

ISRP 1999 abstract

Presenter/author	Title	Abstract
Frund, Z. N. Cobes, J.W. Milius, J. <i>Mine Safety Appliance Company P.O. Box 439 Pittsburgh, PA 15230 USA</i>	Performance of Air-Purifying Respirators Against Chemical Warfare and Tear Gas Agents	<p>MSA recognizes the need of Emergency Response Personnel to have adequate, reliable respiratory protection when responding to acts of terrorism. Testing was conducted to quantify:</p> <ul style="list-style-type: none">• the permeation resistance of the MSA elastomeric full facepiece materials against chemical warfare agents (mustard and Sarin according to Mil-Std-282, Methods 208.1 and 208.2).• the service life performance of MSA's Negative Pressure Riot Control canister against Sarin, hydrogen cyanide, cyanogen chloride, CS and CN tear gases, oleoresin capsicum (the active in OC Pepper Spray), and dimethylmethyl phosphonate (a nerve agent stimulant) under controlled laboratory conditions (NISOH, CASHPAC, and Mil-C-51560).• the performance of MSA's PAPR Riot Control canister against hydrogen cyanide, CS and CN tear gases, oleoresin capsicum, and dimethylmethyl phosphonate. <p>Testing revealed that the MSA's elastomeric facepiece materials are resistant to permeation by chemical warfare agents for more than 6 hours. Also, service life testing revealed that MSA's negative pressure and PAPR Riot Control canisters are very effective in removing toxic chemical warfare agents from an inspired airstream. The details of these laboratory investigations shall be presented at this secession.</p>