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DP

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DC 17803

SAMPLING: done by the Applicant

TEST REPORTS: this document is based on Test Reports no.: 4327010/E, 4325100/E, 4329038/E and 4212016/E.

SAMPLES: Body armors for bike/downhill use, as follows:
- art. "**PROTECTOR SHIRT ZIP**", black color;
- art. "**PROTECTOR JACKET PRO**", black color.

See the complete description on the next page.

REQUEST: Laboratory tests in accordance with me-int 097, EN 1621-1:2012, EN 1621-2:2014 and EN 1621-3:2018 T+ for the aim of the Certification (Regulation (EU) 2016/425).

OUTCOME:  **PASS**

Notes:

All results refer exclusively to the tested materials as received.

Partial reproduction or publication not admitted without written authorization by RCT.

Positive results of a test report do not imply that the tested product is "certified" or "approved" by RCT.

Comments and interpretations are of subjective nature and not part of the Test Report.

Test carried out by qualified partner lab ISO 17025.

* Test not accredited by Accredia

Conformity assessment criterion: the result is considered compliant until the value falls within or coincides with the specification limit.

Unless otherwise indicated, the test conditions correspond to the reference standard.

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DESCRIPTION:

article: "PROTECTOR SHIRT ZIP", black color;

design: shirt.

external coating:

- caviar black 19-4006 lycra (JERSEY LYCRA YTC-C5466) **(1)**;

- caviar black 19-4006 stretch mesh (MESH YTC-5434) **(2)**.

internal coating (in contact with the body):

- caviar black 19-4006 lycra (JERSEY LYCRA YTC-C5466) **(1)**;

- caviar black 19-4006 stretch mesh (MESH YTC-5434) **(2)**;

- caviar black 19-4006 elastic with stone grey 4702TPX silicon print (ELS_01) **(5)**.

fastening system: by means of a lateral zipper.

BACK PROTECTOR:

external/internal coating: caviar black 19-4006 stretch mesh (MESH YTC-5434) **(2)**.

padding: black perforated polymeric material (LITESHIELD FLEX).

SHOULDER PROTECTOR:

external/internal coating: caviar black 19-4006 lycra (JERSEY LYCRA YTC-C5466) **(1)**;

padding: black perforated polymeric material (LITESHIELD FLEX LIMB - "LOCAL MATERIAL 75 SHORE (E7004N-75A-3)).

article: "PROTECTOR JACKET PRO", black color;

design: shirt.

external coating:

- caviar black 19-4006 lycra (JERSEY LYCRA YTC-C5466) **(1)**;

- caviar black 19-4006 stretch mesh (MESH YTC-5434) **(2)**;

- caviar black 19-4006 mesh (MESH SINGETX SK-1155) **(3)**.

internal coating (in contact with the body):

- caviar black 19-4006 lycra (JERSEY LYCRA YTC-C5466) **(1)**;

- caviar black 19-4006 stretch mesh (MESH YTC-5434) **(2)**;

- caviar black 19-4006 elastic with stone grey 4702TPX silicon print (ELS_01) **(5)**.

fastening system: by means of a lateral zipper and a caviar black 19-4006 waist band (JUMBO ELASTIC) **(4)**.

BACK PROTECTOR:

external coating: caviar black 19-4006 mesh (MESH SINGETX SK-1155) **(3)**.

internal coating: caviar black 19-4006 stretch mesh (MESH YTC-5434) **(2)**.

padding: black perforated polymeric material (LITESHIELD FLEX).

SHOULDER PROTECTOR:

external/internal coating: caviar black 19-4006 lycra (JERSEY LYCRA YTC-C5466) **(1)**;

padding: black perforated polymeric material (LITESHIELD FLEX LIMB - "LOCAL MATERIAL 75 SHORE (E7004N-75A-3)) with lateral polymeric loop for additional fastening.

