

## Test Report

No.: GZHL2005014920CE

Date: May 25, 2020

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BOARDS AND MORE GMBH  
RABACH 1, 4591 MOLLN, AUSTRIA

Sample Description : K-PACT  
Style / Item No. : 47800-5900  
Manufacturer : ENCHES  
Supplier : VIA ENCHES DAISY  
Country of Origin : CHINA

As above test item and its relevant information regarding to the submission are provided and confirmed by the applicant. SGS is not liable to either the test item or its relevant information, in terms of the accuracy, suitability, reliability or/and integrity accordingly.

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Type : A  
Level : 2  
Region : K  
Sample Receiving Date : May 08, 2020  
Test Performing Date : May 08, 2020 to May 22, 2020  
Test Performed : EN 1621-1:2012  
Test Result(s) : For further details, please refer to the following page(s)

Signed for and on behalf of  
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch




Lei Wu  
Authorized Signatory



SGS-CSTC Standards Technical Services Co., Ltd.  
Guangzhou Branch Testing Center Headlines

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**Test Conducted:** Based on **EN 1621-1:2012** Motorcyclists' protective clothing against mechanical impact  
– Part 1: Motorcyclists' limb joint impact protectors – Requirements and test methods.

**Test Results:** Details shown as following table

Clause	Test Method/Requirement	Result
4	<b>Zones of protection and protectors</b> The following body regions are specified as zones of protection and protectors shall be categorised as follows:	--
	a. shoulder: Protector "S"	
	b. elbow and forearm: Protector "E"	
	c. hip: Protector "H"	
	d. knee and upper tibia: Protector "K"	
	e. knee, upper and middle tibia: Protector "K" + "L"	
	f. the front of the leg below protector "K": Protector "L"	
	The size of the zones of protection shall comply with 5.3, Table 1.	
5	<b>Requirements</b>	
5.1	<b>General</b> Unless otherwise specified, all linear dimensions bigger than 50 mm in the whole text shall be provided with a deviation of $\pm 2\%$ and dimensions up to 50 mm with a deviation of $\pm 1$ mm.	Note
5.2	<b>Innocuousness</b>	
5.2.1	The materials shall comply with the requirements for innocuousness of materials in EN 340, with the exception of the requirement concerning the colour fastness to perspiration which is replaced by 5.2.2.	NT
5.2.2	The colour fastness to water of the constituent materials which could be likely to come into contact with the skin of the user shall be determined in accordance with 6.2 and shall be at least grade 4 of the Grey scale for the staining of any component of the multi-fibre reference fabric.	NT
5.3	<b>Minimum dimensions of zone of protection</b> Motorcyclist's limb joint protectors shall provide a zone of protection with the minimum dimensions as specified in Table 1. Testing shall be carried out as described in 6.3.4. In Table 1, the zones of protection are defined by the three dimensions $r_1$ , $r_2$ and $l$ , as illustrated in Figure 1	NT



