



## ANHYDROUS AMMONIA SAFETY

Anhydrous ammonia ( $\text{NH}_3$ ) is a nitrogen crop fertilizer that can cause severe chemical burns; frostbite to the eyes, skin, and respiratory tract; and death. Individuals working with this type of fertilizer should understand potential risks, safety precautions, and the proper response in the event of accidental contact. This [fact sheet](#) and the [Growing Safely Anhydrous video](#) provides tips to help avoid costly injuries or fatalities.



**ANHYDROUS AMMONIA** is a hygroscopic compound, meaning that it takes up water from the nearest source, which can include the human body—especially the eyes, lungs, and skin because of their high moisture content. Anhydrous ammonia is caustic, corrosive, and damaging to tissue high in moisture content when it contacts the human body. It's important to have proper PPE, and know how to transport it and what to do in case of an emergency.

### Personal Protective Equipment (PPE)

- Ventless goggles or a full-face shield
- Rubber gloves with long cuffs that can be rolled to catch drips
- A long-sleeved shirt
- Nonrubber gloves made of ammonia-proof material are acceptable
- Avoid wearing contact lenses; they can trap the gas and become fused to the eye
- Carry a 6 to 8 fl. oz. squeeze bottle of water (per person) for rapid response to an emergency
- When there is a likelihood of a spill or during clean-up operations, wear both boots and shoe covers and slickers or jackets and pants made of ammonia-impervious materials

### Exposure Emergency

- Have an ample supply of clean water (5 gallons in your vehicle) to flush the exposed area - eyes and skin, nose, throat, eyes, etc. - for 15 minutes
- Although clean water is ideal for flushing exposed areas of the body, other nontoxic liquids, such as cold coffee or orange juice, can be used
- Remove contaminated clothing unless the clothing is frozen to the victim's skin
- Seek medical attention immediately and inform medical staff of the exposure to anhydrous ammonia so that they will not treat the wounds with oils or ointments that can intensify the damage

### Storage and Transportation

- Only nongalvanized steel or iron containers, fittings, and piping should come in contact with anhydrous ammonia. Do not store other materials, such as propane or liquefied petroleum gas, in a tank that has been used to store anhydrous ammonia.
- When filling your anhydrous ammonia tank, do not fill it more than 85%, and always disconnect the fill hose before moving the tank. Remember to bleed pressurized anhydrous ammonia from the hose before connecting or disconnecting the hose.

*Source: Anhydrous ammonia safety. (2012) Farm and Ranch eXtension in Safety and Health (FReSH) Community of Practice. Retrieved from <http://www.extension.org/pages/63196/anhydrous-ammonia-safety>.*