

1° Istituto Italiano di ricerca, collaudo, test e certificazione di calzature, abbigliamento
dispositivi di protezione individuale per il lavoro, lo sport, e l'outdoor

The 1st Italian testing and research center for footwear, clothing,
Personal Protective Equipment and Outdoor Sports Equipment

1. Italienisches Prüf- und Forschungsinstitut für Schuhe, Bekleidung,
Persönliche Schutzausrüstung und Outdoor Sportausrüstung

AS+IM

Firm: **KTM MOTORCYCLE AG**
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For the attention of: Gabriele De Bettio

TEST REPORT

RAPPORTO DI PROVA

PRÜFBERICHT

N. **362003.01/E**

date: 09/11/2017

Sampling: done by the Applicant

Samples received on: 21/09/2017

Test period: 28/09-16/10/2017

ORGANISMO NOTIFICATO N. 0498

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Prova eseguita da laboratorio partner qualificato.

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Test carried out by qualified partner lab.

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Kommentare und Erklärungen sind subjektiver Natur und nicht Teil des Prüfbericht.

Test durchgeführt von qualifiziertem Partner-Labor.

SAMPLES: A jacket art. "**APEX Jacket**" size L and pants art. "**APEX Pant**" size L for motorcycle riders.

The garment is declared class A and washable.

See the complete description on the next page.

REQUEST: Laboratory tests in accordance with prEN 17092-4 (version 2017/02) after 5 washing cycles (EN ISO 6330:2012) procedure 3G, drying procedure A and EN ISO 13688:2013 for the aim of the EC Certification (Directive 89/686/EEC).

NOTE: This document cancels and replaces the previous Test Report issued on 16/10/2017.

OUTCOME:  **PASS**

Description:

article: "APEX Jacket"

external side:

- black fabric declared 91% Nylon and 9% Polyurethane (4707 W2L) **(1)**;
- orange fabric declared 91% Nylon and 9% Polyurethane (4707 W2L) **(2)** in the area around the shoulder;
- anthracite grey fabric declared 92% Nylon and 8% Spandex (1930 LAMI 10000/10000MM) **(3)** in the sleeve and back area of the hips;
- double layer of black fabric declared 100% Nylon (4121 W2L) **(4)** in both shoulder and elbow areas;
- black fabric declared neoprene 100% Polyester **(5)** in the neck area;

internal side:

- black perforated fabric declared 100% Polyester (POLY 11 : 1 MESH) **(6)**;
- black textile **(7)** in the back protector area, along both main fastening system and bottom area;
- orange fabric declared 100% Nylon (CH-1068 FABRIC) **(8)** in the central area of the hook & loop fastener of the back protector;
- black fabric declared 100% Polyester (210T TAFFTA P/D) **(9)** in both shoulder and elbow protectors;
- black stretch fabric declared 82% Nylon and 18% Spandex (NYLON LYCRA) **(10)** in the bottom area with a zipper provided with a metallic slider in direct contact with the user **(20)** for joining the jacket to the pants;
- black fleece fabric **(11)** in the neck area with a snap metallic button in direct contact with the user **(21)**;

removable lining:

- black textile declared 95% Nylon and 5% Spandex (FY 16237 3L WR C6 PU10.11+R/P FLE ECE) **(12)**.
- The removable lining is joint to the main jacket by means of a zipper with a metallic slider in direct contact with the user **(22)**;

main fastening:

- zipper with a metallic slider;

sleeve and wrist closure:

- a zipper with a metallic slider and inner wristband made of the same fabric **(9)**;

external pockets: two pockets in the hip area externally made of fabric **(1)** and internally made of material **(9)** with a zipper with a metallic slider as fastening system;

internal pockets:

- two pockets: one externally made of fabric **(7)** and internally made of fabric **(9)** and another one externally made of fabric **(6)**.

