

Test Report

Number: SZHH01573248

Applicant: LIVALL TECH CO., LTD.
ROOM 904, 9/F R&D BUILDING,
SHENZHEN TSINGHUA HI-TECH
PARK. NANSHAN DISTRICT,
SHENZHEN, CHINA

Date: Jun 18, 2021

Attn: TAN BING

Sample Description:

Eight (8) pieces of submitted sample said to be :
Item Name : **Smart Helmet**
Item/Model No. : **EVO21**
Size : 58-62cm
Date Manufactured : May 2021
Date Sample Received : May 19, 2021
Testing Period : May 19, 2021 ~Jun 18, 2021



Tests conducted:

As requested by the applicant, refer to attached page(s) for details.





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Conclusion:

Tested sample
Submitted helmets

Standard
EN 1078:2012+A1:2012 Standard Specification
for Helmets Worn by Users of Pedal Cycles,
Skateboards and Roller Skates

Result
Pass

Authorized by:
For Intertek Testing Services
Shenzhen Ltd.



Andy, Fu Bo
Title: Asst. Manager
CNAS Approved Signatory





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1 Standard Specification for Helmets Worn by Users of Pedal Cycles, Skateboards and Roller Skates

As per EN 1078:2012+A1:2012: standard specification for helmets worn by uses of pedal cycles, skateboards and roller skates.

Number of samples tested: Eight (8) sets

Helmets size: 58-62cm

Test headform: M/O

Clause	Test Items	Result
4.1	Materials For those parts of the helmet coming into contact with the skin, the material used should be known not to undergo appreciable alteration from contact with sweat or with substances likely to be found in toiletries. Materials shall not be used which are known to cause skin disorders.	
4.2	Construction The helmet normally consists of a means of absorbing impact energy and means of retaining the helmet on the head in an accident. The helmet should be durable and withstand handling. The helmet shall be so designed and shaped that parts of it (visor, rivets, ventilators, edges, fastening device and the like) are not likely to injure the user in normal use. NOTE Helmets should: - have low weight; - be ventilating; - be easy to put on and take off; - be usable with spectacles; - not significantly interfere with the ability of the user to hear traffic noise.	P
4.3	Field of vision When tested in accordance with 5.7 there shall be no occultation in the field of vision bounded by angles as follows (see Figure 1 in EN 1078:2012+A1:2012): - horizontally: min. 105° from the longitudinal vertical median plane to the left and right hand sides; - upwards: min. 25° from the reference plane; - downwards: min. 45° from the basic plane.	P (Horizontally: >105° Upwards: >25° Downwards >45°)
4.4	Shock absorbing capacity The helmet shall give protection to the forehead, rear, sides, temples and crown of the head. When tested in accordance with 5.3 and 5.4 the peak acceleration shall not, for each impact, exceed 250 g for the velocity of 5,42 (+0.1, 0), m/s on the flat anvil, and 4,57 (+0.1, 0)m/s on the kerbstone anvil. NOTE These are theoretically equivalent to 1 497 mm and 1 064 mm drop heights respectively.	P (See appendix)





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Clause	Test Items	Result
4.5	Durability After being tested the helmet shall not exhibit damage that could cause significant injury to the wearer (sharp edges, points).	P (No damage & significant injury)
4.6	Retention system	
4.6.1	General Means shall be provided for retaining the helmet on the wearer's head. All parts of the retention system shall be securely attached to the helmet.	P
4.6.2	Chin strap The chin strap shall not include a chin cup. Any chin strap shall be no less than 15 mm wide (W). Chin straps may be fitted with means of enhancing comfort for the wearer.	P (W:15.6mm)
4.6.3	Fastening device Any retention system shall be fitted with a device to adjust and maintain tension in the system. The device shall be capable of adjustment so that the buckle does not sit on the jaw bone.	P
4.6.4	Colour No part of the retention system shall be coloured green. NOTE It is recommended that the opening mechanism be marked with red or orange colour.	P (Aubergine)
4.6.5	Strength When tested in accordance with 5.5, the dynamic extension of the retention system shall not exceed 35 mm and the residual extension shall not exceed 25 mm. For this purpose, extension includes slippage of the fastening device. Damage to the retention system shall be accepted provided that the above requirements are met. NOTE In this test, slippage of the fastening device can be measured and recorded separately from other contributions to the extension but this is for information only and is not subject to a separate requirement.	P (See appendix)
4.6.6	Effectiveness When tested in accordance with 5.6 the helmet shall not come off the headform.	P (Did not come off)
4.6.7	Ease of release Following the strength test in accordance with 5.5 and with the load still applied, it shall be possible to open the release system with one hand.	P
5.2	Inspection and determination of mass Inspect the helmet to ascertain whether it is suitable for its intended purpose and fulfils the general requirements in 4.2. Determine the mass of the helmets of the same size submitted for testing. Calculate and record the mean value in g rounded off to the nearest 10 g, stating the size of the helmet.	P (See appendix)





