

## **Aqua Ammonia Materials of Compatibility**

Aqua ammonia (ammonium hydroxide) is generally compatible with carbon steel, stainless steel, aluminum, cast iron, tin, lead, and certain high-alloy nickel materials, while copper-bearing metals and several zinc-containing materials should be avoided. For elastomers, PTFE and several ammonia-resistant rubbers are commonly acceptable, while natural rubber, nitrile, polyurethane, silicone, and Viton are typically not recommended for service in aqua ammonia.

### **Metals**

#### **Acceptable**

- Carbon steel.
- Stainless steel.
- Aluminum.
- Cast iron.
- Tin.
- Lead.
- Hastelloy B, C, and D.

#### **Not acceptable**

- Copper.
- Copper alloys, including brass and bronze.
- Zinc and galvanized surfaces.
- Cadmium.
- Silver, including silver-brazed components.
- Nickel.
- Monel.

### **Elastomers**

#### **Acceptable**

- Neoprene.

- Ethylene propylene.
- Butyl.
- Buna.
- PTFE/Teflon.
- Haveg 41 and 60.
- Hastaflo.
- Fluorothene.

#### **Not recommended**

- Natural rubber.
- Nitrile.
- Polyurethane.
- Hypalon.
- Silicone.
- Viton.

#### **Notes**

This list is a practical compatibility guide for typical aqua ammonia service, but final selection should still be checked against the exact concentration, temperature, pressure, and the manufacturer's chemical-resistance data. For storage tanks, carbon steel or stainless steel are commonly recommended, and one vendor specifically notes that other materials should be verified for compatibility before use.