CHEST PROTECTOR:

external coating:

- caviar black 19-4006 stretch mesh (MESH YTC-5434) **(2)**;

- caviar black 19-4006 mesh (MESH SINGETX SK-1155) **(3)**.

internal coating: caviar black 19-4006 stretch mesh (MESH YTC-5434) **(2)**.

mid-layer: anthracite perforated foam.

padding: black perforated polymeric material (LITESHIELD FLEX CHEST - "KRAIBURG MATERIAL 85 SHORE" (E8592B-2)).

Groups of materials tested for Azo-dyes content:

A) 1 + 2 + 3; B) 4 + 5.

Groups of materials tested for Phthalates content:

C) black perforated polymeric material (LITESHIELD FLEX LIMB/CHEST/BACK).



References	Tests	Measuring unit	Requirements	Results
Internal method Ricotest me-int 097-08*	Body armor - Assembly of protectors of the trunk and upper arms			
				art. "PROTECTOR SHIRT ZIP"
-	Sizing - commercial size - back: WS range - shoulder protectors - elbow protectors - chest protection	- cm - - -	- - Type A/Type B Type A/Type B Type A/Type B	S/M/L/XL 48-52 B - -
				art. "PROTECTOR JACKET PRO"
-	Sizing - commercial size - back: WS range - shoulder protectors - elbow protectors - chest protection	- cm - - -	- - Type A/Type B Type A/Type B Type A/Type B	S/M/L/XL 48-52 B - B
-	Back protector		Accordant with EN 1621-2	Pass
-	Shoulder protectors		Accordant with EN 1621-1	Pass
-	Elbow protectors		Accordant with EN 1621-1	-
-	Chest protection		Accordant with EN 1621-3	Pass
EN 13688:2013 +A1:2021 4.4 4.4.1 – 4.4.2 Annex C*	Comfort		pass	Pass
Analogue method EN 13595-1:2002 6 (annex A) Prospect A.1*	Fit and ergonomics		yes	Yes
-	Protector's positioning on the body Body protected area coverage		The area of the body declared to be protected is covered adequately by each protector	Pass



References	Tests	Measuring unit	Requirements	Results
Analogue method EN 14021:2003 4.5 (6.4)*	Tear strength of the fastening systems	-	All rigid attachments and straps, as well as fasteners and adjusters, shall be able to withstand a pulling force of 120 N without failure	Pass
EN 13688:2013 +A1:2021 4.2*	Innocuousness		Materials shall not adversely affect the health or hygiene of the user, they shall not release substances generally known to be toxic, carcinogenic, mutagenic, allergenic, toxic to reproduction or otherwise harmful.	Pass
4.2/c ISO 3071: 2020	pH - other materials extracting solution: KCl	-	> 3,5 and < 9,5	Material: 1 7,6 2 7,1 3 6,9 4 6,9 5 7,3
4.2 d ISO 14362-1:2017#* textile	Azo colorants content:	mg/kg	absent (< 30 mg/kg)	Group: A-B Pass
EN 1621-1 :2012 5.2.2 (6.2) (EN ISO 11642:2012 o EN ISO 105-E01: 2013)*	Color fastness to water - discharge a) acetate b) cotton c) polyamide d) polyester e) polyacrylic f) wool	Grey scale 5=good, 1=bad.	≥ 4 ≥ 4 ≥ 4 ≥ 4 ≥ 4 ≥ 4	Material: 1 2 3 4 5 5 5 5 5 5 5 4/5 4/5 5 4/5 4 4/5 5 4/5 4 5 5 5 5 5 5 5 5
EN 1621-1 :2012 5.2.2 (6.2) (EN ISO 11642:2012 o EN ISO 105-E01: 2013)*	Color fastness to water - discharge a) acetate b) cotton c) polyamide d) polyester e) polyacrylic f) wool	Grey scale 5=good, 1=bad.	≥ 4 ≥ 4 ≥ 4 ≥ 4 ≥ 4 ≥ 4	Material: 5 5 4/5 4/5 4/5 4/5 5
	Information note it shall specify that the body armor: - is intended for use other than road motorcycles (i.e. off-road, enduro, cross, downhill) - it was designed to be used as "stand-alone"			Pass



