This MotoCAP safety rating applies to:

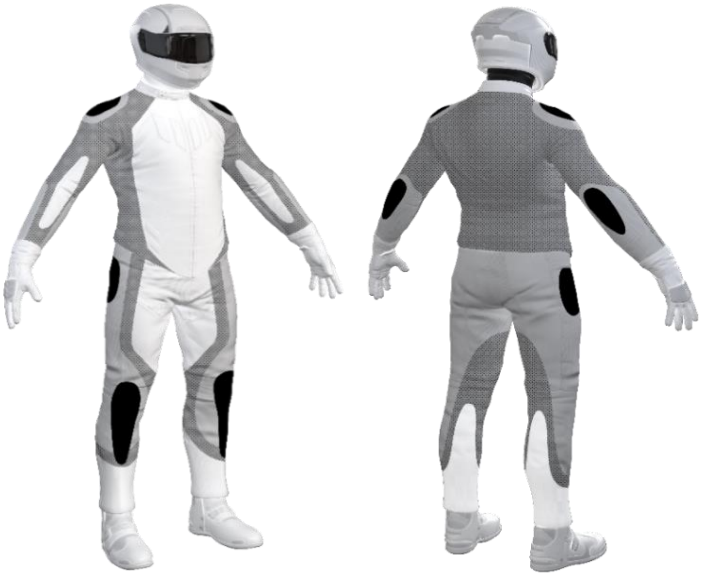
Brand	Bikers Gear
Model	Velocity WP
Type	Pants - Textile
Date purchased	30 August 2024
Sizes tested	36 and 38
Test garment gender	Male
Style	All Purpose
RRP	$179.00

Test Results Summary	Rating	Score
MotoCAP Protection Rating	★	16.6
Abrasion	1/10	0.64
Burst	10/10	1341
Impact	1/10	0.0
MotoCAP Breathability Rating	★	0.049
Moisture Vapour Resistance	-	362.6
Thermal Resistance	-	0.295
Water resistance	9/10	1.0

The foam pads present in hips and the foam protectors in the knee armour pockets were fillers and not tested as they were not considered impact protectors and would provide limited, if any, energy absorption. Adding knee and hip impact protectors would improve the protection levels of this garment. There are zipped vents in the upper legs to allow controlled airflow movement through the garment. The breathability rating is based on tests of the garment's materials when all vents are closed. The breathability of this product may be better when the vents are opened. Breathability was measured without the removable thermal liner installed.

Jacket and Pants - Crash Impact Risk Zones

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



Removable liners

Thermal liner	✓
Water-resistant liner	

Removable impact protection

	Pockets	Armour
Knee	✓	
Hip	✓	

Zone 1	Zone 2	Zone 3	Zone 4
High risk of abrasion High risk of impact	High risk of abrasion	Medium risk of abrasion	Low risk of abrasion

Abrasion Resistance

These pants 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.

Abrasion Resistance Performance	
Abrasion rating	1/10
Abrasion score	0.64

Determining Criteria	Area	Good	Acceptable	Marginal	Poor
High abrasion risk	Zones 1 & 2	> 5.6	3.0 - 5.6	1.3 - 2.9	< 1.3
Medium abrasion risk	Zone 3	> 2.5	1.8 - 2.5	0.8 - 1.7	< 0.8
Low abrasion risk	Zone 4	>1.5	1.0 - 1.5	0.4 - 0.9	< 0.4

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 & 2	Coverage (%)	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	**Average**	
Material A	70%	0.80	0.88	2.20	2.01	2.30	1.11	1.55	M
Material B	30%	0.87	0.34	0.36	0.57	0.61	0.44	0.53	P
Zone 3	Coverage (%)	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	**Average**	
Material B	100%	0.87	0.34	0.36	0.57	0.61	0.44	0.53	P
Zone 4	Coverage (%)	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	**Average**	
Material B	100%	0.87	0.34	0.36	0.57	0.61	0.44	0.53	M

Details of materials used in pant

Material A	Double woven fabric shell, water-resistant layer and fabric inner liner
Material B	Woven fabric shell, water-resistant layer and fabric inner liner

Burst Strength

These pants were tested for burst strength in accordance with MotoCAP test protocols. The diagram below illustrates the burst strength results in terms of the likely performance of the garment in an impact and is a pictorial representation of the data from the table below.

