



# CHEM LOCK

## Chemical Security for Metal Powders



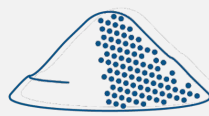
### Why Chemical Security?

Metal and metal alloy powders can be used in a wide variety of applications, including paints and coatings, inks, fireworks, explosives, parts manufacturing, 3D printing, and more. When used properly, these chemicals greatly benefit our lives. However, some of these powders can be weaponized by bad actors. For example, a metal powder was used as an explosive precursor chemical in the 1993 World Trade Center bombing and is still being promoted as an effective explosive chemical by terrorists today. If you work at a site with metal powders, you can play a critical role in understanding the risks and developing a culture of chemical security awareness.

### Most common metal powders that can be weaponized:

- ▶ Aluminum powder
- ▶ Magnesium powder
- ▶ Magnalium powder

### Metal and metal alloy powders can come in different forms and still be weaponized.



Powder



Loose Flakes or Shavings



Paste Suspension

### Chemical Security Considerations for Metal Powders

The primary security concern for metal powders is a bad actor taking the chemical off-site for use as a component in an explosive or other weapon. Thus, facilities that manufacture, store, distribute, and use these metal powders should consider implementing security measures that detect, deter, delay, and respond to chemicals being procured by bad actors, whether legally or through theft. Some possible measures to consider include:

- An active, documented know-your-customer program that ensures that chemicals are purchased by, delivered to, and received from a known, approved individual or entity.
- Alarms, locks, and other access controls to ensure that only authorized personnel can access dangerous chemicals.
- Inventory management and audits to ensure that no chemicals go missing.
- Documentation for all shipments, including method of shipment, carrier information, times and dates of shipments, and destination.
- Policies, plans, and procedures that document reporting and response actions in the event of an incident.
- If your facility has metal shavings that are treated as waste, proper disposal of the waste to prevent adversaries from acquiring the metal shavings.

When evaluating security measures for metal powders that can be weaponized, consider your facility's operational processes. For example, security measures for a paint and coating manufacturer that is mixing metal powders into various products will differ from a parts manufacturer that has metal shavings on equipment and the floor as a byproduct of normal manufacturing operations.

### ChemLock Program

Because no two facilities that use, store, or distribute metal powders are the same, the Cybersecurity and Infrastructure Security Agency's (CISA's) voluntary ChemLock program offers no-cost services and tools to help you improve your chemical security posture in a way that is tailored to your facility and business model.

## ChemLock Services and Tools

- **ChemLock On-Site Assessment and Assistance (OAA):** A holistic chemical security assessment that helps you identify the security risks your on-site chemicals present; offers scalable, tailored suggestions for security measures; and assists you in developing a facility security plan customized to your facility.
- **ChemLock Resources:** Publicly available guidance documents, templates, fact sheets, and flyers to help facilities enhance the cyber and physical security surrounding your chemicals.
- **ChemLock Exercises:** Either a facilitated, tailored tabletop exercise or a suite of CISA Tabletop Exercise Packages (CTEPs) that you can download and use as desired.
- **ChemLock Training:** Virtual and in-person training to assist you with understanding the threat and what security measures can be put into place to reduce the risk of dangerous chemicals from being weaponized.



*Scan the QR code with your phone to learn more about the ChemLock program and request services.*

More information on each of these ChemLock services and tools is available at [cisa.gov/chemlock](https://cisa.gov/chemlock).

## Bombing Prevention Resources

CISA's Office for Bombing Prevention (OBP) leads the Department of Homeland Security's efforts to enhance national security by building public and private capabilities to deter, detect, prevent, and respond to bombing incidents.

- Operation Flashpoint is a national initiative to help organizations and their employees recognize and report suspicious activity related to dangerous chemicals: [cisa.gov/resources-tools/programs/operation-flashpoint](https://cisa.gov/resources-tools/programs/operation-flashpoint).
- The Bomb-Making Materials Awareness Program raises awareness of the products and activities bad actors may take to acquire bomb-making materials and explosive precursor chemicals: [cisa.gov/resources-tools/programs/bomb-making-materials-awareness-program-bmap](https://cisa.gov/resources-tools/programs/bomb-making-materials-awareness-program-bmap).
- Bombing Prevention provides information on bomb threats, training, resources, and more: [cisa.gov/topics/physical-security/bombing-prevention](https://cisa.gov/topics/physical-security/bombing-prevention).
- OBP Training ([cisa.gov/resources-tools/programs/office-bombing-prevention-obp-training-program](https://cisa.gov/resources-tools/programs/office-bombing-prevention-obp-training-program)):
  - Virtual Instructor-Led Training: General Counter-Improvised Explosive Device (C-IED) instruction via online training with a live instructor using a virtual classroom platform.
  - Independent Study Training: Self-paced web-based courses designed for a broad audience to provide general awareness-level information about C-IEDs.

### What Is ChemLock?



Managed by the Cybersecurity and Infrastructure Security Agency (CISA), ChemLock is a voluntary program that provides facilities that possess dangerous chemicals with no-cost services and tools to help them better understand the risks they face and improve their chemical security posture in a way that works for their business model. Learn more and register for ChemLock services at [cisa.gov/chemlock](https://cisa.gov/chemlock).