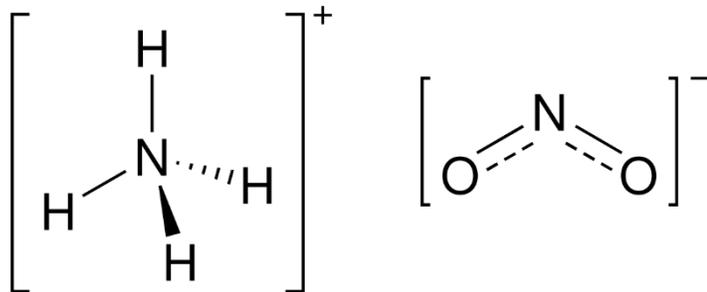


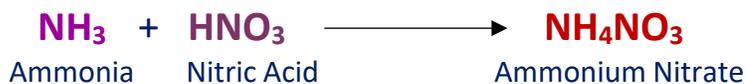


Ammonium Nitrate-NH₄NO₃

What is Ammonium Nitrate



Ammonium nitrite, NH₄NO₃, is the ammonium salt of nitrous acid. It is not used in pure isolated form since it is highly unstable and decomposes into water and nitrogen, even at room temperature. Ammonium Nitrate is a white crystalline solid. It's made in large quantities industrially by the reaction of ammonia with concentrated nitric acid.



HANDLING

Safety:

Ammonium nitrite is unstable and heating it may cause to explode.

Storage:

It is not stable to store this compound in pure form, while aqueous solutions should not be stored for long periods of time. Keep them at high pH and at low temperatures.

Ammonium Nitrate Explosion

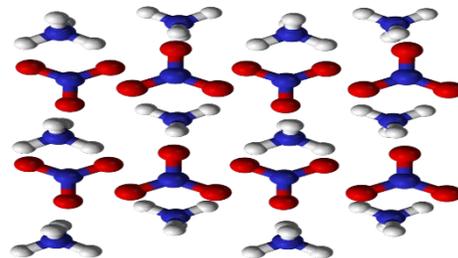
Pure Ammonium Nitrate does not explode easily and can be handled safely. The risk of explosion increases if it is contaminated with impurities. It decomposes at high temperature and if confined can explode.

230°C → **DECOMPOSES**

260-300°C → **EXPLODES***

*If confined

When Ammonium Nitrate decomposes, it primarily breaks down into number of gases, Nitrogen, water vapor, and oxygen. This rapid release of gas causes an explosion



H=white, N=blue, O=red

Disposal:

Can be easily neutralized by strongly diluting the compound in water, then adding a base like sodium hydroxide or sodium percarbonate, though ammonia will be released from the neutralization. Do not add acid to neutralize the ammonia, as the leftover ammonium nitrite may decompose violently.

Please Send your answers by email to:

hse@aimsgt.com

Process Safety incidents can cause?

- Multiple injuries and/or fatalities
- Massive asset damage
- Environmental consequence
- Reputation impact
- All of the above

prepared by: Sadik pm

Last Month HSE Quiz

Answer: Option A

- ✓ Muhammad. P.K.
- ✓ Eliyaz Ahmed
- ✓ Shafi Ur Rahman
- ✓ Joe David

Congratulations!