Burst Strength Performance	
Burst rating	10/10
Burst score	1341

Determining Criteria	Unit	Good	Acceptable	Marginal	Poor
Burst strength	(kPa)	> 1000	800 - 1000	500 - 799	< 500

Individual Burst Strength Results: - The table below shows the burst pressure in kilopascals (kPA) for each sample tested by Zone and the average result for each zone.

Burst pressure for each seam (kPA)

Area	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Average	
Zones 1 & 2	1241	1605	1230	1068	1448	1515	1351	G
Zones 3 & 4	1586	1444	1140	1011	1376	1236	1299	G

Impact Protection

These pants were not tested for impact protection as impact protectors were not provided with the garment. 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 for impact protection ratings.

Impact Protection Performance	
Impact rating	1/10
Impact score	0.0

Determining Criteria	Unit	Good	Acceptable	Marginal	Poor*
Impact force	(kN)	< 15	15 - 24	25 - 30	> 30

* Poor may also indicate that no impact protector, or impact protector pocket is present in the garment

Impact Protector Results: - The table below shows the average and maximum force transmitted through each impact protector type in kilonewtons (kN) and their area of coverage as a proportion (%) of the Zone.

Impact protector type	Knee		Hip	
Average force (kN)		P		P
Maximum force (kN)		P		P
Coverage of Zone 1 area	0%		0%	
Coverage of Zone after displacement	0%		0%	

Individual Impact Protector Results: - The table below shows the test results for each strike on individual impact protectors in kilonewtons (kN) and the position of the strike. Individual strike results are capped at a maximum of 50kN.

Force transfer for each impact strike (kN)

Impact protector type	Knee	No impact protector present		Hip	No impact protector present	
Strike location	Centre	Mid	Edge	Centre	Mid	Edge
Impact Protector 1						
Impact Protector 2						
Impact Protector 3						

Breathability

These pants were tested for breathability following the MotoCAP test protocols. The table below shows the moisture vapour resistance and the thermal resistance values obtained.

Without removable liners		With water-resistant liner	
Breathability rating	4	Breathability rating	N/A
Breathability score	0.049	Breathability score	N/A

Moisture Vapour Resistance - R_{et} (kPa.m^2/W)	1	2	Average
Without removable liners	350.3	374.9	362.6
With water-resistant liner	N/A	N/A	N/A

Thermal Resistance - R_{ct} (K.m^2/W)	1	2	Average
Without removable liners	0.285	0.306	0.295
With water-resistant liner	N/A	N/A	N/A

Water spray and rain resistance

These pants are advertised as water-resistant, and so have been tested for water spray and rain resistance according to the MotoCAP test protocols. The table below shows the water absorbed (ml) and the wetting proportion (%) of the garment and undergarments due to water absorption.

	Water absorbed by garment		Water absorbed by underwear		
	Volume (ml)	Percentage (%)	Volume (ml)	Percentage (%)	**Water Resistance Performance**
Pants 1	250	19%	5	2%	
Pants 2	283	22%	1	0%	Water rating 9/10
Average	266	20%	3	1%	Water score 1.04

Location of wetting

Minor wetting to the cotton underwear was present at the buttocks area for one pair of pants and no visible wetting on the other pair of pants tested.

Assessment Details.

Brand	Bikers Gear
Model	Velocity WP
Type	Pants - Textile
Date purchased	30 August 2024
Tested by	AMCAF, Deakin University
Report approved by	MotoCAP Chief Scientist
Garment test reference	P25T03
Rating first published	February 2025
Rating updated	10 February 2025