References	Tests	Measuring unit	Requirements	Results
EN 1621-1:2012	Motorcyclists' limb joint impact protectors			
4 (5.3 – 6.3.1.5)*	Type of protector - declared dimension: - tested/confirmed dimension:	-	S, E, H, K, L, K+L Type A/B (table 1)	S B B
5.2 5.2.1	Innocuousness			
EN ISO 13688:2013+ A1:20214.2*	Innocuousness		Materials shall not adversely affect the health or hygiene of the user, they shall not release substances generally known to be toxic, carcinogenic, mutagenic, allergenic, toxic to reproduction or otherwise harmful.	Pass
5.4	Impact test			
5.4 6.3.4.2	Impact force transmission 50J / flat impactor 40x80mm - Standard conditioning (23°C/50% r.h.) - 3 impacts zone A: - 3 impacts zone B: - 3 impacts zone C: - Mean: - Level: Visual check after impact	kN kN - -	lev.1 lev.2 ≤ 35 ≤ 20 ≤ 50 ≤ 30 ≤ 50 ≤ 30 ≤ 35 ≤ 20 1/2 no fragmentation of the sample and no sharp edges, cracks and loss of soft debris are permissible	See TR 4325100/E



References	Tests	Measuring unit	Requirements	Results
5.4 6.3.4.3	Impact force transmission 50J / flat impactor 40x80mm - Wet impact test conditioning: hydrolytic treatment 72h/+70°C/>96% r.h. + 24h/23°C - 2 impacts zone A: - 2 impacts zone B: - 2 impacts zone C: - Mean: - Level: Visual check after impact Note: at the end of the hydrolytic treatment the protectors are hung in a water vapor proof bag, avoiding the direct contact with the bag itself.	kN kN -	lev.1 lev.2 ≤ 35 ≤ 20 ≤ 50 ≤ 30 ≤ 50 ≤ 30 ≤ 35 ≤ 20 1/2 no fragmentation of the sample and no sharp edges, cracks and loss of soft debris are permissible	See TR 4327010/E
5.4 6.3.4.4 (optional T+)	Impact force transmission 50J / flat impactor 40x80mm - High temperature Conditioning: 24h/+40°C - 2 impacts zone A: - 2 impacts zone B: - 2 impacts zone C: - Mean: - Level: Visual check after impact	kN kN -	lev.1 lev.2 ≤ 35 ≤ 20 ≤ 50 ≤ 30 ≤ 50 ≤ 30 ≤ 35 ≤ 20 1/2 no fragmentation of the sample and no sharp edges, cracks and loss of soft debris are permissible	See TR 4325100/E
-	Overall protective level	-	1/2	1
5.5 6.4 - 6.5	Ergonomic features	-	Pass	Pass
-	Protector's positioning on the body Body protected area coverage		The area of the body declared to be protected is covered adequately by the protector	Pass



References	Tests	Measuring unit	Requirements	Results
EN 1621-2:2014	Motorcyclists' back protectors			
4.1*	General	-	Protectors shall be safe for use, comfortable to wear and fit for their purpose	Pass
4.2 (EN 1621-1:2012)*	Innocuousness			
EN ISO 13688:2013 +A1:2021 4.2*	Innocuousness		Materials shall not adversely affect the health or hygiene of the user, they shall not release substances generally known to be toxic, carcinogenic, mutagenic, allergenic, toxic to reproduction or otherwise harmful.	Pass
4.3 (Table 1)	Type of protector	-	Full, central or lower back protector (FB, CB, LB)	FB
4.4 (5.1.6.1)	Impact force transmission 50J / bar impactor "kerbstone" - Standard conditioning (23°C/50% r.h.)			
(5.1.6.2)	- Wet impact test conditioning: hydrolytic treatment 72h/+70°C/>96% r.h. + 24h/23°C			
(5.1.6.3)	- High temperature Conditioning: 24h/+40°C			
				art. "PROTECTOR SHIRT ZIP"
-	Overall protective level	-	1/2	1
				art. "PROTECTOR JACKET PRO"
-	Overall protective level	-	1/2	2