Both pockets have a zipper with metallic slider in direct contact with the user **(23)**;

protectors pocket:

- both shoulder and elbow protectors are inserted in pockets externally made of textile **(9)** and internally made of fabric **(6)** with a hook & loop fastener as opening/closing system;
- the back protector is inserted in a pocket externally made of fabric **(7)** and internally made of material **(6)** with a hook & loop fastener as opening/closing system;

vents:

- black perforated fabric declared 100% Polyester (POLY C-008 MESH) **(13)** in the chest area and in both sides of the back, with a linear opening and closing system by means of a zipper.

protectors inserted in the garment:

- shoulder protector art. "SCL-2" (SAS-TEC);
- elbow protector art. "SCL-1" (SAS-TEC);
- back protector art. "SCL-L19" (SAS-TEC).

article: "APEX Pant"

external side:

- black fabric declared 91% Nylon and 9% Polyurethane (4707 W2L) **(1)**;
- anthracite gray perforated fabric declared 92% Nylon and 8% Spandex (1930 LAMI 10000/10000MM) **(3)** in the inner side of the thigh and onto the knee;
- double layer of black fabric declared 100% Nylon (4121 W2L) **(4)** in the knee, bottom and calf areas;

internal side:

- black perforated fabric declared 100% Polyester (POLY 11 : 1 MESH) **(6)**;
- black fabric declared 100% Polyester (210T TAFFTA P/D) **(9)** in the area of both hip and knee protectors;

removable lining:

- made of the same fabric **(9)** internally matched with wadding.
- The removable lining is joint to the main jacket by means of a zipper with a metallic slider in direct contact with the user **(24)**;

main fastening:

- a zipper with a metallic slider, metallic snap button in direct contact with the user **(25)** and a metallic hook in contact with the user's body **(26)**;

leg and ankle closure:

- a zipper with a metallic slider and inner side of the calf made of the same fabric **(9)**;

external pockets: two pockets in the hip area externally made of the same fabric **(1)** and internally made of fabric **(9)** with a zipper with a metallic slider as fastening;

protectors pocket:

- both knee and hip protectors are inserted in pockets externally made of fabric **(9)** and internally made of fabric **(6)** with a hook & loop fastener as opening/closing system;

protectors inserted in the garment:

- knee protector art. "SCL-1" (SAS-TEC);
- hip protector art. "SC-1/77" (SAS-TEC).

The combinations for the impact abrasion tests:

- A) 1+6 (zone 1-2-3);
- B) 1+6+7 (zone 2-3);
- C) 2+6 (zone 2-3);
- D) 3+6 (zone 2-3);
- E) 4+4+6 (zone 1-2-3);
- F) 4+4+6+9 (zone 1-2-3);
- G) 13+6 (zone 3) - (vents).

The seams externally identified in the garment ("SSS") are the followings ("/" means " stitched"):

- a) 1//1 (zone 1-2-3) Flat-seam, single stitching- with covered safety stitching;
- b) 1//3 (zone 2-3) Flat-seam, single stitching- with covered safety stitching;
- c) 1//4 (zone 1-2-3) Flat-seam, single stitching- with covered safety stitching;
- d) 1//4 (zone 1-2-3) Flat-seam, double stitching- with covered safety stitching;
- e) 2//3 (zone 2-3) Flat-seam, single stitching- with covered safety stitching;
- f) 2//4 (zone 1-2-3) Flat-seam, single stitching- with covered safety stitching;
- g) 3//3 (zone 2-3) Flat-seam, single stitching- with covered safety stitching;
- h) 3//3 (zone 2-3) Flat-seam, double stitching- with covered safety stitching;
- i) 4//4 (zone 2-3) Flat-seam, double stitching- with covered safety stitching;
- l) 4//4 (zone 3) Inside-seam, single stitching (covered).

The seams identified in the protector pocket material are the followings ("/" means " stitched"):

- m) 7//6 (protector pocket material);
- n) 9//6 (protector pocket material).

