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Photo: USAID West Africa Fertilizer Program

USAID GUIDANCE FOR PROCURING AMMONIUM NITRATE FERTILIZER

This guidance is intended for use by USAID Contracting/Agreement Officer Representatives or their designee at Missions or in Washington Operating Units. However, this guidance provides important information for partners planning on procuring ammonium nitrate fertilizers as part of their activity.

Ammonium Nitrate is a fertilizer used in agriculture to add nitrogen to the soil for plant uptake. Ammonium Nitrate is also a highly explosive material and is used as an explosive in the mining industry, and used commonly by terrorists in improvised explosive devices (IEDs). On August 4, 2020, a fire at a warehouse where ammonium nitrate was improperly stored at the Port of Beirut, Lebanon led to a massive explosion causing over 200 deaths, 6,500+ injuries, more than 300,000 people displaced, and severe damage to critical infrastructure. The Beirut incident is summarized in this 2022 United Nations (UN) / Organization for Economic Co-operation and Development (OECD) [Lessons Learned by the 2020 Beirut Port Explosion](#).

Because of the significant explosive potential of Ammonium Nitrate, this material must be transported, stored, and used with great care. If possible and appropriate, it is recommended USAID funded programs use an alternative nitrogen fertilizer, such as urea, or utilize fertilizer which contains a combination of nitrogen (N), phosphorus (P), and potassium (K) – NPK.

The following information will be reviewed by the USAID/RFS Chief Scientist prior to the approval of any purchase of fertilizers containing Ammonium Nitrate. The A/COR or designee will compile the information below and submit by email to fertilizerapprovals@usaid.gov. Partners should not submit information on their own to the USAID Chief Scientist — this is an internal process and needs to go through the Mission or Washington OU. No Ammonium Nitrate fertilizer may be purchased without approval.

1. Name of the product (technical and common)
2. Amount to be purchased:
3. Purchase location:
4. Seller:
5. Will this be a local purchase or will the material be imported?
 - a. See purchase regulations below for more information on Ammonium Nitrate.
6. What are the safety measures which will be taken during shipment and transport of the material?
 - a. See Ammonium Nitrate shipping regulations and guidance below.
7. How will the Ammonium Nitrate be stored? Storage of this material can be especially problematic, per the Beirut port explosion.
 - a. See Ammonium Nitrate storage regulations and guidance below and the [UN/OECD report](#).
8. Are there alternative fertilizers available (such as urea or NPK) that could be used instead of Ammonium Nitrate?
9. Description of the intended use:
10. Explain why procuring ammonium nitrate would provide a greater benefit to the USAID program than an alternative fertilizer product
11. Describe how all purchased ammonium nitrate will be tracked and use monitored
12. Identify who will track and monitor the shipment, storage, and use of the procured Ammonium Nitrate



GUIDANCE AND REGULATORY INFORMATION:

PURCHASE

- Department of Homeland Security (DHS) regulations with regard to ammonium nitrate purchase: [6 USC CHAPTER I, SUBCHAPTER VIII, Part J: Secure Handling of Ammonium Nitrate](#))

SHIPMENT

- [Truck shipment](#) of Ammonium Nitrate.
- Ammonium Nitrate as [sea cargo](#).
- [Safety and Security Guidelines for the Storage and Transportation of Fertilizer Grade Ammonium Nitrate at Fertilizer Retail and Distribution Facilities](#)

STORAGE

- Department of Labor Occupational Safety and Health Administration (OSHA) [Guidance on the Ammonium Nitrate Storage Requirements in 29 CFR 1910.109\(i\)](#)
- [Safe Storage and Handling of Ammonium Nitrate](#) - United Kingdom Guidelines
- [Safe Storage and Handling of Ammonium Nitrate](#) - Australia Guidelines
- [Ammonium Nitrate Storage](#) - Swiss Guidelines
- Storage Best Practices:
 - Storage containers of ammonium nitrate shall not exceed 130°F or the storage facility itself may, at any time, exceed such temperatures.
 - Sulfur and other finely divided metals shall not be stored in the same building with ammonium nitrate.
 - The height of piles containing ammonium nitrate shall not exceed 20 feet. The width of piles shall not exceed 20 feet and the length 50 feet or be stacked closer than 36 inches below the roof or supporting and spreader beams overhead.
 - Bags of ammonium nitrate shall not be stored within 30 inches of the storage building walls and partitions.
 - Due to the corrosive and reactive properties of ammonium nitrate, and to avoid contamination, galvanized iron, copper, lead, and zinc shall not be used in a bin construction unless suitably protected. Aluminum bins and wooden bins protected against impregnation by ammonium nitrate are permissible. The partitions dividing the ammonium nitrate storage from other products which would contaminate the ammonium nitrate shall be of tight construction
 - Good housekeeping practices shall be maintained around any bin containing ammonium nitrate. This includes keeping weeds and other combustible materials cleared within 25 feet of such a bin. Accumulation of spilled product on the ground shall be prevented.
 - Ammonium nitrate storage bins or piles shall be clearly identified by signs reading “Ammonium Nitrate” with letters at least 2 inches high.
 - Piles or bins shall be so sized and arranged that all material in the pile is moved out periodically in order to minimize possible caking of the stored ammonium nitrate.
 - Empty ammonium nitrate bags shall be disposed of daily in a safe manner.
 - Large quantity storage shall be subject to due consideration of the fire and explosion hazards, including exposure to toxic vapors from burning or decomposing ammonium nitrate.
 - Storage buildings shall not have basements unless the basements are open on at least one side. Storage buildings shall not be over one story in height.
 - Storage buildings shall have adequate ventilation or be of a construction that will be self-ventilating in the event of fire.
 - The wall on the exposed side of a storage building within 50 feet of a combustible building, forest, piles of combustible materials and similar exposure hazards shall be of fire-resistive construction.
 - All flooring in storage and handling areas, shall be of noncombustible material or protected against impregnation by ammonium nitrate.
 - Buildings and structures shall be dry and free from water seepage through the roof, walls, and floors.