



Chemical Facility Anti-Terrorism Standards: Top Regulated Chemicals of Interest (COI)

Chemicals are vital to our economy. They are used to develop medicines that maintain our health, provide refrigeration for our food supply, manufacture fuel for our vehicles and build the microchips that run our smartphones. But in the hands of a terrorist, some hazardous chemicals could potentially be weaponized. The government and private sector have a shared responsibility to protect chemicals from being exploited in an attack.



Appendix A and COI

The Cybersecurity and Infrastructure Security Agency's (CISA) Chemical Facility Anti-Terrorism Standards (CFATS) program works with high-risk facilities to ensure they have security measures in place to reduce the risks of certain chemicals from being weaponized.

Appendix A of the CFATS regulation lists more than 300 chemicals of interest (COI) and their specific screening threshold quantities (STQs) and concentrations. Facilities that possess COI at or above the STQ must report their holdings to CISA via an online survey called a Top-Screen. CISA reviews the Top-Screens and tiers facilities based on risk. Facilities determined to be high-risk must submit a security plan tailored to their COI, security issues, and business processes that meets the CISA risk-based performance standards (RBPS).



Most Commonly Reported COI and their Security Issues

The most commonly reported COI include, but are not limited to:

COI	Security Issue	STQ	Concentration
Chlorine	Release – Toxic	2,500 lb	1.00%
	Theft – WME	500 lb	9.77%
Hydrogen Peroxide	Theft – EXP/IEDP	400 lb	35.00%
Aluminum (Powder)	Theft – EXP/IEDP	100 lb	A Commercial Grade
Sodium Nitrate	Theft – EXP/IEDP	400 lb	A Commercial Grade
Potassium Nitrate	Theft – EXP/IEDP	400 lb	A Commercial Grade
Triethanolamine	Theft – CW/CWP	220 lb	80.00%
Sulfur Dioxide (Anhydrous)	Release – Toxic	5,000 lb	1.00%
	Theft – WME	500 lb	84.00%
Potassium Permanganate	Theft – EXP/IEDP	400 lb	A Commercial Grade
Nitric Acid	Release – Toxic	15,000 lb	80.00%
	Theft – EXP/IEDP	400 lb	68.00%

COI are categorized into three main security issues based on the risk they pose:

- **Release:** Toxic, flammable, or explosive chemicals or materials that can be released from a facility.
- **Theft or Diversion:** Chemicals or materials that, if stolen or diverted, have the potential to be misused as weapons or easily converted into weapons using simple chemistry, equipment or techniques. These include chemicals considered to be:
 - Weapons of Mass Effect (WME)
 - Explosives (EXP) and Improvised Explosive Device Precursors (IEDP)
 - Chemical Weapons (CW) and Chemical Weapon Precursors (CWP)
- **Sabotage:** Chemicals or materials that can be mixed with readily available materials like water.

Facilities should account for all COI that meet the STQ requirements when reporting their holdings.



Tools and Resources

- Appendix A COI List: www.cisa.gov/publication/cfats-coi-list
- CFATS Resources: www.cisa.gov/cfats-resources
- CFATS Process: www.cisa.gov/cfats-process
- CFATS Advisory Opinion for “A Commercial Grade”: www.cisa.gov/cfats-advisory-opinions
- RBPS Guidance: www.cisa.gov/publication/cfats-rbps-guidance
- Chemical Security Inspectors and other CISA subject matter experts are available to provide guidance to facilities through outreach meetings, calls, and other engagements.
 - Request a CFATS presentation: www.cisa.gov/request-cfats-presentation
 - Request a Compliance Assistance Visit: www.cisa.gov/cfats-request-compliance-assistance-visit
- CFATS Knowledge Center: csat-help.dhs.gov/
- Chemical Security Assessment Tool (CSAT) Help Desk (technical assistance):
Call 1-866-323-2957 or email csat@hq.dhs.gov



Contact Information

For any questions or comments, email CFATS@hq.dhs.gov or visit www.cisa.gov/cfats.