



Commercial Explosives & Supply Chain

The commercial explosives industry contributes more than **\$19 billion annually to the U.S. economy and supports 16,000 jobs**. Our products enable quarrying, critical minerals mining, oil and gas development, renewable energy, construction, and demolition.

Commercial Explosives make possible:

\$112 Billion
Mining/Critical Minerals Industry¹

\$171 Billion
Quarrying Industry²

\$1.3 Trillion
Construction Industry³

\$1.7 Trillion
Energy Industry⁴

The production of essential commercial explosive products depends on reliable access to raw materials and inputs within a highly integrated global supply chain. Domestic supply is often limited, and in some cases does not exist or is solely sourced. Competition from the defense and agriculture sectors further constrain the availability of supplies. **As a result, imports are often necessary to meet demand and stabilize supply.**

High Explosives

High explosives – TNT, HMX, RDX, HNS and PETN – are utilized by both the commercial explosives industry and the U.S. defense industry.

- ✔ **TNT** is used in the production of cast boosters which are utilized in mining, quarrying and construction. The U.S. does not currently produce TNT domestically, making industry solely reliant on imports. While a domestic TNT production facility is planned, it is estimated to take three years to construct. Current sources of TNT include Turkey, China, Vietnam, Australia, South Korea, Brazil, Japan, Greece, Finland, Serbia and India. Due to geopolitical tensions, traditional sources like Poland and Ukraine are no longer reliable.
- ✔ **HNS** is used in shaped charges and detonating cords used in the oil and gas sectors. HNS is used in higher temperature applications, but is not produced commercially in the U.S, making industry solely reliant on imports. Current sources of HNS include Norway, the EU (Sweden, Poland, Germany), China, South Korea and other nations.
- ✔ **HMX** is an essential ingredient in detonating cords and shaped charges used in oil and gas production and demolition. **RDX** is used in similar products with various industrial applications. Both are single sourced domestically, making industry solely reliant on imports. The Holston Army Ammunition Plant (Kingsport, Tennessee) is the only domestic source but prioritizes defense needs. The commercial explosives industry has accessed surplus production when available, but surplus has been extremely constrained or non-existent for the past three years. Current sources of HMX and RDX include Norway, the EU (Sweden, Poland, Germany), China, South Korea and other nations.
- ✔ **PETN** is used in detonating cords, detonators and cast booster and is produced at three U.S. facilities, providing relatively stable access.

[1] <https://pubs.usgs.gov/periodicals/mcs2026/mcs2026.pdf>. [2] <https://phoenix-center.org/scorecards/AggregatesIndustry2025ScorecardFinal.pdf>

[3] https://www.agc.org/sites/default/files/users/user21902/CT-US%20construction%20fact%20sheet_2024.pdf.

[4] <https://www.api.org/-/media/files/policy/american-energy/pwc/api-pwc-economic-impact-report.pdf#:~:text=The%20industry's%20total%20impact%20on%20US%20GDP,percent%20of%20the%20national%20total%20in%202019>

Commercial Explosive Finished Products

Despite domestic manufacturing of finished commercial explosives products, **imports remain necessary to meet demand.**

Detonating cords, detonators, safety fuses, and boosters are vital finished components in explosive systems that are used in varying applications.

These are sourced both domestically and imported from Mexico, Canada, Brazil, France, Spain, and other countries.

Steel

The commercial explosives industry relies on a specialized steel alloy necessary for the manufacture of jet perforating guns used in the oil and gas industry. This alloy is not produced in the U.S. and is **primarily sourced from China.**

Ammonium Nitrate

Over 90% of commercial explosives consumed in the U.S. are ammonium nitrate (AN) based due to AN's safety and relatively stable domestic supply. AN is relatively inert on its own and has numerous uses across multiple industries, including fertilizer.

- U.S. production does exist, but **domestic production is not sufficient to meet the overall demand.**
- Imports from Canada, Russian, Vietnam and Mexico help **stabilize the supply chain** and manage price fluctuations in the domestic market.
- Anhydrous ammonia (key precursor) is produced at 38 plants in 19 states,⁵ with additional imports from Canada, Trinidad and Tobago, and other countries.

IME's Asks for Congress

- 1 Support policies that promote domestic sourcing and production of high explosives, including TNT, HMX, RDX, HNS and PETN.
- 2 Ensure that any legislation or regulation affecting ammonium nitrate is science-based and does not hinder the availability of this essential product.
- 3 Strengthen the domestic commercial explosives industry's ability to maintain cost-effective operations by exempting the following products and materials from current and future tariffs:
 - High Explosive (HMX, RDX, HNS, TNT)
 - Key chemical components (ammonia, ammonium nitrate)
 - Essential raw materials (specialized steel alloy).

[5] <https://pubs.usgs.gov/periodicals/mcs2024/mcs2024-nitrogen.pdf>