261: Avoid breathing dust.
- P264: Wash hands thoroughly after handling.
- P271: Use in a well-ventilated area.

- P305+P351+P338: IF IN EYES, rinse cautiously with water for several minutes. Remove contact lenses, if present.

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4. First Aid Measures

General Advice:

- Seek medical attention if symptoms persist.

If Inhaled:

- Move to fresh air. If breathing is difficult, seek medical attention immediately.

If on Skin:

- Wash skin thoroughly with soap and water. Remove any contaminated clothing. If irritation persists, seek medical advice.

If in Eyes:

- Rinse eyes with plenty of water for at least 15 minutes while holding eyelids open. Seek medical assistance if irritation continues.

If Swallowed:

- Rinse mouth with water. Do not induce vomiting. If symptoms develop, contact a physician.

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5. Handling and Storage

Handling:

- Avoid inhaling dust. Prevent contact with eyes and skin. Use personal protection as required.

Storage:

- Store in a tightly closed container in a cool, dry, and ventilated area. Keep away from moisture and incompatible materials such as strong acids.

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6. Exposure Controls/Personal Protection

Exposure Limits:

- No specifically established occupational exposure limits.

Engineering Controls:

- Ensure adequate ventilation, especially in confined areas, to keep airborne concentrations below permissible limits.

Personal Protective Equipment (PPE):

- **Eye/Face Protection:** Safety goggles or chemical safety glasses.
- **Skin Protection:** Protective gloves (e.g., rubber or PVC).
- **Respiratory Protection:** If exposure limits are exceeded or irritation is experienced, use an approved respirator.
- **Body Protection:** Lab coat or protective clothing.

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7. Physical and Chemical Properties

Appearance: White crystalline powder or granules
Odor: Slight ammonia odor
Odor Threshold: Not available
pH: 7.5–8.5 (1% solution in water)
Boiling Point: Decomposes without boiling
Melting Point: Decomposes at approximately 36°C (97°F)
Flash Point: Not flammable
Density: 1.586 g/cm³
Solubility: Soluble in water; insoluble in alcohol
Vapor Pressure: Negligible at room temperature
Viscosity: Not applicable

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8. Stability and Reactivity

Chemical Stability: Stable under ordinary conditions of use and storage.

Reactivity: Reacts with acids, releasing carbon dioxide gas.

Hazardous Reactions: May react with strong acids to produce ammonia and carbon dioxide.

Conditions to Avoid: Moisture, excessive heat, and incompatible materials.

Hazardous Decomposition Products: Ammonia, carbon dioxide, and nitrogen oxides may form upon decomposition.

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9. Toxicological Information

Routes of Exposure:

- Eye contact, skin contact, inhalation, and ingestion.

Acute Toxicity:

- LD50 (Oral, Rat): 1,575 mg/kg

Irritation/Corrosion:

- May cause mild skin irritation and moderate eye irritation.

Chronic Effects:

- Prolonged exposure may cause respiratory irritation.

Carcinogenicity:

- Not listed as a carcinogen by OSHA, IARC, or NTP.

Sensitization:

- No data available for skin or respiratory sensitization.

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10. Disposal Considerations

Waste Treatment Methods:

- Dispose of unused product and waste according to local, regional, and national regulations. Do not release into drains or sewers.

Contaminated Packaging:

- Thoroughly clean empty containers before recycling or disposal. Follow local regulations for container disposal.

Precautions:

- Avoid contamination of soil and waterways during disposal.