


**This MotoCAP safety rating applies to:**

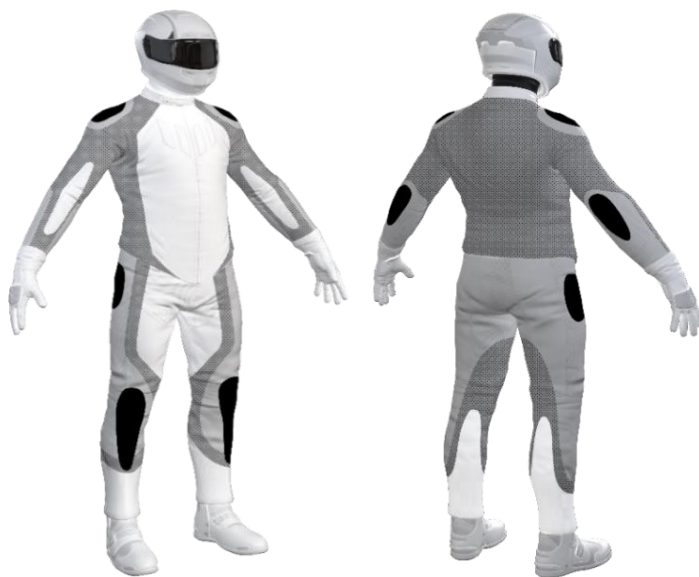
Brand	Alpinestars
Model	GP plus R V4 Rideknit
Type	Leather Jacket
Date purchased	8 May 2024
Sizes tested	54 and 58
Test garment gender	Male
Style	Sports
RRP	\$899.99


Test Results Summary	Rating	Score
MotoCAP Protection Rating	★★★★	60.2
Abrasion	8/10	5.77
Burst	10/10	1521
Impact	7/10	53.9
MotoCAP Breathability Rating	↘	0.153
Moisture Vapour Resistance	-	100.1
Thermal Resistance	-	0.255
Water resistance	N/A	N/A


This garment is fitted with impact protectors for the elbows and shoulders. A pocket is provided for an aftermarket back protector. Replacing the shoulder armour with higher performing impact protectors would improve the protection levels of this garment. Mesh panels are located in the arms and back to allow airflow movement through the garment. Perforated leather is located in the chest to allow further airflow movement through the garment.


**Jacket and Pants - Crash Impact Risk Zones**


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



**Zone 1**  
  
 High risk of abrasion  
 High risk of impact

**Zone 2**  
  
 High risk of abrasion

**Zone 3**  
  
 Medium risk of abrasion

**Zone 4**  
  
 Low risk of abrasion

**Removable liners**

Thermal liner  
 Water-resistant liner


**Removable impact protection**

	Pockets	Armour
Elbow	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Shoulder	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Back	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Abrasion Resistance

The jacket was 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	8/10
Abrasion score	5.77

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	35%	10.00	10.00	10.00	10.00	10.00	10.00	10.00	G
Material B	65%	5.35	5.41	4.31	6.28	5.43	3.90	5.11	A
Zone 3	Coverage (%)	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Average	
Material B	70%	5.35	5.41	4.31	6.28	5.43	3.90	5.11	G
Material C	30%	1.50	1.30	1.44	1.23	1.23	1.47	1.36	M
Zone 4	Coverage (%)	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Average	
Material D	90%	4.39	4.62	4.20	4.54	4.67	6.61	4.84	G
Material E	10%	1.26	1.06	0.80	1.58	0.99	2.72	1.40	A

### Details of materials used in jacket

Material A	Hard-shell armour over leather shell
Material B	Leather shell with mesh inner liner
Material C	Coated woven fabric shell with mesh inner liner
Material D	Perforated leather shell with mesh inner liner
Material E	Thick mesh fabric shell with mesh inner liner

## Burst Strength

The jacket was 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	1521

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	1805	1895	845	1922	1877	1791	1689	G
Zones 3 & 4	1119	744	437	599	1361	836	849	A

## Impact Protection

The jacket 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 for impact protection ratings.



### Impact Protection Performance

Impact rating	7/10
Impact score	53.9

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	Elbow	Shoulder
Average force (kN)	10.0 <span style="background-color: #90EE90; border: 1px solid black; padding: 2px;">G</span>	22.1 <span style="background-color: #FFFF00; border: 1px solid black; padding: 2px;">A</span>
Maximum force (kN)	13.3 <span style="background-color: #90EE90; border: 1px solid black; padding: 2px;">G</span>	25.8 <span style="background-color: #FFA500; border: 1px solid black; padding: 2px;">M</span>
Coverage of Zone 1 area	150%	100%
Coverage of Zone after displacement	100%	100%

**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	Elbow			Shoulder		
Strike location	Centre	Mid	Edge	Centre	Mid	Edge
Impact Protector 1	9.1	9.1	10.2	19.6	21.6	22.3
Impact Protector 2	8.8	12.1	13.3	20.2	21.6	25.8
Impact Protector 3	8.3	9.3	10.2	20.5	22.8	24.6

### Breathability

The jacket was 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	✱	Breathability rating	N/A
Breathability score	0.153	Breathability score	N/A

Moisture Vapour Resistance - $R_{et}$ (kPa.m <sup>2</sup> /W)	1	2	Average
Without removable liners	103.6	96.6	100.1
With water-resistant liner	N/A	N/A	N/A

Thermal Resistance - $R_{ct}$ (K.m <sup>2</sup> /W)	1	2	Average
Without removable liners	0.247	0.263	0.255
With water-resistant liner	N/A	N/A	N/A

### Water spray and rain resistance

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

#### Assessment Details.

Brand	Alpinestars
Model	GP plus R V4 Rideknit
Type	Leather Jacket
Date purchased	8 May 2024
Tested by	AMCAF, Deakin University
Report approved by	MotoCAP Chief Scientist
Garment test reference	J24L19
Rating first published	June 2024
Rating updated	1 November 2024