

# TEST REPORT

**COMPANY NAME:** MECDEX (LIBERMANN INTERNATIONAL)  
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**Report No.:** FTL-238/081017  
**TRF No.:** FTL-238/081017  
**Date In:** 8<sup>th</sup> Oct 2017  
**Date Out:** 12<sup>th</sup> Oct 2017  
**No. Of Working Days:** 04 Days  
**Page:** 1 of 4  
**Pretest for Buyer:** Not Listed

<b>Sample Description:</b>	Functional Safety Gloves
<b>Color(s):</b>	Grey/Hi Vis Yellow
<b>GSM / Thickness:</b>	-
<b>Production Gate Pass (PGP):</b>	Not Listed
<b>Article No(s):</b>	FS-711 (Functional)
<b>Reference:</b>	Not Listed
<b>Quantity Submitted:</b>	06 Pairs
<b>Country of Destination:</b>	Europe
<b>Customer:</b>	Not Listed
<b>End Use:</b>	Gloves
<b>Submitted Fiber Content:</b>	Not Listed
<b>Test Requested:</b>	EN: 388, EN: 420, ANSI/ISEA 105-11
<b>Submitted Care Instruction:</b>	Not Listed

### PHOTO OF THE SUBMITTED SAMPLE



### FIRST TESTING LAB AUTHORIZED SIGNATORIES

  
Test Conducted by

  
Test Checked by

  
Approved by

**Please Contact:**

For any Technical Issues: Mr. Rehan Qamar  
 Tel: +92 52 3252201 – 05  
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 Email: [lab@nizamsons.com](mailto:lab@nizamsons.com) , [lab@libermann.com](mailto:lab@libermann.com)

**SUMMARY OF TEST RESULTS**

TEST PROPERTY	Standard Method	Results	Comments
ABRASION RESISTANCE	BS: EN: 388	Level-2	
BLADE CUT RESISTANCE	BS: EN: 388	Level-1	
TEAR RESISTANCE	BS: EN: 388	Level-2	
PUNCTURE RESISTANCE	BS: EN: 388	Level-1	
DEXTERITY	BS: EN: 420	Level-5	
Sizing	BS: EN: 420	Pass	
BLADE CUT RESISTANCE	ANSI/ISEA 105-11	Level-1	
PUNCTURE RESISTANCE	ANSI/ISEA 105-11	Level-2	
ABRASION RESISTANCE	ANSI/ISEA 105-11	Level-3	

Parameter	According to EN:388: 2016	Test Requirement	Test Results	Remarks												
Abrasion Resistance (Cycles)  Tested – Palm Portion <b>Used abradant:</b> Klingspor PL 31 B	Clause 6.1	<table border="1"> <thead> <tr> <th>Level of Performance</th> <th>Number of Cycles</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>100</td> </tr> <tr> <td>2</td> <td>500</td> </tr> <tr> <td>3</td> <td>2000</td> </tr> <tr> <td>4</td> <td>8000</td> </tr> </tbody> </table>	Level of Performance	Number of Cycles	1	100	2	500	3	2000	4	8000	1900 Cycles	Compiles with Level -2		
Level of Performance	Number of Cycles															
1	100															
2	500															
3	2000															
4	8000															
Blade Cut Resistance ( <i>i</i> )  <i>Tested</i> – All Layers Together. <i>Blade Thickness</i> – 0.3 mm <i>Angle of Blade</i> – 24°	Clause 6.2	<table border="1"> <thead> <tr> <th>Level of Performance</th> <th>Index (<i>i</i>)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1.2</td> </tr> <tr> <td>2</td> <td>2.5</td> </tr> <tr> <td>3</td> <td>5.0</td> </tr> <tr> <td>4</td> <td>10.0</td> </tr> <tr> <td>5</td> <td>20.0</td> </tr> </tbody> </table>	Level of Performance	Index ( <i>i</i> )	1	1.2	2	2.5	3	5.0	4	10.0	5	20.0	Average 1 – 1.3 Average 2 – 1.3	Level-1
Level of Performance	Index ( <i>i</i> )															
1	1.2															
2	2.5															
3	5.0															
4	10.0															
5	20.0															
Tear Resistance (Newton)  <b>Tested</b> – All Layers Together.	Clause 6.4	<table border="1"> <thead> <tr> <th>Level of Performance</th> <th>Strength (N)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>10</td> </tr> <tr> <td>2</td> <td>25</td> </tr> <tr> <td>3</td> <td>50</td> </tr> <tr> <td>4</td> <td>75</td> </tr> </tbody> </table>	Level of Performance	Strength (N)	1	10	2	25	3	50	4	75	26.99 Newton	Level-2		
Level of Performance	Strength (N)															
1	10															
2	25															
3	50															
4	75															
Puncture Resistance (Newton)  <b>Tested</b> – All Layers Together	Clause 6.5	<table border="1"> <thead> <tr> <th>Level of Performance</th> <th>Strength (N)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>20</td> </tr> <tr> <td>2</td> <td>60</td> </tr> <tr> <td>3</td> <td>100</td> </tr> <tr> <td>4</td> <td>150</td> </tr> </tbody> </table>	Level of Performance	Strength (N)	1	20	2	60	3	100	4	150	32.35 Newton	Level-1		
Level of Performance	Strength (N)															
1	20															
2	60															
3	100															
4	150															

The specified performance levels only valid for the palm area.

