



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

What is CFATS?

The Chemical Facility Anti-Terrorism Standards (CFATS) program focuses precisely in filling this chemical security gap. Authorized by Congress in 2007, CFATS identifies and regulates facilities that possess specific high-risk chemicals at certain quantities and concentrations—known as chemicals of interest (COI)—to ensure they have security measures in place that reduce the risks of their misuse.

Appendix A of the CFATS regulations lists more than 300 COI and their respective screening threshold quantity (STQ), concentration, and security issues for which they are regulated. Any facility, including laboratories, that meets or exceeds the STQ for any COI would be considered a chemical facility, and must report possession to the Department of Homeland Security (DHS) through an online survey called a Top-Screen.

Chemicals Commonly Found in CFATS-Regulated Laboratories

DHS has identified COI based on the belief that these chemicals—if released, stolen or diverted, and/or used as a contaminant—have the potential to create significant human life and/or health consequences. Commonly reported COI for this industry 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 (concentration of at least 35%)
- Hydrogen sulfide
- Lewisite 1 [2-Chlorovinyl-dichloroarsine]
- 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-dimethylphosphoradmidocyanidate]
- Titanium tetrachloride [Titanium chloride (TiCl₄)-(T-4)-]
- TNT [Trinitrotoluene]
- Triethanolamine
- VX [o-Ethyl-S-2-diisopropylaminoethyl methyl phosphonothiolate]



A scientist conducts research in a laboratory.

While the table displays COI commonly possessed by laboratories, some may possess other chemicals regulated by DHS that may need to be reported. It is, therefore, important to become familiar with the COI listed in Appendix A, along with the chemicals' STQs, concentrations, and security issues for which they are regulated. Furthermore, 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.

What's Next?

If your facility possesses any COI at or above the STQ and concentration listed in Appendix A:

- Report these chemicals to DHS using the Chemical Security Assessment Tool (CSAT).
- Register for a CSAT account at <https://csat-registration.dhs.gov/>
- Fill out a Top-Screen, an easy-to-use online survey facilities use to report their chemical holdings and facility information to DHS.
- Based on the information provided in the Top-Screen, DHS assesses the overall risk of the facility.
- Facilities assessed as "high risk" by DHS are required to submit a security plan tailored to the risks associated with their chemicals at the facility.
- More than 150 DHS Chemical Security Inspectors are located nationwide to assist high-risk facilities identify and implement security measures, and conduct inspections to ensure compliance with the CFATS regulation.

Failure to Comply or Meet Security Standards

The Department has the authority to issue an enforcement action against a chemical facility found to be in violation of CFATS. Failure to comply with the regulation may result in the imposition of a civil penalty.

Tools and Resources

DHS is committed to providing CFATS resources and tools to facilities with COI.

- Appendix A Chemicals of Interest (COI) List: www.dhs.gov/publication/cfats-coi-list
- CFATS Penalty Policy: www.dhs.gov/cfats-penalty-policy
- Request a CFATS Presentation to learn about any part of the CFATS regulation from submitting a Top-Screen to editing a security plan: www.dhs.gov/request-cfats-presentation.
- Request a Compliance Assistance Visit to learn what to expect from a CFATS Authorization or Compliance Inspection: www.dhs.gov/cfats-request-compliance-assistance-visit.
- The CFATS Knowledge Center is an online repository of FAQs, articles, and more: csat-help.dhs.gov/.
- The CSAT Help Desk provides timely support to chemical facility owners and operators. Call 1-866-323-2957 or email CSAT@hq.dhs.gov.

Contact Information

For any questions, comments, or concerns, please contact CFATS@hq.dhs.gov or visit www.dhs.gov/chemicalsecurity.