

TEST REPORT

COMPANY NAME:

ADDRESS

EMAIL:

ATTN:

TEL:

FAX:

MECDEX

LIBERMANN International
P.O Box-1166 Harrar, Wazirabad
Road, Sialkot-51310, Pakistan

ali.anwar@libermann.com

Ali Anwar

+92 52 3252201-up to 5

+92 52 3252208

Report No.:

TRF No.:

Date In:

Date Out:

No. Of Working Days:

Pretest for Buyer

Temperature & Humidity:

FTL-1260/110823

FTL-1260/110823

11-08-23

18-08-23

07 Days

Not Listed

23°C ± 2 53 ± 5%

Sample Description:	Arc Flex Gloves
Color(s):	Tan Brown
Lab Id Color(S):	Tan Brown
P.O. No(s):	Not Listed
Article No(s):	GA-818
Season:	Not Listed
Quantity Submitted:	10 Pairs
Country of Origin:	Pakistan
Country of Destination:	Europe
Dept:	Not Listed
End Use:	Not Listed

Submitted Fiber Content:	Not Listed
Multi Layers	Goatskin Leather + Thinsulate + A4 Cut Fabric
Test Requested:	EN 388:2016+A1:2018, EN ISO 21420:2020, ANSI Cut, EN 511:2006, EN 407:2020 & Arc Flash testing.
Submitted Care Instruction:	Not Listed
Suggested Care Instruction:	Not Listed

PHOTO OF THE SUBMITTED SAMPLE



EN 388:2016+A1:2018



3 X 2 3 D

EN511:2006



2 2 X

EN 407:2020



4 1 3 2 4 X

3



FIRST TESTING LAB
AUTHORIZED SIGNATORIES


Test Conducted by


Test Checked by


Approved By

SUMMARY OF TEST RESULTS

TEST PROPERTY	Standard Method	Results	Comments
ABRASION RESISTANCE	EN 388:2016+A1:2018	Level-3	
BLADE CUT RESISTANCE	EN 388:2016+A1:2018	Level-X	
TDM CUT RESISTANCE	EN 388:2016+A1:2018	Level-D	
TEAR RESISTANCE	EN 388:2016+A1:2018	Level-2	
PUNCTURE RESISTANCE	EN 388:2016+A1:2018	Level-3	
ANSI CUT RESISTANCE	ANSI/ISEA105-2016 (ASTM F2992)	Level-A4	
SIZING	EN ISO 21420:2020	Pass	
DEXTERITY	EN ISO 21420:2020	Level-4	
CONVECTIVE COLD RESISTANCE	EN 511: 2006	Level-2	
CONTACT COLD RESISTANCE	EN 511: 2006	Level-2	
BURNING BEHAVIOUR	EN 407:2020	Level-4	
CONTACT HEAT	EN 407:2020	Level-1	
CONVECTIVE HEAT	EN 407:2020	Level-3	
RADIANT HEAT	EN 407:2020	Level-2	
SMALL SPLASHES OF MOLTEN METAL	EN 407:2020	Level-4	
ARC Flash	See actual results.		

Test Results:

Parameter	Test Requirement EN 388:2016+A1:2018		Test Results	Remarks												
6.1 Abrasion Resistance (Cycles) Tested – Palm Portion Used abradant: Klingspor PL 31 B	<table><tr><th>Level of Performance</th><th>Number of Cycles</th></tr><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></table>		Level of Performance	Number of Cycles	1	100	2	500	3	2000	4	8000	>500 & <2000 Cycles	Compiles with Level - 3		
Level of Performance	Number of Cycles															
1	100															
2	500															
3	2000															
4	8000															
6.2 Blade Cut Resistance (i) Tested – Palm <i>Blade Thickness – 0.3 mm</i> <i>Angle of Blade – 24°</i>	<table><tr><th>Level of Performance</th><th>Index (i)</th></tr><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></table>		Level of Performance	Index (i)	1	> 1.2	2	≥ 2.5	3	≥ 5.0	4	≥ 10.0	5	≥ 20.0		
Level of Performance	Index (i)															
1	> 1.2															
2	≥ 2.5															
3	≥ 5.0															
4	≥ 10.0															
5	≥ 20.0															
6.3 TDM Cut Resistance <i>EN ISO 13997: 2016</i> Tested – Palm <i>Type of Blade (Straight)</i>	<table><tr><th>Level of Performance</th><th>Cut Load N</th></tr><tr><td>A</td><td>> 2 Newtons</td></tr><tr><td>B</td><td>≥ 5 Newtons</td></tr><tr><td>C</td><td>≥ 10 Newtons</td></tr><tr><td>D</td><td>≥ 15 Newtons</td></tr><tr><td>E</td><td>≥ 22 Newtons</td></tr><tr><td>F</td><td>≥ 30 Newtons</td></tr></table>		Level of Performance	Cut Load N	A	> 2 Newtons	B	≥ 5 Newtons	C	≥ 10 Newtons	D	≥ 15 Newtons	E	≥ 22 Newtons	F	≥ 30 Newtons
Level of Performance	Cut Load N															
A	> 2 Newtons															
B	≥ 5 Newtons															
C	≥ 10 Newtons															
D	≥ 15 Newtons															
E	≥ 22 Newtons															
F	≥ 30 Newtons															
6.4 Tear Resistance (Newton) Tested – All Layers	<table><tr><th>Level of Performance</th><th>Strength (N)</th></tr><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></table>		Level of Performance	Strength (N)	1	10	2	25	3	50	4	75				
Level of Performance	Strength (N)															
1	10															
2	25															
3	50															
4	75															
6.5 Puncture Resistance (Newton) Tested – Palm All Layers Together	<table><tr><th>Level of Performance</th><th>Strength (N)</th></tr><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></table>		Level of Performance	Strength (N)	1	20	2	60	3	100	4	150	>100 & <150 Newton	Level-3		
Level of Performance	Strength (N)															
1	20															
2	60															
3	100															
4	150															

