


This MotoCAP safety rating applies to:

Brand: Merlin
Model: Trenton
Type: Jacket - Textile
Date purchased: 4 February 2019
Sizes tested: XL
Gender: M
Style: All Purpose
Test code: J19T02

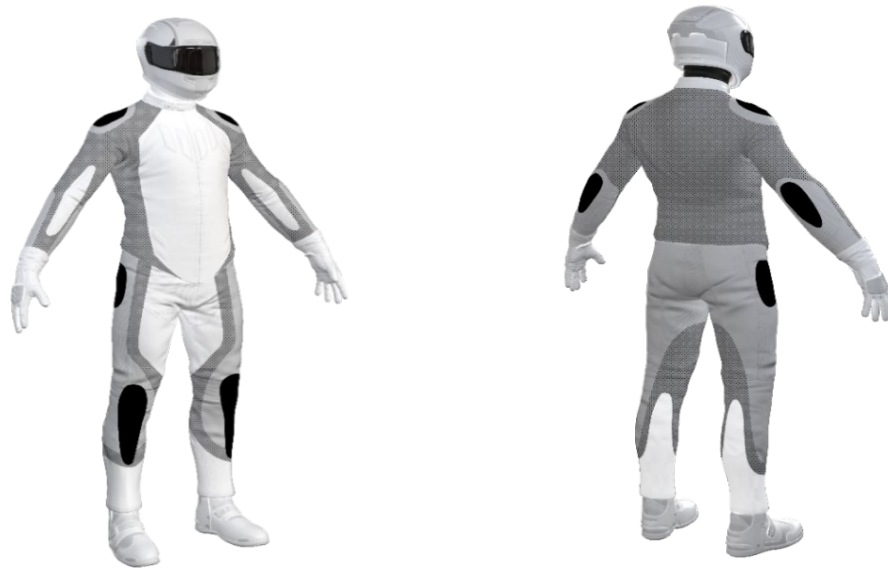
Test Results Summary:


	Rating	Score
MotoCAP Protection Rating	★★	32.1
Abrasion	1/10	1.24
Burst	10/10	1424
Impact	5/10	38.9
MotoCAP Comfort Rating	★★	0.349
Moisture Vapour Resistance		34.6
Thermal Resistance		0.201
Water resistance	N/A	N/A


This garment is fitted with impact protectors for the elbows and shoulders. A pocket is provided at the back for an aftermarket impact protector. Vents are located in the arm pits to allow airflow cooling in hot weather. The thermal comfort rating is based on tests of the breathability of the garment when all vents are closed. The thermal comfort of this product may be better when the vents can be opened.


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

Abrasion Resistance

The garment was tested for abrasion resistance in accordance with MotoCAP test protocols. 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.

Details of materials used in garment:

Material A:	Denim shell, knitted aramid layer, mesh layer and cushioned impact protector pocket
Material B:	Denim shell and mesh inner liner
Material C:	Denim shell, knitted aramid layer and mesh inner liner

Zone	Coverage (%)	Abrasion time for each test (seconds)						Average (seconds)	
		1	2	3	4	5	6		
Zone 1 and 2 areas (High abrasion risk)									
Material A	70%	6.63	6.98	10.06	3.19	0.00	0.00	6.71	G
Material B	30%	0.57	0.32	0.60	0.63	0.41	0.52	0.51	P
Zone 3 area (Medium abrasion risk)									
Material B	70%	0.57	0.32	0.60	0.63	0.41	0.52	0.51	P
Material C	30%	1.40	1.26	1.61	1.69	1.25	1.73	1.49	M
Zone 4 area (Low abrasion risk)									
Material B	100%	0.57	0.32	0.60	0.63	0.41	0.52	0.51	M

Abrasion times are capped at a maximum of 10.00s.

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 above. The colour coding is based on the worst performing material in each zone.



Determining Criteria		Good	Acceptable	Marginal	Poor
High abrasion risk	Zone 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

Burst Strength

The garment's burst strength was tested in accordance with MotoCAP test protocols. 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 (kPa)

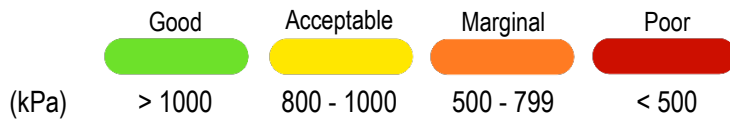
Area	1	2	3	4	5	Average	
Zones 1 & 2	1933	1933	1831	1904	1933	1907	G
Zone EZ	1079	650	1178	835	898	928	A
Zones 3 & 4	1356	1520	1294	1511	1576	1451	G

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 above.



Determining Criteria

Burst strength



Impact Protection

The garment was tested for impact protection and coverage in accordance with MotoCAP test protocols. The table below shows the test results for each strike on each impact protector in kilonewtons (kN) and their area of coverage as a proportion (%) of the Zone.

Impact protector type	Elbow		Shoulder	
Average force (kN)	20.3	A	20.3	A
Maximum force (kN)	21.3	A	21.3	A
Coverage of zone 1 area	85%		120%	
Coverage of zone after displacement	50%		100%	

Individual test results

Impact force (kN)	Elbow			Shoulder		
	A	B	C	A	B	C
Impact Protector 1	18.8	20.4	21.3	18.8	20.4	21.3
Impact Protector 2	19.2	20.9	20.0	19.2	20.9	20.0
Impact Protector 3	20.9	20.0	21.0	20.9	20.0	21.0

The diagram below is a visual indication of the likely performance of each impact protector calculated from the data in the table above. The colour coding is based on the worst performing score for average or maximum force for each impact zone.



Determining Criteria	Impact force (kN)			
	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

Areas shaded black are not considered in the impact protection ratings.

Thermal comfort

The garment was tested for thermal comfort following the MotoCAP test protocols. The table below shows the moisture vapour resistance and the thermal resistance values obtained.

	1	2	Average
Moisture Vapour Resistance - R_{et} (kPam ² /W)	34.2	35.0	34.6
	1	2	Average
Thermal Resistance - R_{ct} (Km ² /W)	0.191	0.212	0.201

Water spray and rain resistance

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