



PROPER CLEANUP AND DISPOSAL OF REPULS®

By Oliver Nichols, B.S, B.A Chemistry

INTRODUCTION

This document will address the chemistry of Crotega REPULS® solution and the cleanup and disposal of the product after deployment. The purpose of REPULS, as used in the Crotega SentiZone™ System, is to deter, disrupt, and delay active threats in a variety of facilities, through the immediate and unexpected application of the product onto the perpetrator. REPULS will temporarily disable and disarm the assailant by severely, but temporarily, affecting vision, respiration and orientation.

The Crotega SentiZone System was developed in response to the rising incidence of school and workplace violence. A key component of this system is the REPULS product, which is sprayed directly on the intruder. While REPULS takes immediate effect, the product is water-soluble, nonflammable, biodegradable and nontoxic when used as directed.

DEPLOYMENT AND CLEANUP

After deployment of REPULS on the active intruder, both the intruder and the facility will be exposed, in addition to anyone in the close vicinity of the deployment. Any person exposed to REPULS should use copious amounts of water to flush eyes and face until irritation is relieved. Do not force flush eyes. After flushing, the effects of REPULS will be eliminated.

Cleanup is easy and can be done by local cleaning and restoration companies. For the surrounding environment, removal of the overspray is required. Apply negative air pressure to affected area to remove off-gassed materials. Walls and floors can be flushed with water and the resulting residue can be vacuumed and disposed in the Publicly Owned Treatment Works (POTW).

In accordance with EPA and NPDES guidelines, REPULS can be flushed down municipal sewer systems. REPULS has been tested for residues of all 133 prohibited pesticides used in the treatment of human and animal food products, using EPA protocol, and no pesticides were detected.

ACUTE TEST CONTROL PERFORMANCE

The test results for meeting the NPDES guidelines are as follows:

Primary Water Controls:

Fathead minnow survival greater than 90% LC50 = 413.23 ppm

Daphnia magna survival greater than 90% LC50 = 318.64 ppm

The complete SDS can be found at crotega.com. Additional information regarding the clean-up and disposal of REPULS can be found on the REPULS SDS.

SUMMARY

The Crotega SentiZone™ System is an effective means of interfering with a person or persons intent on doing harm to people or properties. Cleanup is made relatively easy by diluting the sprayed REPULS® with water with detergent added, vacuuming up the diluted residue and airing out the affected environment. The product chemistry is not harmful to people or the environment when used as directed. The chemicals in REPULS have been used for decades in different types of products (many of which have direct contact with the environment) without any deleterious effects.

ABOUT CROTEGA

Crotega employs technology to bring about a safer world. We empower law enforcement, individuals, and building owners to take control with advanced solutions that neutralize active threats while reducing the risks to the user. We aim to make public safety more humane, offer peace of mind, and ultimately, save lives. Learn more at crotega.com.

ABOUT THE AUTHOR

Oliver Nichols is a chemical consultant with over 40 years' experience in the field.