



This MotoCAP safety rating applies to:

Brand: Macna Model: Darko

Type: Glove - Leather/Textile

Date purchased: 4 February 2019

Sizes tested: XL and 2XL

Test glove gender: Male and Female

Test glove gender: Male and Fe **Style:** All Purpose

RRP: \$59.95

Test Results Summary:

	Rating	Score
MotoCAP Protection Rating	*	1.0
Abrasion	1/10	0.46
Seam strength	1/10	4.4
Impact	3/10	6.3
Water resistance	N/A	N/A

This glove is fitted with impact protectors for the knuckles and palm areas. Mesh fabric on the tops of the fingers, thumb and wrist provide continuous airflow within the glove.

Gloves - Crash Impact Risk Zones

High risk of impact

High risk of abrasion

This diagram is a pictorial representation of the crash impact risk Zones.



High risk of abrasion

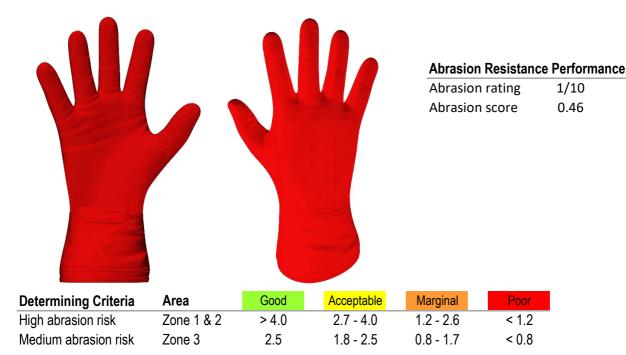
Macna Darko
Leather/Textile Glove

Medium risk of abrasion



Abrasion Resistance

The gloves were tested for abrasion resistance in accordance with MotoCAP test protocols. The diagram below is a visual indication of the likely abrasion performance of the materials in each Zone calculated from the data in the table below. The colour coding is based on the worst performing material in each zone.



Individual Abrasion Resistance Results: - The table below shows the test results for time to abrade through all layers of the materials. Calculated for each sample by Zone, type and area coverage of each material as a proportion of that Zone. Abrasion times are capped at a maximum of 10.00s.

Abrasion time for each test (seconds)

Zones 1	Coverage (%)	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Average	
Material A	50%	10.00	10.00	10.00	10.00	10.00	10.00	10.00	G
Material B	50%	0.87	0.02	0.44	0.44	0.64	0.60	0.50	Р
Zone 2	Coverage (%)	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Average _	
Material B	85%	0.87	0.02	0.44	0.44	0.64	0.60	0.50	Р
Material C	15%	0.06	0.01					0.04	Р
Zone 3	Coverage (%)	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Average	
Material B	50%	0.87	0.02	0.44	0.44	0.64	0.60	0.50	Р
Material C	50%	0.06	0.01					0.04	Р

Details of materials used in glove - derived from manufacturer provided information

Material A	Suede leather and foam patch over mesh fabric shel
Material B	Suede leather shell
Material C	Mesh fabric shell



Seam Tensile Strength

The tensile strength of the gloves seams and glove restraint (the force required to drag off a properly fastened glove) were tested in accordance with MotoCAP test protocols. The diagram below illustrates the tensile strength and wrist restraint results in terms of the likely performance of the glove in a crash and is a pictorial representation of the data from the tables below.



Seam Strength Performance

Seam strength rating	1/10
Seam strength score	4.4

Determining Criteria	Unit	Good	Acceptable	Marginal	Poor
Seam tensile strength	(N/mm)	> 11	9 - 11	6 - 8.9	< 6
Glove restraint	(N)	> 200	100 - 200	50 - 99	<50

Individual Seam Strength Results: - The table below shows the seam tensile strength in newtons per millimeter (N/mm) for each seam tested by Zone and the average result for each Zone.

Seam tensile strength (N/mm)

Area	1	2	3	4	5	Average
Zones 1 & 2	3.97	4.04	2.91	4.09	2.51	3.51 P
Zone 3	5.83	5.74	5.35	6.13	6.08	5.83 P

Individual Glove Restraint Results: - The table below shows the force required to remove the restrained glove in newtons (N) for each of the five gloves tested and the average result.

Glove restraint (N)

Glove	1	2	3	4	5	Average
Wrist restraint	365.5	117.2	344.0	218.1	227.0	254.4 G



Impact Protection

The glove was tested for impact protection and coverage In accordance with MotoCAP test protocols. The diagram below is a visual indication of the likely performance of each impact protector calculated from the data in the table below. The colour coding is based on the worst performing score for average or maximum force for each impact zone. Areas shaded black are not considered in the impact protection ratings.



^{*} Poor may also indicate that no impact protector is present in the glove

Impact Protector Results: - The table below shows the test results for each strike on each impact protector in kilonewtons (kN) and their area of coverage in percentage (%) within the Zone. Impact forces are capped at a maximum of 10.0kN.

Impact protector type	Knuckles	Palm	
Average force (kN)	4.9 A	2.9 A	
Maximum force (kN)	7.2 M	2.9 A	
Coverage of zone 1 area	70%	70%	

Individual test results: - The table below shows the test results for each strike on each impact protector in kilonewtons (kN) and the position of the strike. Impact forces are capped at a maximum of 10.0kN.

Impact protector type	Knuckles			Palm	
Strike number	1	2	3	1	2
Impact Protector 1	4.1	4.0		2.9	
Impact Protector 2	5.5	3.6		2.8	
Impact Protector 3	7.2	5.1		2.9	



Water spray and rain resistance

This glove has not been advertised as water resistant so has not been tested for water spray and rain resistance.

Assessment Details.

Brand Macna Model Darko

Type Glove - Leather/Textile
Date purchased 4 February 2019

Tested by AMCAF, Deakin University Report approved by MotoCAP Chief Scientist

Garment test reference G19L04
Rating first published June 2019
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