5.4	<p><b>Impact attenuation</b></p> <p>When impact protection is tested in accordance with 6.3.4.2 (ambient impact test), 6.3.4.3 (wet impact test after hydrolytic ageing) and, if required, 6.3.4.4 (high temperature impact test) and/or 6.3.4.5 (low temperature impact test), the transmitted force shall conform to the values in Table 2. Level 1 or Level 2 can only be awarded provided that such level is achieved under all test conditions claimed.</p> <p><b>Table 2 — Transmitted force and performance levels</b></p> <table border="1"> <thead> <tr> <th></th><th>Level 1</th><th>Level 2</th></tr> </thead> <tbody> <tr> <td>Overall mean value</td><td>≤ 35 kN</td><td>≤ 20 kN</td></tr> <tr> <td>Single strike area A<sup>a</sup></td><td>≤ 35 kN</td><td>≤ 20 kN</td></tr> <tr> <td>Single strike area B<sup>a</sup> and C<sup>a</sup></td><td>≤ 50 kN</td><td>≤ 30 kN</td></tr> </tbody> </table> <p><sup>a</sup> Areas A, B and C correspond to the areas in Figure 3.</p> <p>After each test, there shall be no fragmentation of the sample and no sharp edges shall be formed. However, formation of cracks and loss of soft debris is permissible.</p>		Level 1	Level 2	Overall mean value	≤ 35 kN	≤ 20 kN	Single strike area A <sup>a</sup>	≤ 35 kN	≤ 20 kN	Single strike area B <sup>a</sup> and C <sup>a</sup>	≤ 50 kN	≤ 30 kN	See annex 1
	Level 1	Level 2												
Overall mean value	≤ 35 kN	≤ 20 kN												
Single strike area A <sup>a</sup>	≤ 35 kN	≤ 20 kN												
Single strike area B <sup>a</sup> and C <sup>a</sup>	≤ 50 kN	≤ 30 kN												
5.5	<p><b>Ergonomic requirements</b></p> <p>When examined and tested in accordance with 6.4, impact protectors shall be found satisfactory for the use intended; to confirm this requirement, each question of 6.5 needs to be answered with "yes".</p> <p>The following deficiencies are not admitted:</p> <p>a) sharp edges;</p> <p>b) any design feature which cause ergonomic problems to the assessor.</p> <p>Follow questions were answered with "yes" by assessor(s):</p> <p>a) Do you confirm the protector fits you properly?</p> <p>b) Can you easily get on and off a motorcycle?</p> <p>c) Can you reach and operate the controls of the motorcycle?</p> <p>d) Can you pick something up from the floor by bending forward?</p> <p>e) For shoulder protector: while wearing a full face helmet, can you turn your head and/or torso left and right? (Requirement e) is not applicable for protectors to be inserted or incorporated into the garments).</p> <p>f) Can you confirm that the adjustment system, if present, does not cause discomfort?</p> <p>g) Does the adjustment system, if present, transmit confidence to the assessor that keeps the protector firmly and comfortably on its place during and after all of the above exercises?</p>	NT												
7	<p><b>Marking</b></p> <p>The marking shall include the following information:</p> <p>a) number and year of this European Standard (EN 1621-1:2012);</p> <p>b) name and trade mark of the manufacturer or his authorised representative in the European Union;</p> <p>c) identification of the product type, commercial name or code;</p> <p>d) a graphical representation, as shown in Figure 4, shall be included showing:</p>	<p>NT</p> <p>NT</p> <p>NT</p> <p>---</p>												



	1) the category of the protector in accordance with Clause 4 (e.g. "S" for shoulder protector) and the type A or B in accordance with Table 2,	NT
	2) the performance level concerning the ambient impact test in accordance with Table 2,	NT
	3) the symbol "T+" if the high temperature impact test is passed (if the test is not claimed, the space is vacant),	NT
	4) the symbol "T-" if the low temperature impact test is passed (if the test is not claimed, the space is vacant).	NT
	Each protector shall be marked. The marking shall be:	
7	e) on the product itself or on labels permanently attached to the product;	NT
	f) affixed so as to be visible and legible;	NT
	g) durable to the appropriate number of cleaning processes.	NT
8	<b>Information supplied by the manufacturer</b>	
	The protector shall be supplied to the customer with information written at least in the official language(s) of the country of destination. All information shall be unambiguous.	NT
	The following information shall be given:	---
	a) name and full address of the manufacturer and/or his authorised representative;	NT
	b) product identification in accordance with 7 c) and d);	NT
	c) number of the European Standard and year of publication (EN 1621-1:2012);	NT
	d) explanation of the graphical symbol and other symbols used;	NT
	e) instruction for use:	---
	1) fitting, how to put on and off, if relevant;	NT
	2) performance of impact attenuation as recorded during technical tests;	NT
	3) limitations on use (e.g. temperature range, exchange after being exposed to an impact, ageing);	NT
	4) instructions for storage and maintenance;	NT
	5) instruction for cleaning;	NT
	6) appropriate warning against problems which could arise from particular properties or misuse, or alteration or ageing of the protector (e.g. cutting off parts, chemical contaminations);	NT
	7) if helpful illustrations, part numbers etc. shall be added;	NT
	f) the type of packaging suitable for transport if relevant;	NT
	g) size of the user(s) for whom the protector is intended.	NT