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Clause	Test Items	Result
6	<p>Marking</p> <p>Each helmet shall be marked in such a way that the following information is easily legible by the user and is likely to remain legible throughout the life of the helmet:</p> <p>a) number of this European Standard; b) name or trademark of the manufacturer; c) designation of the model; d) designation, which shall be one or more of the following: Helmet for pedal cyclists, skateboarders or roller skaters; e) size or size range of the helmet, quoted as the circumference (in centimeters) of the head which the helmet is intended to fit; f) weight of the helmet (the average mass in grams determined according to 5.2); g) year and quarter of manufacture; h) following text:</p> <p>"Warning! This helmet should not be used by children while climbing or doing other activities when there is a risk of strangulation/hanging if the child gets trapped with the helmet."</p> <p>In addition, if the helmet has components made of material which are known to be adversely affected by contact with hydrocarbons, cleaning fluids, paints, transfers or other extraneous additions, the helmet shall carry an appropriate warning.</p>	P
	<p>If there is a consumer sales packaging, the information specified in a), b), d) and h) shall also be given on that package. The text shall be of minimum font size 12.</p>	P





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Clause	Test Items	Result
7	Information supplied by the manufacturer With every helmet, clear information in the language of the country of sale shall be given as follows: a) that the helmet can only protect if it fits well and that the buyer should try different sizes and choose the size which feels secure and comfortable on the head; b) that the helmet should be adjusted to fit the user, e.g. the straps positioned so that they do not cover the ears, the buckle positioned away from the jawbone and the straps and buckle adjusted to be both comfortable and firm; c) how the helmet should be positioned on the head to ensure the intended protection is provided (e.g. hat it should be placed so as to protect the forehead and not be pushed too far over the back of the head); d) that a helmet cannot always protect against injury; e) that a helmet subjected to a severe impact should be discarded and destroyed; f) a statement of the danger of modifying or removing any of the original component parts of the helmet other than as recommended by the manufacturer, and that helmets should not be adapted for the purpose of fitting accessories in a way not recommended by the manufacturer.	P

Abbreviation : P = Pass

Appendix:

Section 5.2 – Inspection and determination of mass

Sample No.	Mass (g)
1	318.3
2	336.9
3	337.2
4	342.5
5	346.2
6	339.5
7	339.1
8	349.5
Average(rounded off to nearest 10g)	338.7 (340)





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Section 4.4—Shock absorbing capacity
Ambient temperature at time of test: 22.8°C

Test headform: M

Sample No.	Environment Impact	Test anvil	Location Impact	Velocity (m/s)	Peak (Gn)	Compliant
1	High	Kerbstone	Right	4.59	95.6	Pass
		Flat	Front	5.49	170.3	Pass
2	Low	Flat	Left	5.49	174.8	Pass
		Kerbstone	Front	4.59	105.7	Pass
3	Artificial ageing	Kerbstone	Front	4.58	88.8	Pass
		Flat	Right	5.47	166.4	Pass

Test headform: O

Sample No.	Environment Impact	Test anvil	Location Impact	Velocity (m/s)	Peak (Gn)	Compliant
5	High	Kerbstone	Front	4.66	100.7	Pass
		Flat	Left	5.46	158.3	Pass
6	Low	Flat	Front	5.50	184.5	Pass
		Kerbstone	Left	4.57	90.8	Pass
7	Artificial ageing	Kerbstone	Crown	4.57	101.4	Pass
		Flat	Front	5.46	179.5	Pass

Section 4.6.5—Retention system strength

Test headform: M

Sample No.	Dynamic extension (mm)	Residual extension (mm)	Compliant
2	18.8	8.4	Pass
3	8.2	7.6	Pass

Test headform: O

Sample No.	Dynamic extension (mm)	Residual extension (mm)	Compliant
6	15.9	7.6	Pass
7	9.9	7.3	Pass



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Photos for reference:

