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PROPER CLEAN-UP AND DISPOSAL

OF

REPULS

This paper will address Crotega's Repuls chemistry and the clean-up/disposal of the product after deployment. The purpose of the Repuls chemistry used in Crotega Shooter Suppression System is to deter, disrupt, and delay active threats in a variety of facilities, through the immediate and unexpected application of the Repuls product on the perpetrator. The Repuls product will temporarily disable/disarm the assailant, by severely, but temporarily, affecting vision, respiration, and orientation. The author of this paper has over 40 years' experience in the field of chemistry.

History: The Crotega Shooter Suppression 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 is effective and immediate to deter, disrupt, and delay, the product is water soluble, non-flammable, biodegradable, and non-toxic when used as directed.

Disposal and Cleanup: After deployment of the Repuls product 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 utilize copious amounts of water to flush eyes and face until irritation is relieved. Do not force flush eyes. After such flushing, the effects of the Repuls product 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 following EPA and NPDES guidelines, the Repuls product can be flushed down municipal sewer systems. The Repuls has been tested for residues of all prohibited pesticides used in the treatment of human and animal food products, using EPA Protocol. None of these 133 pesticides were found in Repuls. The test results for meeting the NPDES guidelines are as follows:

ACUTE TEST CONTROL PERFORMANCE

Primary Water Controls: Fathead Minnow survival greater than 90%	LC50=413.23ppm
Daphnia magna survival greater than 90%	LC50=318.64ppm

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 sheet.

Conclusion: The Crotega Shooter Suppression System is an effective means of interfering with a person or persons intent on doing harm to people or properties. Clean-up is 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 many different types of chemical products, many of which have direct contact with the environment, without any deleterious effects.