MAPA PROFESSIONNEL, a global leader in the manufacture and development of protective gloves provides assistance in understanding the new standards and undertakes to offer a range of products which are fully compliant.

www.mapa-pro.com

TO FIND OUT MORE
about new Mapa products and to use Mapa’s interactive tool, scan this QR code with your smartphone.

DEFENSE OUEST
420, rue d’Estienne d’Orves - 92705 Colombes Cedex - France
Tel.: +33 (0)1 49 64 22 00 - Fax: +33 (0)1 49 64 24 29

www.mapa-pro.com

REVISION OF STANDARD EN 388

MAPA PROFESSIONNEL,
This standard applies to gloves protecting against mechanical risks, including abrasion, cut, tear and puncture. It was necessary to revise the standard as the cut resistance test (Couptest) did not allow the performance of high resistance gloves to be qualified correctly.

The changes

Cut resistance

**B E F O R E**

The method for assessing cut resistance of glove is currently the Couptest. Method which measures the number of cycles (forwards and backwards) to cut a sample with a low pressure (5N /approximately 500g).

**N O W**

The Couptest method has been made more reliable with improved control of the blade. If the glove material dulls the blade, then the reference test becomes EN ISO 13997. A fifth digit under the pictogram is created to indicate the cut level according to the ISO 13997 test. If there is no dulling on the blade, the Couptest test remains the reference test; however the level of performance according to the ISO 13997 test may be reported.

MAPA Professionnel was already using a more suitable test for characterising gloves with a high resistance to cut, the ISO 13997 test.

**P R O F E S S I O N A L E N B O R N**

**B E F O R E**

Abrasion resistance

The abrasion test is done with a new abrasive paper (Klingspor PL31B 180 grit), which is a more reliable quality paper than the one used previously.

**N O W**

Abrasion resistance

Klingspor
PL31B 180 grit

Note: The letter X means that the test was not performed or is not applicable.

**P R O T E C T I O N A G A I N S T I M P A C T S**

**N E W**

New test according to EN 13594: 2015 standard which allows protection against impacts to be claimed. If the glove passes the test, the letter «P» is added after the five digits under the pictogram.

**P I C T O G R A M S**

**B E F O R E**

**N O W**

Performance levels*

<table>
<thead>
<tr>
<th>Test</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abrasion resistance (cycles)</td>
<td>100</td>
<td>500</td>
<td>2000</td>
<td>8000</td>
<td>-</td>
</tr>
<tr>
<td>Cut resistance - Couptest (index)</td>
<td>1,2</td>
<td>2,5</td>
<td>5,0</td>
<td>10,0</td>
<td>20,0</td>
</tr>
<tr>
<td>Tear resistance (Newton)</td>
<td>10</td>
<td>25</td>
<td>50</td>
<td>75</td>
<td>-</td>
</tr>
<tr>
<td>Puncture resistance (Newton)</td>
<td>20</td>
<td>60</td>
<td>100</td>
<td>150</td>
<td>-</td>
</tr>
</tbody>
</table>

Cut resistance according to EN ISO 13997 (Newton)

<table>
<thead>
<tr>
<th>Level</th>
<th>2</th>
<th>5</th>
<th>10</th>
<th>15</th>
<th>22</th>
<th>30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level A</td>
<td>Level B</td>
<td>Level C</td>
<td>Level D</td>
<td>Level E</td>
<td>Level F</td>
<td></td>
</tr>
</tbody>
</table>

* Values greater than or equal to...