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| References | Tests | Measuring unit | Requirements | Results |
|---|--|--------------------------|---|------------------------------|
| prEN 17092 (version 2017/02) | Protective garments for motorcycle riders | | | |
| - | Class of protection - declared - verified | - | AAA, AA, A, B or C AAA, AA, A, B or C | A A |
| 4.1.1 (EN ISO 13688:2013 p. 4.2) | Innocuousness | - | Materials shall not adversely affect the health or hygiene of the user, materials shall not release substances generally know to be toxic, carcinogenic, mutagenic, allergenic, toxic to reproduction or otherwise harmful. | Pass |
| | | | | Materials: 20+21+22 23+24 |
| (4.2/b) EN 1811:2011 /AC:2012, EC 1:2012, EC 2:2013# | Nickel release (materials which come into prolonged contact with the skin) | µg/cm ² -week | < 0,5 | < 0,1 < 0,1 |
| | | | | Materials: 25+26 |
| (4.2/b) EN 1811:2011 /AC:2012, EC 1:2012, EC 2:2013# | Nickel release (materials which come into prolonged contact with the skin) | µg/cm ² -week | < 0,5 | < 0,1 |
| | | | | Materials: 1 2 3 4 |
| (4.2/c) ISO 4045:2008 ISO 3071:2005 | pH - leather - other materials | - - | > 3,5 and < 9,5 | - - - - 5,9 6,0 5,9 6,1 |
| | | | | Materials: 5 6 7 8 |
| (4.2/c) ISO 4045:2008 ISO 3071:2005 | pH - leather - other materials | - - | > 3,5 and < 9,5 | - - - - 6,3 6,1 6,3 5,5 |
| | | | | Materials: 9 10 11 |

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|---|---|----------------|------------------------|----------------------------------|-----|
| (4.2/d) EN 14362-1:2012# textile UNI EN ISO 17234-1:2011# leather | Azo colorants content: | mg/kg | absent (< 30 mg/kg) | | |
| | 1. 4-aminobiphenyl | | | < 5 | < 5 |
| | 2. Benzidine | | | < 5 | < 5 |
| | 3. 4-chloro-o-toluidine | | | < 5 | < 5 |
| | 4. 2-naphtylamine | | | < 5 | < 5 |
| | 5. 4-chloroaniline | | | < 5 | < 5 |
| | 6. 2,4-diaminoanisole | | | < 5 | < 5 |
| | 7. 4,4'-diaminodiphenylmethane | | | < 5 | < 5 |
| | 8. 3,3'-dichloro benzidine | | | < 5 | < 5 |
| | 9. 3,3'-dimethoxy benzidine | | | < 5 | < 5 |
| | 10. 3,3'-dimethyl benzidine | | | < 5 | < 5 |
| | 11. 4,4'-methylenedi-o-toluidine | | | < 5 | < 5 |
| | 12. p-cresidine | | | < 5 | < 5 |
| | 13. 4,4'-mehylene-bis-(2-chloroaniline) | | | < 5 | < 5 |
| | 14. 4,4'-oxydianiline | | | < 5 | < 5 |
| | 15. 4,4'-thiodianiline | | | < 5 | < 5 |
| | 16. o-toluidine | | | < 5 | < 5 |
| | 17. 2,4-toluenediamine | | | < 5 | < 5 |
| | 18. 2,4,5-trimethylaniline | | | < 5 | < 5 |
| | 19. o-aminoazotoluene | | | < 5 | < 5 |
| | 20. 5-nitro-o-toluidine | | | < 5 | < 5 |
| | 21. 4-aminoazobenzene | | | < 5 | < 5 |
| | 22. o-anisidine | | | < 5 | < 5 |
| | 23. 2,4 xylidine | | | < 5 | < 5 |
| 24. 2,6 xylidine | < 5 | < 5 | | | |
| | | | | Materials: 9+10+11 12+13 | |

