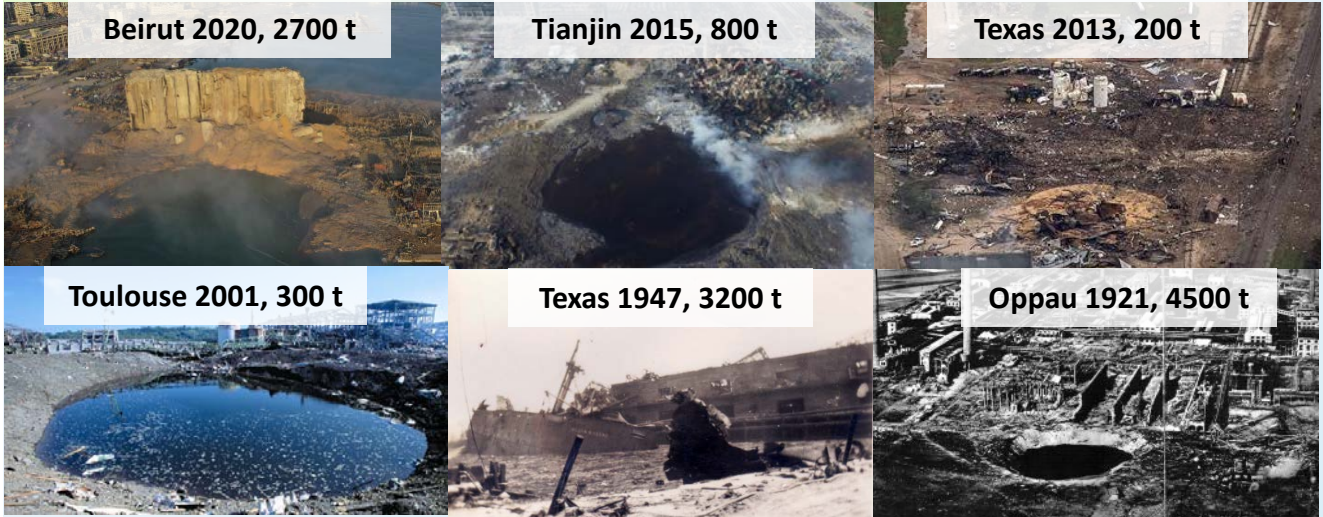


# Ammonium Nitrate

EPSC Learning Sheet October 2020



Stored Ammonium Nitrate (AN) has exploded violently



## Aspects:

- AN is used as fertilizer and sometimes stored in large quantities close to populated areas.
- Under a number of conditions, certain grades of AN can undergo a violent decomposition resulting in a devastating detonation. Fire and shock wave can cause ignition.  
 $\text{NH}_4\text{NO}_3 \rightarrow \text{N}_2 + 2 \text{H}_2\text{O} + 0.5 \text{O}_2$  releases ca 118 kJ/mol
- Safe handling and storage of AN requires the application of basic rules understood by all involved. See public [guidance](#) from EFMA European Fertilizers Manufacturers Association.
- Contaminants (e.g. chlorinated products and metals) might enhance reactivity. Ensure accidental mixing is not possible.
- Limit at all times the maximum quantity and define layout with safe distances based on risk calculations.

**Store Ammonium Nitrate with great care**