



Monthly Topic: Ammonia (NH₃)

- Ammonia exists naturally in humans and in the environment. It is part of the nitrogen cycle and is produced in soil from bacterial processes. It is also created from decomposition of organic matter (plants, animals and animal waste).
- At room temperature, ammonia is a colorless, corrosive, highly irritating gas.
- Ammonia gas is easily compressed and forms a clear liquid under pressure. It is usually shipped as a liquefied compressed gas in steel containers.
- Ammonia is not highly flammable, though containers of ammonia may explode due to stress corrosion cracking when exposed to high heat.
- Ammonia is one of the most commonly produced industrial chemicals in the United States. 80% of the ammonia industrially produced is used in agriculture as a fertilizer. It can also be used as a refrigerant gas, for purification of water supplies, and in the manufacture of plastics, explosives, textiles, pesticides, dyes and other chemicals.
- Ammonia has a pungent, suffocating odor. But because ammonia causes olfactory fatigue, prolonged exposure at low concentrations will reduce one's ability to detect it naturally.



TX-6-AM



Health Effects

- Inhalation – Low concentrations can cause coughing as well as throat and nose irritation. High concentrations cause burning of the throat, nose and respiratory tract. This can lead to airway destruction and alveolar and bronchiolar edema resulting in respiratory distress or failure.
- Children are more susceptible to ammonia than adults, and can receive a larger dose due to a greater lung surface area to body weight ratio and increased minute volume to weight ratios.
- Skin or Eye Contact – Exposure to low concentrations results in rapid skin or eye irritation. Higher concentrations may cause corrosive injury including skin burns, permanent eye damage or blindness. Contact with liquefied ammonia can lead to frostbite.

Macurco Gas Products

- [TX-6-AM](#)
- [TX-12-AM](#)
- [Explosion Proof](#)
- [Other Macurco Products](#)

Gas in the News

- [Cold Storage Facility](#)
- [Community Center](#)
- [Food Processing Plant](#)
- [Chemical Factory](#)

Learn More

- [OSHA – NH₃ Refrigeration](#)
- [NIOSH on Ammonia](#)
- [Encyclopedia Britannica](#)
- [CCOHS Fact Sheet](#)

Applications

- | | | |
|-------------------------|----------------------------|----------------------------|
| ✓ Cold Storage | ✓ Farming and Agriculture | ✓ Leather Curing |
| ✓ Food Processing | ✓ Fertilizer Manufacturing | ✓ Dairy Processing |
| ✓ Water Treatment | ✓ Mining | ✓ Pharmaceutical Synthesis |
| ✓ Wineries | ✓ Woodworking | ✓ Wastewater Treatment |
| ✓ Breweries | ✓ Pulp and Paper Mills | ✓ Explosives Manufacturing |
| ✓ Textile Manufacturing | ✓ Juice Processing | ✓ Fermentation |

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