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|---|---|----------------|---|--|------|------|------|-----|-----|-----|--|
| (4.2/d) EN 14362-1:2012# textile UNI EN ISO 17234-1:2011# leather | Azo colorants content: | mg/kg | absent (< 30 mg/kg) | <table style="width:100%; border:none;"> <tr> <td style="width:25%;"></td> <td style="width:25%; text-align:center">< 5</td> <td style="width:25%; text-align:center">< 5</td> <td style="width:25%;"></td> </tr> </table> | | | | | < 5 | < 5 | |
| | | | | | | | | < 5 | < 5 | | |
| | 1. 4-aminobiphenyl | | | | | | | | | | |
| | 2. Benzidine | | | | | | | | | | |
| | 3. 4-chloro-o-toluidine | | | | | | | | | | |
| | 4. 2-naphtylamine | | | | | | | | | | |
| | 5. 4-chloroaniline | | | | | | | | | | |
| | 6. 2,4-diaminoanisole | | | | | | | | | | |
| | 7. 4,4'-diaminodiphenylmethane | | | | | | | | | | |
| | 8. 3-3'-dichloro benzidine | | | | | | | | | | |
| | 9. 3,3'-dimethoxy benzidine | | | | | | | | | | |
| | 10. 3,3'-dimethyl benzidine | | | | | | | | | | |
| | 11. 4,4'-methylenedi-o-toluidine | | | | | | | | | | |
| | 12. p-cresidine | | | | | | | | | | |
| | 13. 4,4'-mehylene-bis-(2-chloroaniline) | | | | | | | | | | |
| | 14. 4,4'-oxydianiline | | | | | | | | | | |
| | 15. 4,4'-thiodianiline | | | | | | | | | | |
| | 16. o-toluidine | | | | | | | | | | |
| | 17. 2,4-toluenediamine | | | | | | | | | | |
| | 18. 2,4,5-trimethylaniline | | | | | | | | | | |
| | 19. o-aminoazotoluene | | | | | | | | | | |
| | 20. 5-nitro-o-toluidine | | | | | | | | | | |
| | 21. 4-aminoazobenzene | | | | | | | | | | |
| | 22. o-anisidine | | | | | | | | | | |
| 23. 2,4 xylydine | | | | | | | | | | | |
| 24. 2,6 xylydine | | | | | | | | | | | |
| 4.1.2 | Dimensional stability of garments | | | | | | | | | | |
| (EN ISO 13688:2013 p. 5.3) | Dimensional changing due to cleaning | | (5 washing cycles at 30 °C/ dry cleaning) | 5 washing cycles procedure 3G, drying procedure A | | | | | | | |
| | | | | Materials: | | | | | | | |
| | | | | 1 | 2 | 3 | 4 | | | | |
| (ISO 5077:2007 ISO 6330:2012) | Domestic washing | % | woven materials: ≥-3 and ≤+3 | -0,5 | -0,5 | -1,0 | 0 | | | | |
| | - length | | | -0,5 | -0,5 | -1,0 | -0,5 | | | | |
| | - width | | | | | | | | | | |
| | - length | % | knitted material and nonwovens: ≥-5 - ≤+5 | - | - | - | - | | | | |
| | - width | | | - | - | - | - | | | | |
| | | | | Materials: | | | | | | | |
| | | | | 5 | 6 | 7 | 8 | | | | |

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|----------------------------------|---|----------------|---|---|
| (ISO 5077:2007 ISO 6330:2012) | Domestic washing - length - width | % | woven materials: ≥-3 and ≤+3 | -1,0 - -1,0 -0,5 -1,0 - -1,0 0 |
| | - length - width | % | knitted material and nonwovens: ≥-5 - ≤+5 | - -1,5 - - - -2,0 - - |
| | | | | Materials: 9 10 11 |
| (ISO 5077:2007 ISO 6330:2012) | Domestic washing - length - width | % | woven materials: ≥-3 and ≤+3 | -1,5 -1,5 -2,0 -1,0 -1,5 -1,5 |
| | - length - width | % | knitted material and nonwovens: ≥-5 - ≤+5 | - - - - - - |
| | | | | Materials: 12 13 |
| (ISO 5077:2007 ISO 6330:2012) | Domestic washing - length - width | % | woven materials: ≥-3 and ≤+3 | -1,0 -2,5 -1,0 -2,0 |
| | - length - width | % | knitted material and nonwovens: ≥-5 - ≤+5 | - - - - |
| - | After cleaning washing marking shall be legible | - | pass | Pass |
| 4.2 (table 2) | Impact energy absorption | - | Impact protection shall be present in the garment according to table 2 | Pass |
| | Suit/Jackets: | | | |
| | - Elbow (mandatory) | - | pass | Pass |
| | - Shoulder (mandatory) | - | pass | Pass |
| | - Chest (optional) | - | pass | - |
| | - Back (optional) | - | pass | - |
| | - Lumbar (optional) | - | pass | - |
| | Suits/Trousers: | | | |
| | - Knee or knee leg (mandatory) | - | pass | Pass |
| | - Hip (mandatory for Class AAA and AA, optional only Class A, B and C garments) | - | pass | Pass |

