


**This MotoCAP safety rating applies to:**

<b>Brand:</b>	Dainese
<b>Model:</b>	Air Frame D1
<b>Type:</b>	Jacket - Textile
<b>Date purchased:</b>	16 November 2019
<b>Sizes tested:</b>	42 and 46
<b>Gender:</b>	F
<b>Style:</b>	All Purpose
<b>Test code:</b>	J19T34

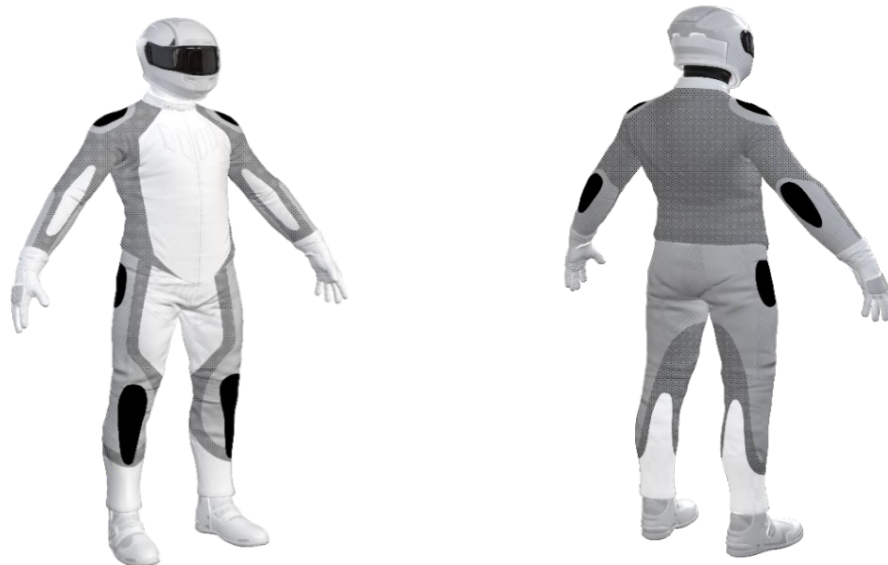
**Test Results Summary:**

	Rating	Score
MotoCAP Protection Rating	↘	10.6
Abrasion	1/10	0.35
Burst	8/10	834
Impact	1/10	1.8
MotoCAP Comfort Rating	★★★	0.470
Moisture Vapour Resistance		23.4
Thermal Resistance		0.183
Water resistance	1/10	35

This garment is fitted with impact protectors for the elbows and shoulders. A pocket is provided for an aftermarket back protector. Mesh panels are located in the arms, chest and back to allow airflow movement through the garment. This garment has a removable water-resistant liner. The comfort rating above was achieved with the liner removed. When tested with the liner installed, the comfort rating reduced but remained within the 3 star range.

**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: Woven fabric shell with mesh inner liner  
 Material B: Mesh fabric shell with mesh inner liner

Zone	Coverage (%)	Abrasion time for each test (seconds)						Average (seconds)	
		1	2	3	4	5	6		
<b>Zone 1 and 2 areas (High abrasion risk)</b>									
Material A	90%	0.53	0.42	0.66	0.48	0.37	0.49	0.49	P
Material B	10%	0.31	0.17	0.24	0.22	0.16	0.27	0.23	P
<b>Zone 3 area (Medium abrasion risk)</b>									
Material A	10%	0.53	0.42	0.66	0.48	0.37	0.49	0.49	P
Material B	90%	0.31	0.17	0.24	0.22	0.16	0.27	0.23	P
<b>Zone 4 area (Low abrasion risk)</b>									
Material A	10%	0.53	0.42	0.66	0.48	0.37	0.49	0.49	M
Material B	90%	0.31	0.17	0.24	0.22	0.16	0.27	0.23	P

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	706	630	1017	1058	1114	905	A
Zone EZ	818	1113	735	662	839	834	A
Zones 3 & 4	915	562	701	660	625	693	M

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.



### 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)	36.9	<span style="background-color: red; color: white; padding: 2px;">P</span>	25.4	<span style="background-color: yellow; padding: 2px;">M</span>
Maximum force (kN)	52.1	<span style="background-color: red; color: white; padding: 2px;">P</span>	35.7	<span style="background-color: red; color: white; padding: 2px;">P</span>
Coverage of zone 1 area	115%		85%	
Coverage of zone after displacement	100%		100%	

### Individual test results

Impact force (kN)	Elbow			Shoulder		
	A	B	C	A	B	C
Impact Protector 1	19.8	39.3	41.1	18.4	20.1	32.7
Impact Protector 2	22.4	41.3	52.1	16.2	31.7	35.7
Impact Protector 3	20.7	52.1	43.4	18.2	24.0	31.6

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*
	< 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 <sup>2</sup> /W)	21.3	25.5	23.4
	1	2	Average
Thermal Resistance - $R_{ct}$ (Km <sup>2</sup> /W)	0.170	0.196	0.183

### Water spray and rain resistance

This garment is 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 (%)
Jacket 1	348	38%	78	28%
Jacket 2	241	28%	116	42%
<b>Average</b>	294	33%	97	35%

### Location of wetting:

Visible wetting to the cotton underwear was present at the neck of both garments tested.