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Model: 47800-5900 (S)

Type: A

Region: K

Level: 2

### Annex 1: Force transmission test result

Test Specification: EN 1621-1:2012-6.3

Ambient temperature at time of test: 22.1 °C

Samples No.	Test area	Test site	Impact energy (J)	Peak force (KN)	Requirement for single value	Result	Mean value (KN)	Requirement for mean value	Result
Wet No.1	A	1	50.1	11.53	Level 2: Area A ≤ 20KN Area B and C ≤ 30KN	Pass	12.84	Level 2 ≤ 20KN	Pass
	B	2	49.9	13.01		Pass			
	C	3	49.8	13.99		Pass			
Wet No.2	A	4	50.2	12.80		Pass	13.43		
	B	5	50.3	11.86		Pass			
	C	6	50.1	15.62		Pass			

Model: 47800-5900 (M)

Type: A

Region: K

Level: 2

### Annex 1: Force transmission test result

Test Specification: EN 1621-1:2012-6.3

Ambient temperature at time of test: 22.1 °C

Samples No.	Test area	Test site	Impact energy (J)	Peak force (KN)	Requirement for single value	Result	Mean value (KN)	Requirement for mean value	Result
Wet No.1	A	1	49.9	11.67	Level 2: Area A≦20KN Area B and C ≦30KN	Pass	13.21	Level 2≦20KN	Pass
	B	2	50.0	13.22		Pass			
	C	3	50.1	14.73		Pass			
Wet No.2	A	4	50.1	12.36		Pass	13.15		
	B	5	50.2	12.34		Pass			
	C	6	49.9	14.76		Pass			

Model: 47800-5900 (L)

Type: A

Region: K

Level: 2

### Annex 1: Force transmission test result

Test Specification: EN 1621-1:2012-6.3

Ambient temperature at time of test: 22.1 °C

Samples No.	Test area	Test site	Impact energy (J)	Peak force (KN)	Requirement for single value	Result	Mean value (KN)	Requirement for mean value	Result
Wet No.1	A	1	49.7	11.62	Level 2: Area $A \leq 20\text{KN}$ Area B and C $\leq 30\text{KN}$	Pass	12.94	Level 2 $2 \leq 20\text{KN}$	Pass
	B	2	50.0	12.60		Pass			
	C	3	50.1	14.61		Pass			
Wet No.2	A	4	50.1	12.09		Pass	12.94		
	B	5	50.1	12.12		Pass			
	C	6	50.1	14.62		Pass			



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Model: 47800-5900 (XL)

Type: A

Region: K

Level: 2

### Annex 1: Force transmission test result

Test Specification: EN 1621-1:2012-6.3

Ambient temperature at time of test: 22.1 °C

Samples No.	Test area	Test site	Impact energy (J)	Peak force (KN)	Requirement for single value	Result	Mean value (KN)	Requirement for mean value	Result
Wet No.1	A	1	50.1	11.79	Level 2: Area A $\leq 20\text{KN}$ Area B and C $\leq 30\text{KN}$	Pass	12.92	Level 2 $\leq 20\text{KN}$	Pass
	B	2	49.7	13.10		Pass			
	C	3	49.6	13.87		Pass			
Wet No.2	A	4	50.1	11.92		Pass	13.12		
	B	5	50.3	12.03		Pass			
	C	6	49.8	15.41		Pass			

### Remark:

1. Pass means the test sample met the requirement of the test item.
  2. NA means not applicable.
- NT means not tested as per client's request.

### Sample photos:





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<p>Test areas (S)</p>	
<p>Test areas (M)</p>	





<p>Test areas (L)</p>	
<p>Test areas (XL)</p>	

\*\*\*End of Report\*\*\*