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| References | Tests | Measuring unit | Requirements | Results |
|------------|---|----------------|--------------|---------|
| 4.2.1 | Impact protector location and fixation | | | |
| | Internal or external impact protectors present in or on garments shall be correctly aligned in or on the garment no matter which system is used to hold them in place | - | pass | Pass |
| | For garments, which have impact protector pockets for optional impact protectors, any optional protectors listed in the information notice for users, when installed, shall be correctly aligned in the garment | - | pass | Pass |
| | EN 1621-1, -2, -3, and -4, protectors must be aligned in the garment so that they cover the appropriate body part according to the relevant impact protector standard | - | pass | Pass |

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|------------------|--|----------------|--------------|---------|
| 4.2.1 (5.3.1) | Restrain of impact protectors: | | | |
| | a) A visual and tactile check is performed to confirm that the pockets or restraint systems for any unincorporated internal or external impact protectors are in the correct location in the garment to position the impact protectors over the correct location on the body | - | pass | Pass |
| | b) A visual and tactile check is performed to confirm that any incorporated impact protectors are in the correct location in the garment over the correct location on the body | - | pass | Pass |
| | c) A visual and tactile checking of the restraint of any protectors in pockets is performed to confirm that the pockets are not too big as to allow excessive movement of the protectors | - | pass | Pass |
| | d) A visual and tactile check is performed to confirm that any protectors restrained by other means cannot move excessively | - | pass | Pass |
| 4.4 | Structurally strong seams - SSS in the SSL, which are exposed on the exterior of the garment in Zone 1 and 2 shall have at least one line of the stitching protected by an SSL material | - | pass | Pass |
| | - Overlays and abrasion reinforcements sewn onto the main body material for the purposes of mitigating abrasion shall be required to have two rows of stitching attaching them to the main body material but are not required to have at least one line of stitching protected | - | pass | Pass |

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|---|--|----------------|----------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| | | | | Seams: | | | |
| | | | | a | b | c | d |
| 4.4.1 Table 4 (EN 13594:2015 p. 6.7 Annex B) | Seam strength: - zone 1 - zone 2 - zone 3 - protector pocket material (if present) | N/mm | ≥ 6,0 ≥ 6,0 ≥ 4,0 ≥ 4,0 | 16,6 16,6 16,6 - | - 14,2 14,2 - | 15,4 15,4 15,4 - | 21,9 21,9 21,9 - |
| | | | | Seams: | | | |
| | | | | e | f | g | h |
| 4.4.1 Table 4 (EN 13594:2015 p. 6.7 Annex B) | Seam strength: - zone 1 - zone 2 - zone 3 - protector pocket material (if present) | N/mm | ≥ 6,0 ≥ 6,0 ≥ 4,0 ≥ 4,0 | - 10,6 10,6 - | 13,9 13,9 13,9 - | 15,8 15,8 15,8 - | - 19,1 19,1 - |
| | | | | Seams: | | | |
| | | | | i | l | m | n |
| 4.4.1 Table 4 (EN 13594:2015 p. 6.7 Annex B) | Seam strength: - zone 1 - zone 2 - zone 3 - protector pocket material (if present) | N/mm | ≥ 6,0 ≥ 6,0 ≥ 4,0 ≥ 4,0 | - 19,5 19,5 - | - - 12,6 - | - - - 5,2 | - - - 7,4 |
| | <p>Note:</p> <ul style="list-style-type: none"> - for seams "a" "b" "c" "e" "f" "i" "l": breakage of the sewing thread; - for seam "d" : breakage of fabric (1); - for seams "g" "h": breakage of fabric (3); - for seam "m" : breakage of fabric (6); - for seam "n" : breakage of fabric (9). | | | | | | |

