

Chemical Facility Anti-Terrorism Standards (CFATS)
and its impact on
RemOx® ISCO Reagents



TECHNICAL INFORMATION

TECHNICAL REVIEW

The U.S. Department of Homeland Security (DHS) published a new set of standards in June 2007 establishing risk-based performance standards for the security of the nation's chemical facilities. These standards are designed to reduce the risk of release, theft, or sabotage of chemicals while being used or stored at any chemical facility, a requirement also potentially applicable to a remediation site. How these new standards affect your ability to purchase and store Carus Corporation's permanganate products will be discussed in the following document. Please note that the following guidance is provided for information purposes only. You should consult your own advisors regarding the compliance of your facility or site with Chemical Facility Anti-Terrorism Standards (CFATS) rules and regulations.

This new regulation only affects RemOx® S ISCO reagent (potassium permanganate). RemOx® L ISCO reagent (sodium permanganate) is not subject to this new regulation.

GENERAL BACKGROUND

The U.S. DHS has released an interim final rule that is based on risk-based performance standards that imposes comprehensive federal security regulations for high-risk chemical facilities. The CFATS require regulated chemical facilities to -

- Prepare Security Vulnerability Assessments (SVAs)
- Develop and implement Site Security Plans (SSPs)

It also allows certain covered chemical facilities, in specified circumstances, to submit Alternate Security Programs in lieu of a Security Vulnerability Assessment, Site Security Plan, or both.

Chemical Facility or facility shall mean any establishment that possesses or plans to possess, at any relevant point in time, a quantity of a chemical substance determined to be potentially dangerous or that meets other risk-related criteria identified by the DHS. Chemicals of interest are those chemicals listed in Appendix A at or above the STQ (Screening Threshold Quantity);

The following facilities are exempted:

- 1. Those regulated by the Maritime Transportation Security Act of 2002;**
- 2. Public Water Systems, as defined by the Safe Drinking Water Act;**
- 3. Treatment Works as defined by the Federal Water Pollution Control Act;**
- 4. Any facility owned or operated by the Department of Defense or the Department of Energy;**
- 5. Any facility subject to regulation by the Nuclear Regulatory Commission.**

This regulation became effective June 8, 2007, except for Appendix A (PDF, 41 pages - 2.12 MB, the DHS Table of Chemicals of Interest) which became effective upon its publication in the Federal Register on November 20, 2007. **With the publication of a final Appendix A, all provisions of 6 CFR Part 27, including § 27.210(a)(1)(i), are operative and in effect.**

To determine the type and quantity of chemicals that will be subject to the preliminary screening process, DHS examined the following three security issues:

1. **Release** – quantities of toxic, flammable, or explosive chemicals that have the potential to create significant adverse consequences for human life or health if intentionally released or detonated;
2. **Theft and diversion** – chemicals that have the potential, if stolen or diverted, to be used or converted into weapons; and
3. **Sabotage and contamination** – chemicals that, if mixed with other readily available materials, have the potential to create significant adverse consequences for human life or health.





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The DHS identified these chemicals in the specific amounts for preliminary screening based on their potential to create significant human life or health consequences.

Appendix A lists approximately 300 chemicals of interest and their STQs. Appendix A includes common industrial chemicals such as chlorine, propane, and anhydrous ammonia as well as specialty chemicals such as arsine and phosphorus trichloride.

If a facility has on-site a chemical of interest at or above the STQ, then the facility may be required to file a Top-Screen. The facility has to file the Top-Screen within 60 calendar days of coming into possession of a chemical of interest at or above its STQ. If your site or facility is determined to be a "high-risk facility," then you will be notified by DHS in writing, and may be required to submit further documentation, such as an SVA and SSP.

What This Means When Purchasing and Storing Carus Corporation's RemOx® S ISCO Reagent

Potassium permanganate is the only Carus product that is listed in Appendix A of CFATS (STQ = 400 pounds). Sodium permanganate and all other Carus products are NOT listed.

The criterion under which potassium permanganate exceeds the standard is for Theft/Diversion-Explosives (EXP)/ Improvised Explosive Device Precursors (IEDP): chemicals that could be stolen or diverted and used in explosives or IEDs. The STQ for potassium permanganate is set at 400 pounds. Therefore any chemical facility, except those five exempted categories, that intends to store potassium permanganate above 400 pounds and may be subject to fill out the Top-Screen questionnaire. This questionnaire is a 111 page document and is estimated to take over 30 man hours to complete. **It is the responsibility of the facility or the site to be in compliance with these standards.**

If you are considering using potassium permanganate at a site, there are three main options for you to explore. These options are:

1) If you are temporarily storing (less than 60 days) greater than 400 pounds of potassium permanganate, you can write to the DHS demonstrating that the remediation site is not a chemical facility per the terms of the regulation. In the letter, describe the process and business practices for the remediation project. The DHS will respond in writing. The letter can be sent to:

Laurie Boulden- Senior Compliance Officer
Mail Stop 8100
Department of Homeland Security
Washington D.C. 20528

2) Complete the Top Screen Survey and document that your facility is in compliance with the CFATS Standards. If the project is large enough the additional administrative costs may be warranted.

3) Convert the permanganate order from potassium permanganate to sodium permanganate.

Carus Remediation Technologies can assist in this conversion. Since the cost difference on a per pound basis between potassium and sodium permanganate have closed in the past four years coupled, with the fact that you can inject sodium permanganate at higher concentrations, your actual project costs may be reduced by using sodium permanganate by decreasing the number of field injection days.

If you have any additional questions or concerns, please contact one of the following members of Carus Remediation Technologies.

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