



RISK ALERT

Recognizing Hazardous Propane Cylinders Tanks Used in Meth Production are Extremely Dangerous

Understanding the Problem

Anhydrous ammonia, a colorless gas with strong-smelling, extremely poisonous vapors, is used primarily as an agricultural fertilizer and in refrigeration systems. It is also used in the illegal production of the drug methamphetamine.

Because anhydrous ammonia is not generally for sale to the general public without a license, criminals will steal the gas from tanks in farm fields, industrial refrigeration systems, and tank trucks or rail cars. They typically siphon small amounts of the gas into makeshift, easily portable containers such as the propane cylinders commonly used on barbecue grills.

*Anhydrous ammonia is extremely corrosive and must be stored only in containers specially designed to hold and dispense it safely. When anhydrous ammonia is illegally dispensed into a propane cylinder (which is not safe for anhydrous ammonia), it causes immediate corrosion damage to the cylinder's brass valves and fittings, weakening these parts and creating an immediate risk of leakage and deadly explosion. Because the corrosion may develop from inside the cylinder, it can be difficult to determine the extent of the damage or the risk of leak or explosion. **Propane cylinders that have been exposed to anhydrous ammonia are unsafe and should not be used.***

Methamphetamine is typically produced in makeshift laboratories in homes, hotel or motel rooms, trucks, abandoned buildings, and even at the sites from which the anhydrous ammonia is stolen. The debris left behind at the manufacturing site, including used propane cylinders, is often the primary indication of the illegal activity. Contaminated cylinders have also been found at propane cylinder exchanges, refilling locations, tag sales, and flea markets.

Understanding the Risk

Anhydrous ammonia is properly stored in specially-designed tanks under high pressure and/or at extremely low temperatures. Corrosion-damaged propane cylinders exposed to even moderately warm temperatures (such as in a vehicle or hotel room) are at extreme risk of leakage and explosion. The warmth increases the pressure inside the tank, placing even greater stress on the damaged valve mechanism.

When anhydrous ammonia is released into the air, it expands up to 850 times its original volume, quickly

forming large clouds of toxic vapor. Thus, even if a very small amount is spilled, the hazardous vapor will spread quickly over a large area. The vapor tends to behave as a dense gas, traveling along the ground where it poses extreme danger to humans. Exposure to anhydrous ammonia can cause:

- Irritation and burns to the eyes, skin, throat and lungs
- Blindness, freeze burns or frostbite, and severe respiratory injuries
- Death

Anhydrous ammonia should be handled *only* by people who have received appropriate training and have appropriate personal protective equipment.

Identifying Contaminated Cylinders

Any propane cylinders that are found with drug-manufacturing debris, or in inappropriate locations, are likely to be contaminated. Propane cylinders that have been used to store anhydrous ammonia may often be identified by:

- Blue-green corrosion on brass valves and fittings (see photo)
- Damage or other evidence of tampering on the valve or connection threads
- Odor of ammonia on or near the cylinder



(Photo courtesy National Propane Gas Association)

Remember that corrosion that has developed *inside* the valve may not be evident on the *outside*. There have been cases where brass fittings appeared to be intact but broke off easily in the hands of emergency responders, creating dangerous leaks and causing severe injuries. Thus, *regard any propane cylinder found in questionable circumstances as contaminated.*

Responding Safely

If a contaminated cylinder is found:

- Contact the fire department and/or the police.
- Do not touch the cylinder or attempt to move it.
- Restrict access to the area. If the cylinder is in an area that can be closed off, clear all people out of the area, then close and lock the door or gate until officials arrive.