**This MotoCAP safety rating applies to:**

| | |
|---|---|
| **Brand:** | Rukka |
| **Model:** | Airium 2.0 |
| **Type:** | Glove - Textile |
| **Date purchased:** | 19 December 2024 |
| **Sizes tested:** | 11, 12 and 13 |
| **Test glove gender:** | Male |
| **Style:** | All Purpose |
| **RRP:** | $150.00 |

**Test Results Summary:**

| | Rating | Score |
|---|---|---|
| MotoCAP Protection Rating | ★★ | 2.1 |
| Abrasion | 2/10 | 1.25 |
| Seam strength | 1/10 | 4.0 |
| Impact | 7/10 | 13.0 |
| Water resistance | N/A | N/A |

This glove is fitted with impact protectors for the knuckles and palm areas. Mesh fabric on the back of the fingers and hand provides continuous airflow within the glove. This glove has poor seam strength in the high risk areas of the palm and fingers.

## Gloves - Crash Impact Risk Zones

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

**Impact protection**

| | |
|---|---|
| Knuckles | ✓ |
| Palm | ✓ |

| Zone 1 | Zone 2 | Zone 3 |
|---|---|---|
| High risk of impact<br>High risk of abrasion | High risk of abrasion | Medium risk of abrasion |

## Abrasion Resistance

The gloves 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 | 2/10 |
| Abrasion score | 1.25 |

| Determining Criteria | Area | Good | Acceptable | Marginal | Poor |
|---|---|---|---|---|---|
| High abrasion risk | Zone 1 & 2 | > 4.0 | 2.7 - 4.0 | 1.2 - 2.6 | < 1.2 |
| Medium abrasion risk | Zone 3 | 2.5 | 1.8 - 2.5 | 0.8 - 1.7 | < 0.8 |

**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 | Coverage (%) | Sample 1 | Sample 2 | Sample 3 | Sample 4 | Sample 5 | Sample 6 | Average | |
|---|---|---|---|---|---|---|---|---|---|
| Material A | 40% | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | G |
| Material C | 60% | 1.03 | 0.63 | 0.95 | 1.07 | 1.30 | | 1.00 | P |
| **Zone 2** | Coverage (%) | Sample 1 | Sample 2 | Sample 3 | Sample 4 | Sample 5 | Sample 6 | **Average** | |
| Material B | 5% | 3.22 | 3.79 | 3.01 | 2.93 | 2.08 | 2.39 | 2.90 | A |
| Material C | 95% | 1.03 | 0.63 | 0.95 | 1.07 | 1.30 | | 1.00 | P |
| **Zone 3** | Coverage (%) | Sample 1 | Sample 2 | Sample 3 | Sample 4 | Sample 5 | Sample 6 | **Average** | |
| Material B | 30% | 3.22 | 3.79 | 3.01 | 2.93 | 2.08 | 2.39 | 2.90 | G |
| Material D | 70% | 1.03 | 0.63 | 0.96 | 1.07 | 1.30 | | 1.00 | M |

**Details of materials used in glove - derived from manufacturer provided information**

| | |
|---|---|
| Material A | Stretch fabric shell over hard-shell armour |
| Material B | Faux suede leather patch over faux suede leather shell with fabric inner liner |
| Material C | Faux suede leather shell with fabric inner liner |

## Seam Tensile Strength

The tensile strength of the glove's seams and glove restraint (the force required to drag off a properly fastened glove) were tested in accordance with MotoCAP test protocols. The diagram below illustrates the tensile strength and wrist restraint results in terms of the likely performance of the glove in a crash and is a pictorial representation of the data from the tables below.

| Seam Strength Performance | |
|---|---|
| Seam strength rating | 1/10 |
| Seam strength score | 4.0 |

| Determining Criteria | Unit | Good | Acceptable | Marginal | Poor |
|---|---|---|---|---|---|
| Seam tensile strength | (N/mm) | > 11 | 9 - 11 | 6 - 8.9 | < 6 |
| Glove restraint | (N) | > 200 | 100 - 200 | 50 - 99 | <50 |

**Individual Seam Strength Results:** - The table below shows the seam tensile strength in newtons per millimeter (N/mm) for each seam tested by Zone and the average result for each Zone.

Seam tensile strength (N/mm)

| Area | 1 | 2 | 3 | 4 | 5 | Average | |
|---|---|---|---|---|---|---|---|
| Zones 1 & 2 | 5.58 | 5.30 | 5.28 | 5.45 | 5.04 | 5.33 | P |
| Zone 3 | 12.26 | 4.88 | 13.18 | 5.95 | 12.62 | 9.78 | A |

**Individual Glove Restraint Results:** - The table below shows the force required to remove the restrained glove in newtons (N) for each of the five gloves tested and the average result.

Glove restraint (N)

| Glove | 1 | 2 | 3 | 4 | 5 | Average | |
|---|---|---|---|---|---|---|---|
| Wrist restraint | 145.7 | 124.2 | 175.5 | 53.4 | 60.7 | 111.9 | A |

## Impact Protection

The glove 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 in the impact protection ratings.

| Impact Protection Performance | |
|---|---|
| Impact rating | 7/10 |
| Impact score | 13.0 |

| Determining Criteria | Unit | Good | Acceptable | Marginal | Poor |
|---|---|---|---|---|---|
| Impact force | (kN) | < 2 | 2 - 4.9 | 5 - 8 | > 8 |

* Poor may also indicate that no impact protector is present in the glove

**Impact Protector Results: -** The table below shows the test results for each strike on each impact protector in kilonewtons (kN) and their area of coverage in percentage (%) within the Zone. Impact forces are capped at a maximum of 10.0kN.

| Impact protector type | Knuckles | | Palm | |
|---|---|---|---|---|
| Average force (kN) | 1.2 | G | 3.0 | A |
| Maximum force (kN) | 1.6 | G | 4.0 | A |
| Coverage of zone 1 area | 120% | | 70% | |

**Individual test results:** - The table below shows the test results for each strike on each impact protector in kilonewtons (kN) and the position of the strike. Impact forces are capped at a maximum of 10.0kN.

| Impact protector type | Knuckles | | | Palm | |
|---|---|---|---|---|---|
| Strike number | 1 | 2 | 3 | 1 | 2 |
| Impact Protector 1 | 1.2 | 0.9 | 1.6 | 2.0 | 2.9 |
| Impact Protector 2 | 1.4 | 1.2 | 0.9 | 3.2 | 4.0 |
| Impact Protector 3 | 1.1 | 1.3 | 1.5 | 3.3 | 2.6 |

**Water spray and rain resistance**

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

## Assessment Details.

| | |
|---|---|
| Brand | Rukka |
| Model | Airium 2.0 |
| Type | Glove - Textile |
| Date purchased | 19 December 2024 |
| Tested by | AMCAF, Deakin University |
| Report approved by | MotoCAP Chief Scientist |
| Garment test reference | G25T04 |
| Rating first published | April 2025 |
| Rating updated | 30 April 2025 |