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| References | Tests | Measuring unit | Requirements | Results | | | |
|---|--|----------------|--------------|------------|------------|----------|-----------|
| | | | | Materials: | | | |
| | | | | 1 | 2 | 3 | 4 |
| 4.5 Table 5 (EN ISO 3377-1:2011 for leather or EN ISO 4674-1:2003 method B for other materials) | Tear strength | | | | | | |
| | - zone 1 direction a: direction b: | N | ≥ 35 | 103 136 | - - | - - | 90 144 |
| | - zone 2 direction a: direction b: | | ≥ 25 | 103 136 | 142 110 | 54 55 | 90 144 |
| | - zone 3 direction a: direction b: | | ≥ 25 | 103 136 | 142 110 | 54 55 | 90 144 |
| | - protector pocket material (if present) direction a: direction b: | | ≥ 10 | - - | - - | - - | - - |
| | | | | Materials: | | | |
| | | | | 7 | 9 | 13 | |
| 4.5 Table 5 (EN ISO 3377-1:2011 for leather or EN ISO 4674-1:2003 method B for other materials) | Tear strength | | | | | | |
| | - zone 1 direction a: direction b: | N | ≥ 35 | - - | - - | - - | - - |
| | - zone 2 direction a: direction b: | | ≥ 25 | - - | - - | - - | 33 41 |
| | - zone 3 direction a: direction b: | | ≥ 25 | - - | - - | - - | 33 41 |
| | - protector pocket material (if present) direction a: direction b: | | ≥ 10 | 12 21 | 19 18 | - - | - - |

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|--------------------|---|---------------------|--|--------------------------|
| 4.6 (5.3) | Restraint | | | |
| 4.6.1 (5.3.2.1) | <p>Two-piece suit requirements for joint between upper part and lower part</p> <p>Visually assess the garment and record whether any of the following has occurred:</p> <p>a) failure of the connecting fastening system between the upper part and lower part</p> <p>b) gaps in protection anywhere between the upper part and the lower part</p> <p>The fastening system shall not be exposed and must be protected by SSL material</p> | - - - | no no pass | No No Pass |
| 4.6.2 (5.3.2.2) | <p>Garment sleeve restraint</p> <p>In the case of loop restraints, the total extension of the loop shall be less than 240 mm</p> | - - | shall not be possible to extract the test cone pass | Pass - |
| 4.7 | <p>Additional garment construction requirements</p> <p>Garments shall meet the following requirements, according to their zones, which are determined according to the procedure described in clause 5.1</p> | - | pass | Pass |
| 4.7.2 | <p>Structural closures</p> <p>Structural closures shall not allow openings along their length during testing</p> | - | pass | Pass |

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| References | Tests | Measuring unit | Requirements | Results |
|---|---|----------------|-------------------------|--------------------------|
| | | | | Jacket: Main fastening |
| 4.4.1 Table 4 (EN 13594:2015 p. 6.7 Annex B) | Seam strength of the structural closures: - zone 1 - zone 2 - zone 3 | N/mm | ≥ 6,0 ≥ 6,0 ≥ 4,0 | - - 16,8 |
| | | | | Jacket: Sleeve closure |
| 4.4.1 Table 4 (EN 13594:2015 p. 6.7 Annex B) | Seam strength of the structural closures: - zone 1 - zone 2 - zone 3 | N/mm | ≥ 6,0 ≥ 6,0 ≥ 4,0 | - 13,3 13,3 |
| | | | | Jacket: External pockets |
| 4.4.1 Table 4 (EN 13594:2015 p. 6.7 Annex B) | Seam strength of the structural closures: - zone 1 - zone 2 - zone 3 | N/mm | ≥ 6,0 ≥ 6,0 ≥ 4,0 | - 12,2 12,2 |
| | | | | Pant: Main fastening |
| 4.4.1 Table 4 (EN 13594:2015 p. 6.7 Annex B) | Seam strength of the structural closures: - zone 1 - zone 2 - zone 3 | N/mm | ≥ 6,0 ≥ 6,0 ≥ 4,0 | - - 12,2 |
| | | | | Pant: Leg closure |
| 4.4.1 Table 4 (EN 13594:2015 p. 6.7 Annex B) | Seam strength of the structural closures: - zone 1 - zone 2 - zone 3 | N/mm | ≥ 6,0 ≥ 6,0 ≥ 4,0 | - 12,0 12,0 |
| | Note: for all fastening/closure: breakage of the sewing thread. | | | |

