AMMONIA

Technical Information

NITROGEN PRODUCTS

Commercial Grade

Properties

MSDS #1129

Product Description
AMMONIA is a colorless gas shipped under pressure as a liquid. It has a pungent characteristic odor that is highly irritating to the mucosal membranes of the eyes and lungs. Contact with the liquid can cause frostbite. It absorbs readily into water to form alkaline ammonium hydroxide solution which is corrosive to bodily tissue.

Application Recommendations
- AMMONIA is intended for use as a fertilizer.
- AMMONIA is corrosive to aluminum, tin, copper, lead, silver, zinc and their alloys.
- A spill of 100 pounds or more is a reportable release pursuant to CERCLA Section 311(b)(4) of the Clean Water Act.
- Consult MSDS #1129 for more specific and comprehensive information about chemical hazards.

Transportation, Storage and Handling
There are extensive documents that discuss all the procedures for the transportation, storage and safe handling of AMMONIA. Some of these publications include the following:
- **American National Standard Institute** ANSI/CGA G-2.1 *Safety Requirements for the Storage and Handling of AMMONIA Compressed Gas Association* G-2 AMMONIA.
- Consult the **Compressed Gas Association** (www.cganet.com) for publications.
- Ammonia trailers may only be filled to 82% of capacity to meet the DOT transportation standards.

Hazardous Shipping Description
- Trailers must be marked with the words "AMMONIA, Inhalation Hazard". Commercial ammonia must not be marked with the acronym NQT (Not for Quenched and Tempered steel trailers) which is reserved for Refrigeration ammonia.
- Commercial AMMONIA requires a minimum of 0.2% water to meet DOT standards.

Total Nitrogen % by weight	82.0
Ammonia % by weight	99.5 - 99.8
Water % by weight	0.2 - 0.5
Oil ppm by weight	5
Weight @ 60°F lbs/gallon	5.15
Fertilizer Nutrient Designation	N/A

Physical Properties

Physical Form	**Liquified Gas** (*under pressure*)
Color	Colorless
Vapor Pressure @115°F (psia)	266
Boiling Temperature (°F)	-28
Freezing Temperature (°F)	-108
Specific Gravity @ 60°F	0.618
Density (lbs/gal) @ 60°F	5.15

- The trailer must display a Nonflammable Gas placard on both sides and both ends (hazard classification 2.2). The shipment may further be marked with international transportation number UN 1005 to identify it as ammonia.
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