



Protect Your Laboratory Chemicals from Use in a Terrorist Attack

Chemicals and reagents used for research and development, testing, monitoring, or education are critical to production, nonproduction, diagnostic, and pharmaceutical laboratory services. When used properly, chemicals assist labs across the country in DNA-evidence testing in crime labs and develop medicines in research and pharmaceutical labs. However, in the wrong hands, some of these same chemicals can be used for great harm.

What Is CFATS?

In 2006, Congress authorized the U.S. Department of Homeland Security (DHS) to establish the Chemical Facility Anti-Terrorism Standards (CFATS) program. Managed by the Cybersecurity and Infrastructure Security Agency (CISA), the CFATS program identifies and regulates high-risk chemical facilities to ensure that they have security measures in place that reduce the risk of certain chemicals being weaponized.

Appendix A of the CFATS regulation lists more than 300 chemicals of interest (COI) and their respective screening threshold quantity (STQ), concentration, and security issues. If released, stolen or diverted, and/or used as a contaminant, these COI have the potential to cause significant loss of human life and/or health consequences. Any individual or facility in possession of COI that meets or exceeds the STQ must report their holdings to CISA through an online survey called a Top-Screen.



A scientist conducts research in a laboratory.

COI Commonly Found in Laboratories

Laboratories that use COI are considered chemical facilities under CFATS and may be subject to its regulations. Some of the commonly reported COI include, but are not limited to:

- Acetone cyanohydrin, stabilized
- Aluminum (powder)
- Ammonium perchlorate
- Chloroacetyl chloride
- DF (Methyl phosphonyl difluoride)
- HN1, HN2, and HN3 (Nitrogen mustard-1, 2, 3)
- Hydrogen fluoride (anhydrous)
- Hydrogen peroxide (conc. of at least 35%)
- Hydrogen sulfide
- Lewisite 1 [2-Chlorovinylchloroarsine]
- Methylphosphonothioic dichloride
- O-Mustard (T) [Bis(2-chloroethylthioethyl)ether]
- Nitric acid
- Nitric oxide [Nitrogen oxide (NO)]
- PETN [Pentaerythritol tetranitrate]
- Phosphorus oxychloride [Phosphoryl chloride]
- RDX [Cyclotrimethylenetrinitramine]
- RDX and HMX mixtures
- Sarin
- Sodium nitrate
- Soman [o-Pinacolyl methylphosphonofluoridate]
- Sulfur Mustard (Mustard gas (H))
- Tabun [o-Ethyl-N,N-dimethylphosphoradmido-cyanidate]
- Titanium tetrachloride [Titanium chloride (TiCl₄) (T-4)-]
- TNT [Trinitrotoluene]
- Triethanolamine
- VX [o-Ethyl-S-2-diisopropylaminoethyl methyl phosphonothiolate]

If your facility possesses any COI at or above the STQ listed in Appendix A, you must submit a Top-Screen within 60 days of coming into possession of the COI. See 6 CFR § 27.210(a)(1)(i).

Note: Some facilities may possess small quantities of COI spread out across various buildings. It is important that the facility total all quantities of COI so it may be counted towards the STQ.

Review the Appendix A COI List at www.dhs.gov/publication/cfats-coi-list.

CFATS Exclusions and Exception

Certain facilities are excluded from the CFATS regulation by statute (6 USC § 621(4)) if they are:

- A Public Water System under the Safe Drinking Water Act.
- A Treatment Works under the Federal Water Pollution Control Act.
- Regulated by the U.S. Coast Guard under the Maritime Transportation Security Act (MTSA).
- Regulated by the Nuclear Regulatory Commission (NRC) or by a State with an NRC agreement
- Owned or operated by the Department of Defense or Energy.

Laboratories with a Technically Qualified Individual

With certain exceptions, laboratories under the supervision of a “technically qualified individual” (defined in 40 CFR 720.3) do not need to report release-toxic, release-flammable, or release-explosive COI. See 6 CFR § 27.203(b)(2) and (b)(2)(i) for more information:

www.gpo.gov/fdsys/pkg/CFR-2016-title6-vol1/pdf/CFR-2016-title6-vol1-sec27-203.pdf.

What's Next?

If your facility is not statutorily excluded from CFATS, your next steps are:

- Complete the Chemical-terrorism Vulnerability Information (CVI) Authorized User training to begin the process of reporting COI: www.cisa.gov/cvi-authorized-user-training.
- Register for a Chemical Security Assessment Tool (CSAT) account to access the Top-Screen survey: <https://csat-registration.dhs.gov>.
- Fill out a Top-Screen in CSAT to report your COI holdings to CISA.
- Based on the information provided, CISA assesses the overall risk of the facility.
- Facilities assessed as “high-risk” are required to submit a Security Vulnerability Assessment and security plan tailored to the unique security challenges and risks associated with their COI.

More than 150 CISA Chemical Security Inspectors are located nationwide to assist high-risk facilities identify and implement security measures that comply with the CFATS regulation.

Failure to Submit a Top-Screen

CISA has the authority to enforce compliance with the program. This can include issuing civil monetary penalties to facilities that fail to submit a Top-Screen or that are found to be in violation of any aspect of the CFATS regulations (6 USC § 624). Learn more at www.cisa.gov/cfats-enforcement.

Tools and Resources

- CFATS Resources: www.cisa.gov/cfats-resources
- CFATS Process: www.cisa.gov/cfats-process
- Appendix A COI List: www.cisa.gov/publication/cfats-coi-list
- CFATS Knowledge Center: <https://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 questions or comments, email CFATS@hq.dhs.gov or visit www.cisa.gov/cfats.