Parameter	According to EN: 420:2003	Test Requirement	Test Results	Remarks													
Sizing in millimeters (mm)	Clause 5.1	<b>Size</b>	<b>Lab Analysis</b>	PASS													
		Submitted Size: Small, Medium, Large, X-Large, XX-Large, XXX-Large	<p><b>Small</b> Length of Glove-230 Hand Length- 175 Circumference- 190 Size 7</p> <p><b>Medium</b> Length of Glove-240 Hand Length- 185 Circumference- 215 Size 8</p> <p><b>Large</b> Length of Glove-250 Hand Length- 200 Circumference- 225 Size 9</p> <p><b>X-Large</b> Length of Glove-260 Hand Length- 210 Circumference- 235 Size 10</p> <p><b>XX-Large</b> Length of Glove-270 Hand Length- 215 Circumference- 245 Size 11</p> <p><b>XXX-Large</b> Length of Glove-280 Hand Length- 225 Circumference- 255 Size 11</p>														
Dexterity in millimeters (mm)	Clause 5.2	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Level of Performance</th> <th style="text-align: center;">Diameter of Pins (mm)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">11</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">9.5</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">8</td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">6.5</td> </tr> <tr> <td style="text-align: center;">5</td> <td style="text-align: center;">5</td> </tr> </tbody> </table>		Level of Performance	Diameter of Pins (mm)	1	11	2	9.5	3	8	4	6.5	5	5	Pin – 5 mm	Level-5
		Level of Performance	Diameter of Pins (mm)														
1	11																
2	9.5																
3	8																
4	6.5																
5	5																

Parameter	According to ANSI/ISEA 105-11	Test Requirement		Test Results	Remarks																			
Blade Cut Resistance	Clause 1	<table border="1"> <thead> <tr> <th>Level of Performance</th> <th>Strength (grams)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>&lt; 200</td> </tr> <tr> <td>1</td> <td>≥ 200</td> </tr> <tr> <td>2</td> <td>≥ 500</td> </tr> <tr> <td>3</td> <td>≥ 1000</td> </tr> <tr> <td>4</td> <td>≥ 1500</td> </tr> <tr> <td>5</td> <td>≥ 3500</td> </tr> </tbody> </table>	Level of Performance	Strength (grams)	0	< 200	1	≥ 200	2	≥ 500	3	≥ 1000	4	≥ 1500	5	≥ 3500	> 200 grams	Level-1						
Level of Performance	Strength (grams)																							
0	< 200																							
1	≥ 200																							
2	≥ 500																							
3	≥ 1000																							
4	≥ 1500																							
5	≥ 3500																							
Puncture Resistance (Newton)  Tested – All Layers Together	Clause 2	<table border="1"> <thead> <tr> <th>Level of Performance</th> <th>Strength (Newton)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>&lt; 10</td> </tr> <tr> <td>1</td> <td>≥ 10</td> </tr> <tr> <td>2</td> <td>≥ 20</td> </tr> <tr> <td>3</td> <td>≥ 60</td> </tr> <tr> <td>4</td> <td>≥ 100</td> </tr> <tr> <td>5</td> <td>≥ 150</td> </tr> </tbody> </table>	Level of Performance	Strength (Newton)	0	< 10	1	≥ 10	2	≥ 20	3	≥ 60	4	≥ 100	5	≥ 150	32.35 Newton	Level-2						
Level of Performance	Strength (Newton)																							
0	< 10																							
1	≥ 10																							
2	≥ 20																							
3	≥ 60																							
4	≥ 100																							
5	≥ 150																							
Abrasion Resistance (Cycles)  Tested – Material of Palm  Used Abrasive wheel: H-18	Clause 3	<table border="1"> <thead> <tr> <th>Level of Performance</th> <th>Number of Cycles</th> </tr> </thead> <tbody> <tr> <td colspan="2">With 500 grams Weight</td> </tr> <tr> <td>0</td> <td>&lt; 100</td> </tr> <tr> <td>1</td> <td>≥ 100</td> </tr> <tr> <td>2</td> <td>≥ 500</td> </tr> <tr> <td>3</td> <td>≥ 1000</td> </tr> <tr> <td colspan="2">With 1000 grams Weight</td> </tr> <tr> <td>4</td> <td>≥ 3000</td> </tr> <tr> <td>5</td> <td>≥ 10000</td> </tr> <tr> <td>6</td> <td>≥ 20000</td> </tr> </tbody> </table>	Level of Performance	Number of Cycles	With 500 grams Weight		0	< 100	1	≥ 100	2	≥ 500	3	≥ 1000	With 1000 grams Weight		4	≥ 3000	5	≥ 10000	6	≥ 20000	1150 Cycles	Compiles with Level-3
Level of Performance	Number of Cycles																							
With 500 grams Weight																								
0	< 100																							
1	≥ 100																							
2	≥ 500																							
3	≥ 1000																							
With 1000 grams Weight																								
4	≥ 3000																							
5	≥ 10000																							
6	≥ 20000																							

The above specified result valid for glove model.

“End of Report”