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|--|---|---|
| <b>NFPA</b><br> | <b>HCS Risk Phrases</b><br><b>HCS CLASS:</b> R36 Irritating to eyes<br>R37 Irritating to respiratory system<br>R38 Irritating to skin | <b>Protective Clothing</b><br> |
|--|---|---|

### Section I. Chemical Product and Company Identification

|                            |  |   |
|----------------------------|--|---|
| Common Name/<br>Trade Name | <b>AMMONIUM BICARBONATE</b>  | Revision Date: 10-11-06   |
| Supplier                   | FRITZ INDUSTRIES, INC.<br>500 SAM HOUSTON ROAD<br>MESQUITE, TX 75149<br>(972) 285-5471<br>(800) 955-1323 | In Case of Emergency.<br>(800) 424-9300<br>Week Days:<br>(972) 285-5471<br>(800) 955-1323 |

Chemical Family Inorganic salt

### Section II. Composition and Information on Ingredients

| Name                 | CAS #     | % by Weight | TLV/PEL | LC <sub>50</sub> /LD <sub>50</sub> |
|----------------------|-----------|-------------|---------|------------------------------------|
| Ammonium Bicarbonate | 1066-33-7 | ≥99         | N/A     | N/A                                |

### Section III. Hazards Identification

|                    |   |
|--------------------|---|
| Emergency overview | Harmful if inhaled. May cause irritation to skin, eyes, and respiratory tract.  |
| Eye contact        | May cause irritation, redness, and pain.  |
| Skin               | May cause irritation with redness and pain.   |
| Inhalation         | Dust may cause irritation of the nose, throat, and lungs. Ammonia vapors released upon decomposition may cause irritation of the upper respiratory tract, with coughing, vomiting, and redness to the mucous membranes. Higher concentrations (> 1000 ppm) may cause restlessness, tightness in the chest, pulmonary edema, weak pulse, and cyanosis. |
| Ingestion          | Large oral doses may cause irritation to the gastrointestinal tract.  |

### Section IV. First Aid Measures

|              |  |
|--------------|--|
| Eye Contact  | Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Seek medical attention immediately.   |
| Skin Contact | Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention if irritation persists. Wash clothing and thoroughly clean shoes before reuse. |
| Inhalation   | Remove to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.   |
| Ingestion    | Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.   |




### Section V. Fire and Explosion Data

|                                      |   |
|--------------------------------------|---|
| Fire                                 | This material is not considered to be a fire hazard. Irritating and toxic ammonia gas may form in fires.  |
| Explosion                            | Not considered to be an explosion hazard.   |
| Fire Fighting Media and Instructions | Use any means suitable for extinguishing surrounding fire.  |
| Special Information                  | In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. |

### Section VI. Accidental Release Measures

|            |  |
|------------|--|
| Leak/Spill | Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal. US Regulations (CERCLA) require reporting spills and releases to soil, water, and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802. |
|------------|--|