The specified performance levels are valid for only the palm area of this glove.

Test Results

Parameter	Test Requirement ANSI/ISEA 105-2016		Test Results	Remarks
6.3 TDM Cut Resistance <i>EN ISO 13997: 2016</i> <i>Tested – Palm</i> <i>Type of Blade (Straight)</i>		Level of Performance Cut Load N	> 1500 & < 2200 Grams	Level-A4
		A1 > 200 Grams		
		A2 ≥ 500 Grams		
		A3 ≥ 1000Grams		
		A4 ≥ 1500 Grams		
		A5 ≥ 2200 Grams		
		A6 ≥ 3000 Grams		
		A7 ≥ 4000 Grams		
		A8 ≥ 5000 Grams		
		A9 ≥ 6000 Grams		

The specified performance levels are valid for only the palm area of this glove.

Test Results:

Parameter	Test Requirement EN ISO 21420:2020	Test Results	Remarks
5.1 Sizing	Size	Lab Analysis	PASS
	Submitted Size: Small, Medium, Large, X-Large, XX-Large, XXX-Large	➤ Hand Length: All gloves meet the requirements of standard method. ➤ Circumference: All gloves meet the requirements of standard method.	
5.2 Dexterity Pin sizes in millimeters (mm)	Level of Performance Diameter of Pins (mm)	Level-4	Pass

The above-specified results are valid for only this glove model.

Test Results:

Parameter	EN 511: 2006	Test Requirement	Test Results	Remarks
Convective Cold Resistance	Clause 1	Level of Performance Thermal Insulation I_{TR}	> 0.15 I _{TR} & < 0.22 I _{TR}	Level-2
		0 < 0.10		
		1 ≥ 0.10 <0.15		
		2 ≥ 0.15 <0.22		
		3 ≥ 0.22 <0.30		
		4 ≥ 0.30 I _{TR}		
Contact Cold Resistance	Clause 2	Level of Performance Thermal Resistance R(m²K/W)	> 0.50 & < 0.100 R(m²K/W)	Level-2
		0 < 0.25 R		
		1 ≥ 0.25 <0.50		
		2 ≥ 0.50 <0.100		
		3 ≥ 0.100 <0.150		
		4 ≥ 0.150 R		
Water Penetration	Clause 3	Level of Performance Water Penetration	-	Level-X
		0 Yes		
		1 No		

The above specified results are valid for only this glove model.

Test Results:

Parameter	Test Requirement of EN 407:2020			Test Results	Remarks
6.2 Limited Flame Spread EN 407:2020	Levels	After Flame Time	After Glow Time	≤ 5 Sec	Level-4
	1	≤ 20 Seconds	No Require		
	2	≤ 10 Seconds	≤ 120		
	3	≤ 3 Seconds	≤ 25		
	4	≤ 2 Seconds	≤ 5		
6.3 Contact Heat EN 407:2020	Levels	°C Contact Temperature	Threshold Time (S)	≥ 15 Sec @ 100 °C	Level-1
	1	100	≥ 15		
	2	250	≥ 15		
	3	350	≥ 15		
	4	500	≥ 15		
6.4 Convective Heat EN 407:2020	Performance Level		Heat Transfer Index (HTI)	>10 & <18 Second	Level-3
	1		≥ 4 Sec		
	2		≥ 7 Sec		
	3		≥ 10 Sec		
	4		≥ 18 Sec		
6.5 Radiant Heat EN 407:2020	Performance Level		Heat Transfer T ₂₄ (Sec)	>20 & <50 Second	Level-2
	1		≥ 7 Sec		
	2		≥ 20 Sec		
	3		≥ 50 Sec		
	4		≥ 95 Sec		
6.6 Small Splashes of Molten Metal EN 407:2020	Performance Level		Numbers of Droplets	>35 Drops	Level-4
	1		≥ 10 Drops		
	2		≥ 15 Drops		
	3		≥ 25 Drops		
	4		≥ 35 Drops		

The above-specified results are valid for only this glove model.

Test Results:

Parameter	Test Requirement of ASTM F2675/F2675M-22		ATPV	Remarks
Arc Flash Testing	Levels	ATPV (Arc Thermal Performance Value)	37 Cal/cm ²	Compiles with Level – 3
	0	4 Cal/cm ²		
	1	4 Cal/cm ²		
	2	8 Cal/cm ²		
	3	25 Cal/cm ²		
	4	40 Cal/cm ²		

The above-specified results are valid for only this glove model.

“End of Report”