The Respirex Powered Respirator Protective Suit (PRPS) is a one piece gas tight chemical protective suit for use by emergency response personnel after a CBRN incident

- Manufactured from DuPont™ Tychem® TK, a high performance, lightweight, multi-layer chemical barrier material
- Respiratory system comprising a battery powered 3M™ Jupiter™ air filter unit fitted with a visual display unit mounted inside the suit at the base of the visor, and audible alarm
- Battery pack provides 1 hour operational use, plus 15 minutes for decontamination
- Twin JRF-85 gas & particle filters to provide protection against chemical and biological warfare agents
- Semi-rigid laminated visor
- Heavy duty gas tight zip fitted across the chest enclosed by double external storm flaps with velcro closure
- Dual glove system comprising Neoprene outer gloves bonded to inner Silver Shield laminate gloves
- Gas tight locking cuff mechanism
- Highly chemically resistant Hazmax™ safety boots permanently attached to suit
- Supplied with lightweight disposable Hazbag to quarantine the suit after use
- Available in a range of sizes (see over)

Features and Benefits
- Powered respirator and loose-fitting hood provide cooling air over the head and through the suit, making the wearer more comfortable and better able to focus on tasks
- The loose-fitting hood design provides high protection without the need for a tight-fitting face piece, which means:
  - Many wearers feel less constricted
  - Can be used by wearers with facial hair
  - Training needs are reduced
  - Face-fit testing is not required
- The clear wide-view visor provides reassurance to casualties and victims by allowing easier, friendly ‘whole-face’ communication
- Compared to a gas-tight suit with SCBA, the PRPS suit and respirator is significantly lighter and more comfortable, with easier breathing and less equipment in body contact
- The lower weight and increased user comfort results in a lower physiological load than a conventional gas-tight suit
- Improved operational duration over gas-tight SCBA suits
- Up to six times the resource efficiency compared with gas-tight SCBA suits thanks to the lower physiological loading and increased duration
- Uncontaminated or ‘decontamination-guaranteed’ suits can be re-used following gas-tight re-test and re-certification

Options
- Reusable PVC training suit - PRPS(T)
- Primary (single-use) lithium battery for Immediate operational use, and rechargeable battery for training use
- Optional rehydration system and hard-hat
- Choice of lightweight dexterity gloves for medical tasks or heavy-duty gloves for increased physical protection

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Sizing

The following pictograms designate the range of height & chest sizes suitable for specific sizes of PRPS suit, check your body measurements and select the correct size of suit. Body measurements in cm (inch). Gloves and boots are graded according to suit size.

**Warning**: Incorrect size selection could lead to a reduced level of protection.

<table>
<thead>
<tr>
<th>Suit Size</th>
<th>Body Height</th>
<th>Chest Girth</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>152 - 165</td>
<td>86 - 94</td>
</tr>
<tr>
<td>M</td>
<td>163 - 175</td>
<td>94 - 102</td>
</tr>
<tr>
<td>L</td>
<td>173 - 185</td>
<td>102 - 112</td>
</tr>
<tr>
<td>XL</td>
<td>180 - 196</td>
<td>109 - 124</td>
</tr>
</tbody>
</table>

Material Performance

<table>
<thead>
<tr>
<th>Tested In Accordance With</th>
<th>Performance Requirement</th>
<th>Typical Performance level</th>
<th>Performance Class Required For EN 943-2: 2002</th>
<th>Performance Class Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN 530:1994 Method 2</td>
<td>Abrasion Resistance</td>
<td>&gt; 2,000 Cycles</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>EN ISO 7854:1997 Method B</td>
<td>Flex Cracking Resistance</td>
<td>&gt; 1,000 cycles</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>EN ISO 13934-1:1999</td>
<td>Tensile strength</td>
<td>Machine Direction 519.6 N</td>
<td>Machine Direction 482.9 N</td>
<td>4</td>
</tr>
<tr>
<td>EN 863:1995</td>
<td>Puncture Resistance</td>
<td>49 N</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>EN ISO 6529:2001</td>
<td>Permeation Resistance</td>
<td>&gt;480 min</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>EN 13274-4:2001 Method 3</td>
<td>Resistance to ignition</td>
<td>No part ignited or continued to burn on removal from the flame</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>EN 13274-4:2001 Method 3</td>
<td>Resistance to flame</td>
<td>No part ignited or continued to burn on removal from the flame</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISO 5082:1982 Annex A2</td>
<td>Seam Strength</td>
<td>607 N</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

For permeation data please refer to the separate Respirex Materials Permeation Guide and the DuPont™ Tychem® TK material datasheet.

For boot performance, please refer to the separate Hazmax™ Boot data sheet.

Respirator and Filter Performance

**Respiratory Protection:**

3M™ specification TS0084 (based on EN12941:1998 TH3, nominal PF= 500). Following clauses excluded or modified: battery duration; maximum mass; strength of hoses and couplings; strength of couplings to hood; marking.

**Battery:**

(BAT-21) Lithium, single-use, duration: 3.5 hours.

**Filters:**


**MMDF (Manufacturer's Minimum Design Flow):**

135 l/min; max flow: 230 l/min.

Specifications, configurations and colours are subject to change without notice.

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