AMMONIUM BICARBONATE

| <b>Section VII. Handling and Storage</b>   |   |          |   |        |   |   |                 |            |              |                 |                          |  |
|--|---|----------|---|--------|---|---|-----------------|------------|--------------|-----------------|--------------------------|--|
| Handling   | Avoid contact with eyes, skin, or clothing. Do not ingest. Do not breathe dust. Wash hands after use. Observe all warnings and precautions listed for the product.  |          |   |        |   |   |                 |            |              |                 |                          |  |
| Storage  | Keep in a tightly closed container. Store in a cool, dry, ventilated area. Protect against physical damage. Store at temperatures below 80°F (27°C) to minimize decomposition. Containers of this material may be hazardous when empty since they retain product residues.  |          |   |        |   |   |                 |            |              |                 |                          |  |
| <b>Section VIII. Exposure Controls/Personal Protection</b>   |   |          |   |        |   |   |                 |            |              |                 |                          |  |
| Ventilation System   | Provide local exhaust ventilation where dust or mist may be generated.  |          |   |        |   |   |                 |            |              |                 |                          |  |
| Personal Protection  | Wear chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eyewash fountain and quick-drench facilities in work area. Wear appropriate protective clothing to prevent skin contact. Wear an approved respirator.  |          |   |        |   |   |                 |            |              |                 |                          |  |
| <b>Section IX. Physical and Chemical Properties</b>  |   |          |   |        |   |   |                 |            |              |                 |                          |  |
| Physical state and Appearance  | Fine crystals<br>Odor: Slight ammonia odor<br>Color: White  |          |   |        |   |   |                 |            |              |                 |                          |  |
| Specific Gravity   | 1.59<br>Melting Point 107.5°C (226°F)   |          |   |        |   |   |                 |            |              |                 |                          |  |
| Solubility   | 17.4% @ 20°C (68°F) in water.   |          |   |        |   |   |                 |            |              |                 |                          |  |
| pH   | 7.8   |          |   |        |   |   |                 |            |              |                 |                          |  |
| <b>Section X. Stability and Reactivity Data</b>  |   |          |   |        |   |   |                 |            |              |                 |                          |  |
| Stability  | Stable under ordinary conditions of use and storage   |          |   |        |   |   |                 |            |              |                 |                          |  |
| Incompatibilities  | Can react dangerously with acids, caustic alkalis and strong oxidizing agents.  |          |   |        |   |   |                 |            |              |                 |                          |  |
| Hazardous decomposition products   | Burning may produce ammonia, nitrogen oxides, carbon monoxide, carbon dioxide, and nitrogen oxides.   |          |   |        |   |   |                 |            |              |                 |                          |  |
| Conditions to Avoid  | Heat, incompatibles   |          |   |        |   |   |                 |            |              |                 |                          |  |
| <b>Section XI. Toxicological Information</b>   |   |          |   |        |   |   |                 |            |              |                 |                          |  |
| Primary Routes of Exposure   | Eye and skin contact; inhalation of dust; ingestion.  |          |   |        |   |   |                 |            |              |                 |                          |  |
| Toxic Effects on Humans  | Irritation possible to skin, eyes, and respiratory and gastrointestinal tracts. May be harmful if inhaled.  |          |   |        |   |   |                 |            |              |                 |                          |  |
| <b>Section XIV. Transport Information</b>  |   |          |   |        |   |   |                 |            |              |                 |                          |  |
| DOT Classification   | Not regulated under the Transport of Dangerous Goods Act.   |          |   |        |   |   |                 |            |              |                 |                          |  |
| <b>Section XV. Other Regulatory Information and Pictograms</b>   |   |          |   |        |   |   |                 |            |              |                 |                          |  |
| Other Classifications  | WHMIS (Canada)<br>Canadian DSL Inventory Status<br>Classification: Not controlled<br>This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.  |          |   |        |   |   |                 |            |              |                 |                          |  |
| HMIS (U.S.A.)  | <table border="0"> <tr> <td style="background-color: blue; color: white; padding: 2px;">1 HEALTH</td> <td rowspan="4" style="vertical-align: middle; padding: 0 10px;">National Fire Protection Association (U.S.A.)</td> <td rowspan="4" style="vertical-align: middle; padding: 0 10px;">Health</td> <td rowspan="4" style="text-align: center;">  </td> <td style="padding: 2px;">Fire Hazard</td> </tr> <tr> <td style="background-color: red; color: white; padding: 2px;">0 FLAMMABILITY</td> <td style="padding: 2px;">Reactivity</td> </tr> <tr> <td style="background-color: yellow; color: black; padding: 2px;">1 REACTIVITY</td> <td style="padding: 2px;">Specific Hazard</td> </tr> <tr> <td style="background-color: white; padding: 2px;">(e) PROTECTIVE EQUIPMENT</td> <td></td> </tr> </table> | 1 HEALTH | National Fire Protection Association (U.S.A.) | Health |  | Fire Hazard   | 0 FLAMMABILITY  | Reactivity | 1 REACTIVITY | Specific Hazard | (e) PROTECTIVE EQUIPMENT |  |
| 1 HEALTH   | National Fire Protection Association (U.S.A.)   | Health   |   |        |   |  | Fire Hazard     |            |              |                 |                          |  |
| 0 FLAMMABILITY   |   |          |   |        |   |   | Reactivity      |            |              |                 |                          |  |
| 1 REACTIVITY   |   |          |   |        |   |   | Specific Hazard |            |              |                 |                          |  |
| (e) PROTECTIVE EQUIPMENT   |   |          |   |        |   |   |                 |            |              |                 |                          |  |
| <b>Section XVI. Other Information</b>  |   |          |   |        |   |   |                 |            |              |                 |                          |  |
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