



CLIENT: **EVOC SPORTS GMBH**  
Tegernseer Landstraße 37A  
81541 München  
Germany

PZ

FOR THE ATTENTION OF: Tobias Reischle

DC 18908


SAMPLING: done by the Applicant

TEST REPORTS: this document is based on Test Reports no.: 4326031/E and 4341061.01/E.

SAMPLES: Limb joint impact protectors for bike/downhill use in the following items:  
- art. "**KNEE PROTECTOR LS FLEX LITE**" declared K Type A, sizes S-M-L-XL;  
- art. "**KNEE PROTECTOR LS FLEX ENDURO**" declared K Type A, sizes S-M-L-XL;  
- art. "**ELBOW PROTECTOR LS FLEX LITE**" declared E Type A, sizes S-M-L-XL.

See the complete description on the next page.

REQUEST: Laboratory tests in accordance with EN 1621-1:2012 T+ (only for art. ELBOW PROTECTOR LS FLEX LITE) 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.

M22 rev08 del 01/01/2023



Description:

article: "KNEE PROTECTOR LS FLEX LITE"

design: multilayer;

external coating:

- black fabric **(1)** marked "Evoc" in white color;
- black elastic fabric **(2)**;
- black elastic fabric **(3)** with silicon;
- black perforated fabric **(4)**;

internal coating (in contact with the body): protectors pocket in black fabric **(5)** with edge in black fabric **(6)**;

fastening system: absent.

Knee protector inserted (removable): black polymeric material declared TPE **(1070B-EVO9 LOCAL 70 SHORE)**.

article: "KNEE PROTECTOR LS FLEX ENDURO"

design: multilayer;

external coating:

- black fabric **(7)** marked "Evoc" in white color;
- black fabric coupled with black perforated foam material **(8)**;
- higher band in black elastic fabric **(9)** with silicon;
- lower band in black elastic fabric **(3)** with silicon;
- black perforated fabric **(4)**;

internal coating (in contact with the body): protectors pocket in black fabric **(5)** with edge in black fabric **(6)**;

fastening system: absent.

- higher band in black elastic fabric **(10)**;

- lower band in black elastic fabric **(11)**;

- black Velcro **(12)**.

Knee protector inserted (removable): black polymeric material declared TPE **(1070B-EVO9 LOCAL 70 SHORE)**.

article: "ELBOW PROTECTOR LS FLEX LITE"

design: multilayer;

external coating:

- black fabric **(1)** marked "Evoc" in white color;
- black elastic fabric **(2)**;
- black elastic fabric **(3)** with silicon;
- black perforated fabric **(4)**;

internal coating (in contact with the body): protectors pocket in black fabric **(5)** with edge in black fabric **(6)**;

fastening system: absent.

Elbow protector inserted (removable): black polymeric material declared TPE.

Groups of materials tested for Azo-dyes content:

X) (1) + (2) + (3) + (4);

Y) (5) + (6) + (7) + (8);

Z) (9) + (10) + (11) + (12).



References	Tests	Measuring unit	Requirements	Results
EN 1621-1:2012	Motorcyclists' limb joint impact protectors			
5.2 5.2.1	Innocuousness			For all samples:
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 know 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	Materials: 1 7,4 2 7,2 3 6,7 4 8,1 5 7,7 6 7,3 7 6,7 8 6,9 9 7,4 10 7,3 11 8,2 12 7,5
4.2 d ISO 14362-1:2017#* textile	Azo colorants content:	mg/kg	absent (< 30 mg/kg)	Groups of materials: X, Y, Z  Pass
				Materials: 1 2 3 4
5.2.2 (6.2) (EN ISO 11642:2012 o EN ISO 105-E01: 2013)*	Colour 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	5 5 5 5 5 4/5 4/5 5 4/5 4 4/5 5 5 4/5 4/5 5 5 5 5 5 5 5 4/5 5



References	Tests	Measuring unit	Requirements	Results
				Materials: 5 6 7 8
5.2.2 (6.2) (EN ISO 11642:2012 o EN ISO 105-E01: 2013)*	Colour 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	5 5 5 5 4/5 5 5 5 5 5 5 4/5 4/5 5 5 5 5 5 5 5 5 5 5 5
				Materials: 9 10 11 12
5.2.2 (6.2) (EN ISO 11642:2012 o EN ISO 105-E01: 2013)*	Colour 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	5 5 5 5 4/5 5 5 5 4/5 5 5 5 5 5 5 5 4/5 5 5 5 5 5 5 5
<b>art. "KNEE PROTECTOR LS FLEX LITE" and "KNEE PROTECTOR LS FLEX ENDURO"</b>				
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)	"K" Type A "K" Type A
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	15,7 18,8 17,9 19,1 17,5 16,7 18,7 16,5 19,5  17,8  2  Pass



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	lev.1    lev.2  ≤ 35    ≤ 20 ≤ 50    ≤ 30 ≤ 50    ≤ 30  ≤ 35    ≤ 20	18,4    15,3 18,9    15,5 16,7    16,9  17,0  2  Pass
-	Overall protective level	-	1/2	2
<b>art. "ELBOW PROTECTOR LS FLEX LITE"</b>				
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)	"E" Type A "E" Type A
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	lev.1    lev.2  ≤ 35    ≤ 20 ≤ 50    ≤ 30 ≤ 50    ≤ 30  ≤ 35    ≤ 20  1/2	27,1    28,3    30,4 31,5    28,8    30,0 29,8    34,8    32,1  30,3  1  Pass



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	lev.1    lev.2  ≤ 35    ≤ 20 ≤ 50    ≤ 30 ≤ 50    ≤ 30  ≤ 35    ≤ 20	25,2    26,8 29,1    37,7 26,6    31,8  29,5  1  Pass
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	lev.1    lev.2  ≤ 35    ≤ 20 ≤ 50    ≤ 30 ≤ 50    ≤ 30  ≤ 35    ≤ 20	31,6    30,6 32,6    32,7 32,3    33,9  32,3  1  Pass
-	Overall protective level	-	1/2	1
				For all samples:
5.5 6.4 - 6.5	Ergonomic features	-	Pass	Pass



References	Tests	Measuring unit	Requirements	Results
-	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

- End of the Technical Report -