

THE MOMENT YOU ARE EXPOSED IS THE MOMENT YOU NEED RSDL[®] NEUTRALIZATION

Medical Countermeasures
by Emergent BioSolutions

Within 2 minutes, RSDL **removes or neutralizes** chemical warfare agents and many pesticide-related chemicals.¹⁻⁹



Chemical warfare agent? Pesticide-related chemical? **Unexpected troop exposure?**



The moment your troops are exposed,
can they be decontaminated?

- “...a tiny drop of a nerve agent, no larger than the head of a pin, can kill an adult human being within minutes after exposure” (Organisation for the Prohibition of Chemical Weapons)¹⁰
- Pesticide-related chemicals may be just as toxic as chemical warfare agents¹¹
- While decontamination is crucial, Fullers Earth Powder decontaminants do not neutralize chemical warfare agents or pesticide-related chemicals and may cause cross-contamination^{5,7,12}

**The right skin
decontaminant helps
ensure your troops
stay on mission**

Now there is a more effective way to protect your troops^{12,3}

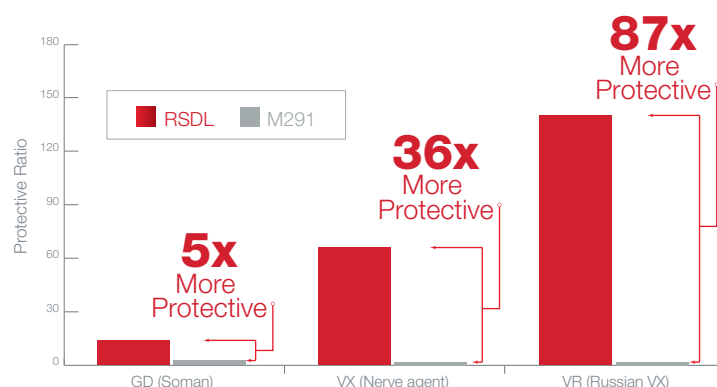
Military forces around the world have already switched to RSDL®.

- **RSDL removes or neutralizes:**

- Chemical warfare agents within 2 minutes, including: tabun, sarin, soman, cyclohexyl sarin, vx, mustard, and T-2 Toxin¹⁻⁸
- Many pesticide-related chemicals, including organophosphates such as parathion and malathion⁹

- **Safe:** Leaves a nontoxic residue on the skin¹³
- **Fast:** Just open, wipe the skin after exposure, and rinse when time permits
- RSDL has a long shelf life of five years*

Efficacy of RSDL Compared to M291³



RSDL provided significantly greater protection than M291³

Efficacy of RSDL Compared to Fullers Earth Powder MK Kits¹²

	RSDL	MK Kits
Neutralization of contaminants	Yes	No
Picks up contaminants from skin	Yes	No
Washing with water removes contaminants from skin after use†	Yes	No – Initiates Desorption

RSDL removed or neutralized contaminants on the skin while Fullers Earth did not¹²

*Storage temperature should be between 15°C to 30°C (59°F to 86°F). Store in original container protected from direct sunlight in a dry, cool area. Keep container tightly closed until ready for use.



RSDL® has a proven heritage:

- Deployed for use by warfighters in both Gulf wars
- Currently protects military, first responders, and ministries of defense in over 30 countries worldwide.
- Has US Department of Homeland Security SAFETY Act certification¹⁴

To learn about ordering RSDL,
call 1-888-773-3266.



Neutralize the threat.
Order RSDL today.



† Important Safety Information:

For external use only. Contact with eyes and mucous membranes should be avoided. In emergency conditions, RSDL does not require immediate removal from skin, but should be rinsed as soon as it is safe to do so. An ingredient of RSDL may be absorbed. Studies with RSDL left on the skin for 24 hours showed minimal adverse effects, however some patients have been known to experience minor skin irritation.

1. Braue E, Smith K, Doxzon B, Lumpkin H, Clarkson E. Efficacy studies of Reactive Skin Decontamination Lotion, M291 Skin Decontamination Kit, 0.5% bleach, 1% soapy water, and skin exposure reduction paste against chemical warfare agents, part 1: guinea pigs challenged with VX. *Cutan Ocul Toxicol*. 2011;30(1):15-28. 2. Braue E, Smith K, Doxzon B, Lumpkin H, Clarkson E. Efficacy studies of Reactive Skin Decontamination Lotion, M291 Skin Decontamination Kit, 0.5% bleach, 1% soapy water, and skin exposure reduction paste against chemical warfare agents, part 2: guinea pigs challenged with soman. *Cutan Ocul Toxicol*. 2011;30(1):29-37. 3. Hanssen K, Doxzon B, Lumpkin H, Clarkson E, Braue E. Evaluation of decontamination systems challenged with nerve agents. Aberdeen Proving Ground, MD: US Army Medical Research Institute of Chemical Defense; 2004. 4. Bide R, Risk D, Schofield L. Evaluation of the Canadian reactive skin decontaminant lotion and US skin decontamination kit for decontamination of T-2 toxin on guinea pig skin. Final report. Suffield, Canada: Defence Research and Development Canada; 2002. 5. Taysse L, Daulon S, Delamanche S, Bellier B, Breton P. Skin decontamination of mustards and organophosphates: comparative efficacy of RSDL and Fuller's earth in domestic swine. *Hum Exp Toxicol*. 2007;26(2):135-141. 6. Snider T, Hayes T, Jarvis R, Matthews M, Estep J. Assessment of RSDL as a decontaminant against VX and HD: efficacy, equivalence to M291 skin decontamination kit, and compatibility with fielded materials. Final report. Columbus, OH: US Army Medical Materiel Development Activity and US Marine Corps Systems Command; 2002. 7. Bjarnason S, Mikler J, Hill I, et al. Comparison of selected skin decontaminant products and regimens against VX in domestic swine. *Hum Exp Toxicol*. 2008;27(3):253-261. 8. Rolland P, Bolzinger MA, Cruz C, Josse D, Briançon S. Hairy skin exposure to VX *in vitro*: effectiveness of delayed decontamination. *Toxicol In Vitro*. 2013;27(1):358-366. 9. Fentabil M, Gebremedhin M, Burczyk A, Purdon JG, Goldman V. In-Vitro Reactivity of the RSDL: LC-MS Investigation of the Effectiveness and Minimum Molar Ratio of RSDL: Test Article for Decontamination of Nine Pesticides. Data on File, Emergent BioSolutions, 2013. 10. The chemical weapons ban facts and figures. <http://www.opcw.org/news-publications/publications/facts-and-figures/#c1918>. Organisation for the Prohibition of Chemical Weapons Web site. Accessed January 24, 2014. 11. Organophosphates. <http://www.panna.org/resources/organophosphates>. Pesticide Action Network. Accessed January 24, 2014. 12. Farrington, Lockwood Company Limited. Novel comparative research on skin decontaminants using advanced digital imagery. Poster presented at: CBRNe Convergence Conference; November, 2013; San Diego, CA. 13. Tonucci D. Evaluation of phototoxicity and photoallergy for Reactive Skin Decontamination Lotion (RSDL) in humans. Columbus, OH: Battelle Memorial Institute; 2003. 14. US Department of Homeland Security. Safety Act Certification; August 2011.

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