References	Tests	Measuring unit	Requirements	Results
4.5 (5.2.1)	Dangerous elements	-	No sharp edges or other features that may cause any inconvenience to the user	Pass
	Correspondence between the protective area marked on the back/lumbar protector and the extent of the body part which must be protected	-	Pass	Pass
4.5 (5.2.2)	Ergonomic features	-	Pass	Pass
	- Male tester with WS:	cm	-	52
4.6*	Sizing Waist-to-shoulder length (W-S) (range min-max)			
	Declared:	cm	-	48-52
	Verified:	cm	-	48-52
-	Protector's positioning on the body Body protected area coverage		The area of the body declared to be protected is covered adequately by the protector	Pass
EN 1621-3: 2018	Motorcyclists' chest protectors			
4.1*	General	-	Motorcyclists' chest protectors shall meet an overall requirement that they are safe to use, comfortable to wear and fit for their purpose. Chest protectors shall be provided with means of restraint and/or adjustments capable to ensure that the protector is maintained in position during use	Pass
4.2 (EN 1621-1:2012)*	Innocuousness			



References	Tests	Measuring unit	Requirements	Results
EN ISO 13688:2013 +A1:2021 4.2*	Innocuousness		Materials shall not adversely affect the health or hygiene of the user, they shall not release substances generally known to be toxic, carcinogenic, mutagenic, allergenic, toxic to reproduction or otherwise harmful.	Pass
4.3	Minimum dimensions of zones of protection			
4.3.1 Table 1*	General - Type of protector: - Declared dimension: - Checked/verified dimension:	-	full/divided type A/B type A/B	Full B B
4.3.1*	Full chest protector (C)	-	The protective area of full chest protectors shall be of a sufficient size to fit the template provided in fig.1a	C
4.3.2	Levels of protection: - Level declared: - Level verified:	- -	1/2 1/2	1 1
4.4 (6.3)	Impact attenuation (applicable to level 1 and level 2 protectors)			
6.5.1	Impact attenuation 50J / bar impactor kerbstone - Standard conditioning (23°C/50% r.h.) - Single values: 1) 2) 3) 4) 5) 6) 7) 8) - Mean: Visual check after impact	kN kN -	≤ 24 ≤ 18 no fragmentation of the sample and no sharp edges, cracks and loss of soft debris are permissible	See TR 4329038/E



References	Tests	Measuring unit	Requirements	Results
6.5.2	Impact attenuation 50J / bar impactor kerbstone - Wet impact test after hydrolytic treatment 72h/+70°C />96% r.h. + 24h/23°C - Single values: 1) 2) 3) 4) - Mean: Visual check after impact Note: at the end of the hydrolytic treatment the protectors are hung in a water vapor proof bag, avoiding the direct contact with the bag.	kN kN -	≤ 24 ≤ 18 no fragmentation of the sample and no sharp edges, cracks and loss of soft debris are permissible	See TR 4329038/E
6.5.3 (optional T+)	Impact attenuation 50J / bar impactor kerbstone - High temperature Conditioning: 24h/+40°C - Single values: 1) 2) 3) 4) - Mean: Visual check after impact	kN kN -	≤ 24 ≤ 18 no fragmentation of the sample and no sharp edges, cracks and loss of soft debris are permissible	See TR 4329038/E
4.6 (5.7)	Ergonomics	-	Pass	Pass
-	Protector's positioning on the body Body protected area coverage		The area of the body declared to be protected is covered adequately by the protector	Pass
	Innocuousness, additional chemical tests			
EN ISO 14389:2014#*	Phthalates	mg/kg	< 1000 mg/kg (Sum of phthalates listed in REACH Annex XVII Entry 51)	Group: C Pass

- End of the Technical Report -