

ISRP 2002 abstract

Presenter/author	Title	Abstract
<p>Hindmarsh, Chris J.</p> <p><i>DSTL, Porton Down, Salisbury, Wilts., UK</i></p>	<p>Novel Polymeric Barrier Materials for Respiratory Protection</p>	<p>Current respirator barrier materials have several drawbacks associated with them. These include, amongst others, manufacturability and poor adhesion properties. This work describes efforts to produce novel polymeric barrier laminate materials that are lightweight, flexible, optically clear and have good manufacturing properties.</p> <p>A selection of barrier materials, both single layer and multi-layered laminates, have been produced by co-extrusion and investigated as alternatives to chlorobutyl rubber for respiratory protection. The barrier properties of these materials have been assessed using quantitative penetration tests including both sulphur mustard and nerve agent. The basic manufacturing properties of these materials have been investigated with properties such as their abilities to be thermoformed and welded being determined. Further agent penetration studies have been carried out on both the thermoformed shapes and the welded joints, in order to assess whether any flaws have been introduced to the materials.</p>