

AQUA AMMONIA

Technical Information



Ammonium Hydroxide

Product Description

AQUA AMMONIA, aqueous ammonia and ammonium hydroxide are synonymous terms referring to a solution of ammonia in water. Aqua is a high purity solution produced using demineralized water and is suitable for applications that require low levels of trace minerals. This product is used in stack emission control systems to neutralize sulfur oxides from combustion of sulfur-containing fuels and as a method of NOx control in both catalytic and non-catalytic applications. It is also used for pH control, nutrient for waste disposal systems and wood treating.

Application Recommendations

- AQUA AMMONIA is used as a source of ammonia and is the preferred form for users who need to avoid the storage of the compressed gas, which is considered to be more hazardous.
- AQUAAMMONIA can be injected as a liquid into various process streams and quickly vaporized with the addition of heat into water vapor and gaseous ammonia. It also is used as a base to neutralize acidic conditions in various chemical processes.

Transportation, Storage and Handling

- AQUA AMMONIA is transported in tanker trucks suitable for hauling corrosive materials. The trailers are constructed of stainless steel since AQUA AMMONIA is corrosive to carbon steel.
- Storage containers must **ALWAYS** conform to all applicable requirements for the locale and generally have some type of vapor recovery system for the ammonia fumes. Tanks are most generally constructed of stainless steel or carbon steel with a non-corrosive liner.
- When handling, **ALWAYS** use approved personal protective equipment, gloves goggles, face shield, boots and water impervious clothing.

Properties

MSDS
#1130

Total Ammonia by weight typical	19%	30%
Total Ammonia, % by weight minimum	18.5	29.4
Chloride, ppm typical	≤1 ppm	≤1 ppm
Sodium, ppm typical	≤1 ppm	≤1 ppm
Phosphate, ppm typical	≤1 ppm	≤1 ppm
Sulfate, ppm typical	≤1 ppm	≤1 ppm
Nitrate, ppm typical	N/A	≤1 ppm
Heavy Metals, ppm typical	≤1ppm	≤1ppm
Iron, ppm typical	N/A	≤1 ppm
Specific Gravity, @ 60°F	0.9293	0.896
Approximately Density, @ 60°F (lbs/gal)	7.74	7.47
Boiling Temperature, °F	120.6°F	83.5°F
Freezing Temperature, °F	-28°F	-119°F
Vapor Pressure, @ 100°F (psia)	9.0	22.0
Physical Form	Liquid	Liquid
Color	Clear	Clear

Hazardous Shipping Description

- AQUAAMMONIA is defined as DOT hazard class 8, corrosive. The trailers must be placarded with the corrosive label and also display the international transportation number UN2672.
- A spill of 1,000 pounds or more is a reportable quantity (RQ) pursuant to CERCLA Section 311 of the Clean Water Act.
- Consult MSDS #1130 for more specific and comprehensive information about chemical hazards.



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