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|------------|--|----------------|--------------|---------|
| 4.7.2 | <p>Vents</p> <p>Vents in any zone, which are not covered by SSL material, must have material that fills the opening and meets the applicable zone requirements whether or not they are closed with structural closure, with the exception of vent openings in Zone 2 that are constructed as single linear openings, which can to expand no more than 4 cm or less, when measured at 90° to the line of the closure, which are permitted to have a material that fills the opening and meets only the requirements of Zone 3</p> | - | pass | Pass |
| 4.7.3 | <p>Pockets</p> <p>Pockets creating an opening in the SSL shall have SSL material inside which fills the exposed opening and extends along the interior of the pocket beyond the opening at least an additional 3 cm</p> | - | pass | Pass |

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| 4.7.4 Table 6 | <p>Zone materials intrusion</p> <p>The total area permitted for Zone 3 materials intrusion into Zone 2 shall be calculated according to table 6</p> <p>The total area of Zone 3 materials permitted to intrude into Zone 2 shall respect the following rules:</p> <ul style="list-style-type: none"> - The entire intrusion allowance according to Table 6 shall not be used in one location - No more than one half of the intrusion allowance may be used on either side of the medial line - The Zone 3 into Zone 2 intrusion area shall be adjacent and connected to Zone 3 (refer to Fig. 1) - Zone 3 material on the arm shall be aligned in such a way that it is on the inside of the arm only - The Zone 3 into Zone 2 intrusion area shall not be used to join two Zone 3 boundaries together across Zone 2 or to divide Zone 2 completely at any location | - | pass | Pass |
| 4.7.6 | <p>Use of open mesh materials</p> <p>Mesh materials that are woven or knitted with openings greater than 5mm² may not be used as the only layer of the SSL</p> | - | pass | Pass |

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| 4.8 (5.4) table 12 | Fit and ergonomics Hard sharp edges or sharp points shall not be present on the interior or exterior of garments. Metallic, ceramic, plastic or similar hard materials present as studs, staples, rivets, plates, or other structures, used to form part of the protective layer of the garment, shall not pose a hazard to the user | - | pass | Pass |
| 1 | <u>Pre-donning assessment</u> | | | |
| a | Do any metallic, ceramic, plastic or similar hard materials present as studs, staples, rivets, plates, or other structures, used to form part of the protective layer of the garment, pose a hazard to the user? | - | no | No |
| b | Does the construction of the garment protect the body from such structures when necessary? | - | yes | Yes |
| c | When such features do penetrate the protective layer, Are the inner surfaces of these features are flush to the protective layer? | - | yes | Yes |
| d | Is the clothing free from any rough, sharp or hard components, or other features that might cause irritation or that would make riding hazardous? | - | yes | Yes |
| 2 | Is the garment sized in accordance with the manufacturer's fit information and in accordance with the fit instructions supplied in the manufacturer's information notice for users, or according to EN ISO 13688 or is it made-to-measure? | - | yes | Yes |
| 3 | <u>Donning</u> | | | |
| a | Is It possible to put on the garment and to operate the fasteners and adjusters without impediment? | - | yes | Yes |
| b | Is it possible to don gloves and helmet while wearing the garment? | - | yes | Yes |

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| 4 | <u>Off-bike activities</u> Can the following be carried out without difficulty? | | | |
| a | Walking on the flat. | - | yes | Yes |
| b | Mounting and dismounting a motorcycle or a device that mimics one. | - | yes | Yes |
| 5 | <u>Riding actions and compatibility with other Items of PPE</u> Is it possible to perform the following without difficulty? | | | |
| a | Sit astride a motorcycle or device that mimics it, while adopting a riding position | - | yes | Yes |
| b | Make the body movements and position changes necessary to control the motorcycle | - | yes | Yes |
| c | While holding both handlebar grips, turn the head to look to the rear | - | yes | Yes |
| 6 | Are all impact protectors correctly positioned in such a way as to protect the appropriate body parts (refer to clause 5.3.1) whilst not preventing adequate movement of limbs or impeding the rider's effective control of the motorcycle? | - | yes | Yes |
| 7 | Is the garment free of unnecessary tightness, which restricts body movement or blood flow in such a way as to prevent effective operation of the motorcycle? | - | yes | Yes |
| 8 | Does the garment fit without creating dangerous interference with the helmet? | - | no | No |

