


**This MotoCAP safety rating applies to:**

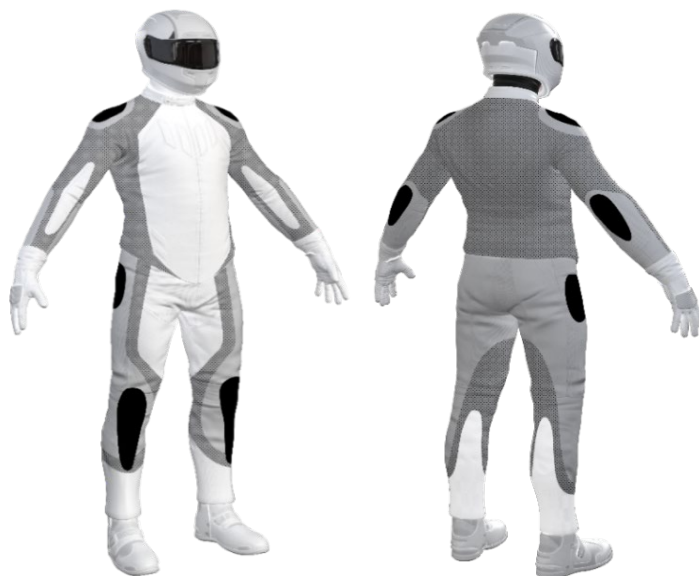
Brand	RST
Model	Adventure-X Pro
Type	Pants - Textile
Date purchased	19 October 2021
Sizes tested	XL and 2XL
Test garment gender	Male
Style	Tourer
RRP	\$399.95

Test Results Summary	Rating	Score
MotoCAP Protection Rating	★	15.3
Abrasion	1/10	0.78
Burst	10/10	1144
Impact	1/10	0.0
MotoCAP Breathability Rating	★★	0.406
Moisture Vapour Resistance	-	33.8
Thermal Resistance	-	0.229
Water resistance	8/10	2.7

This garment is fitted with impact protectors for the knees. Pockets are provided at the hips for fitting aftermarket impact protectors. Adding hip impact protectors would improve the protection levels of this garment. There are zipped vents in the upper and lower 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 can be opened. This garment has a removable water-resistant liner. The breathability rating above was achieved with the water-resistant liner removed. When tested with the water-resistant liner installed, the breathability rating remained the same at 2 stars.

**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

Knee

☒
☒

Hip

☒
☐

## 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	0.78

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	40%	1.01	1.10	1.01	0.89	0.98	1.25	1.04	P
Material B	60%	0.86	0.50	1.38	0.80	0.69	0.58	0.80	P
Zone 3	Coverage (%)	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Average	
Material A	60%	1.01	1.10	1.01	0.89	0.98	1.25	1.04	M
Material B	40%	0.86	0.50	1.38	0.80	0.69	0.58	0.80	M
Zone 4	Coverage (%)	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Average	
Material A	50%	1.01	1.10	1.01	0.89	0.98	1.25	1.04	A
Material B	50%	0.86	0.50	1.38	0.80	0.69	0.58	0.80	M

### Details of materials used in jacket

Material A	Coarse woven fabric shell with mesh inner liner
Material B	Woven fabric shell with mesh 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	1144

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	1405	865	959	1930	971	891	1170	G
Zones 3 & 4	1097	1552	1455	613	540	976	1039	G

## Impact Protection

These pants were 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	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)	11.1	G		P
Maximum force (kN)	15.2	A		P
Coverage of Zone 1 area	120%		0%	
Coverage of Zone after displacement	80%		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			Hip	No impact protector present
Strike location	Centre	Mid	Edge		
Impact Protector 1	9.8	11.8	15.2		
Impact Protector 2	9.9	9.7	10.0		
Impact Protector 3	10.5	10.9	11.9		

## 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

Breathability rating	★★
Breathability score	0.406

### With water-resistant liner

Breathability rating	★★★
Breathability score	0.424

Moisture Vapour Resistance - $R_{et}$ (kPa.m <sup>2</sup> /W)	1	2	Average
Without removable liners	33.8	33.9	33.8
With water-resistant liner	45.4	39.1	42.2
Thermal Resistance - $R_{ct}$ (K.m <sup>2</sup> /W)	1	2	Average
Without removable liners	0.228	0.230	0.229
With water-resistant liner	0.292	0.305	0.298

## Water spray and rain resistance

This pants are advertised as water-resistant, and so has 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 (%)
Pants 1	625	33%	11	4%
Pants 2	817	42%	4	2%
<b>Average</b>	<b>721</b>	<b>37%</b>	<b>7</b>	<b>3%</b>

## Location of wetting

There was no visible wetting to the cotton underwear for either pants tested.

### Assessment Details.

Brand	RST
Model	Adventure-X Pro
Type	Pants - Textile
Date purchased	19 October 2021
Tested by	AMCAF, Deakin University
Garment test reference	P20T14
Rating first published	January 2022
Rating updated	11 January 2022