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| EN ISO 13688:2013 | protective clothing - general requirements | | | |
| 4.2 | Innocuousness | | Materials shall not adversely affect the health or hygiene of the user, materials shall not release substances generally known to be toxic, carcinogenic, mutagenic, allergenic, toxic to reproduction or otherwise harmful. | Pass |
| 4.3 4.3.1- 4.3.2 - 4.3.3 | Design | | The design should facilitate its correct positioning on the user and should ensure that it remains in place during the course of work, ensuring that no parts of the body get uncovered by expected movements by the wearer. When two or more items are worn together, they should be compatible. | Pass |

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|---------------------------------|--|----------------|---|---|
| 4.4 4.4.1 – 4.4.2 Annex C | <p>Comfort Clothing:</p> <ul style="list-style-type: none"> - should provide a level of comfort consistent with the level of protection against hazard which is provided; - should not have rough, sharp or hard surfaces that irritate or injure the user; - should not be so tight, loose and/or heavy so that it restricts normal movements; - should not be so tight that blood flow and deep breathing are restricted; - allows the following movements: standing, sitting, walking, stair climbing, raising both hands above the head, bending over; - should not be so loose that it flaps about or moves independently and inconveniently; - should not be points at which unexpected and unintended gaps open up between or within components of the clothing; - should not cause any unreasonable restriction of movement at any joint; - putting on and removing other items of PPE should be possible without difficulty. | | <p>pass</p> <p>pass</p> <p>pass</p> <p>pass</p> <p>pass</p> <p>pass</p> <p>pass</p> <p>pass</p> | <p>Pass</p> <p>Pass</p> <p>Pass</p> <p>Pass</p> <p>Pass</p> <p>Pass</p> <p>Pass</p> <p>Pass</p> |

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|---------------------------------|---|---|-------------------------------------|---|
| 4.4 4.4.1 – 4.4.2 Annex C | <p>Comfort</p> <ul style="list-style-type: none"> - armholes, crotch and other elements of clothing design are appropriately proportioned and positioned; - the range of adjustment available is adequate; - arms and legs of the clothing should not be so long that they interfere with hand and foot movements. | | <p>pass</p> <p>pass</p> <p>pass</p> | <p>Pass</p> <p>Pass</p> <p>Pass</p> |
| | | | | Jacket |
| 6 ISO 3635:1981 | <p>Sizing</p> <p>Declared size</p> <p>Declared dimensions</p> <ul style="list-style-type: none"> - height - chest girth - waist girth <p>Measured dimensions</p> <ul style="list-style-type: none"> - height - chest girth - waist girth | <p>cm</p> <p>cm</p> <p>cm</p> <p>cm</p> <p>cm</p> <p>cm</p> | | <p>L</p> <p>175-185</p> <p>99-104</p> <p>-</p> <p>-</p> <p>-</p> <p>-</p> |
| | | | | Pant |
| 6 ISO 3635:1981 | <p>Sizing</p> <p>Declared size</p> <p>Declared dimensions</p> <ul style="list-style-type: none"> - height - chest girth - waist girth <p>Measured dimensions</p> <ul style="list-style-type: none"> - height - chest girth - waist girth | <p>cm</p> <p>cm</p> <p>cm</p> <p>cm</p> <p>cm</p> <p>cm</p> | | <p>L</p> <p>175-185</p> <p>-</p> <p>89-94</p> <p>-</p> <p>-</p> <p>-</p> |

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Impact abrasion resistance "Darmstadt" - prEN 17092-1:2017 § 5.2

| Sample | Speed (km/h) | Final results |
|---------------|-------------------------|----------------------|
| A | 45 | Pass |
| B | 25 | Pass * |
| C | 25 | Pass |
| D | 25 | Pass |
| E | 45 | Pass |
| F | 45 | Pass ** |
| G | n/a | n/a |

* Combinations which have the same outer layer of the combination A, material that got a positive result at 45 km/h;

** Combinations which have the same outer layer of the combination E, material that got a positive result at 45 km/h.

End of the test report.