Front view	
Side view	



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Back view	
Top view	

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<p>Bottom view</p>	
<p>Label</p>	<p>Product: Smart Helmet Model No.: EVO21 Production Lot: A1 Size: 58-62cm Weight: 340g EN 1078: 2012+A1:2012 CPSC 1203 Helmet for Pedal Cyclists Date of manufacture:2021/04 Made in China Manufacturer: LIVALL Tech Co., Ltd. Manufacturer address: Room 904, 9F, R&D Building, Shenzhen Tsinghua Hi-Tech Park, Nanshan District, Shenzhen, China</p> <p><small>WARNING! This helmet should not be used by children while climbing or doing other activities when there is a risk of strangulation/hanging if the child gets trapped with the helmet. WARNING! Do not clean with solvents, bleaches and strong detergents. They can damage helmet, sometimes invisibly. Use mild soap and water only. Read manual.</small></p> <p><small>US telephone: +1 415 788-2371 Ext. 242 FCC ID: 2AEKF-EVO21 UK CA CE</small></p> <p><small>US importer: Livall IoT Technology, Inc. 5.1mm 7mm</small></p> <p><small>WARNING! No helmet can prevent all head injuries. Even in very low speed accidents, serious injury or death can occur. For best protection, follow manual fitting instructions: Helmet must fit snugly. Wear chin strap comfortably tight against throat. Fasten buckle securely. Destroy and replace helmet after impact. Protection may not be adequate in future impacts. Damage can be invisible. Don't modify anything on this helmet. It could reduce the helmet's ability of protection. Complies with U.S. Consumer Product Safety Commission Safety Standard for Bicycle Helmets for Persons Age 5 and Older.</small></p>

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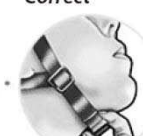

<p>Package</p>	
<p>Instruction</p>	<p>VII. Electronic functions troubleshooting</p> <p>During the usage, if the following troubles occur, please charge the product according to quick guide of the model(the helmet can be reset during the charging). If the problems still can not be solved, please contact the after-sales service center. (After-sales email: riding@livall.com)</p> <p>Faults:</p> <ol style="list-style-type: none"> 1. Can not be charged or turn-off normally; 2. The helmet is turn on, but the lights and other functions can not work normally. 3. After power on, it turns off automatically in a short time without reason. <p>Note: Please refer to the quick guide of the specific model for function details.</p> <p>Performance standards:</p> <p>USA: CPSC 1203:1998, FCC Part 15 Rules Europe: EN 1078: 2012+A1:2012</p> <p>VIII. Instructions for Use and Care</p> <ol style="list-style-type: none"> 1. That the helmet can only protect If it fits well and that the buyer should try different sizes and choose the size which feels secure and comfortable on the head. 2. That the helmet should be adjusted to fit the user e.g. the straps positioned so that they do not cover the ears, the buckle positioned away from the jawbone and the straps and buckle adjusted to be both comfortable and firm. 3. How the helmet should be position on the head to ensure the intended protection is provided (e.g. that it should be placed so as to protect the forehead and not be pushed too far over the back of the head.) 4. That a helmet cannot always protect against injury. 5. That a helmet subjected to a severe impact should be discarded and destroyed. 6. A statement of the danger of modifying or removing any of the original component parts of the helmet other than as recommended by the manufacturer, and that helmets should not be adapted for the purpose of fitting <p>9</p>



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	<p>NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:</p> <ul style="list-style-type: none"> - Reorient or relocate the receiving antenna. - Increase the separation between the equipment and receiver. - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. - Consult the dealer or an experienced radio/TV technician for help. <p>Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.</p> <p style="text-align: center;">11</p> <p>III. Instructions de port</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <i>Incorrect</i> </div> <div style="text-align: center;">  <i>Incorrect</i> </div> <div style="text-align: center;">  <i>Correct</i> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">  <i>Ajustez la longueur de la Mentonnière</i> </div> <div style="text-align: center;">  <i>Laissez un espace aussi épais qu'un doigt</i> </div> <div style="text-align: center;">  <i>Portez correctement le casque</i> </div> <div style="text-align: center;">  <i>Vérifiez si la boucle est en bon état</i> </div> </div> <p style="text-align: center;">13</p>
<p>Test line (Test headform: M)</p>	



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<p>Test line/ (Test headform: O)</p>	
<p>Impact sites #1</p>	

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End of report

The statements of conformity reported have considered the decision rule agreed, namely that Intertek have taken account of measurement uncertainty as calculated by Intertek, and applied according to ILAC-G8/09:2019 (Non-binary acceptance based on guard band $w = U$) except designation from the customer, regulation or test specification. This decision rule only applies to the numeric test results.

The sample(s) and sample information hereto are provided by the client who shall be solely responsible for the authenticity and integrity thereof. The results shown in this report relate only to the sample(s) tested. It is not intended to be a recommendation for any particular course of action. Intertek does not accept a duty of care or any other responsibility to any person other than the Client in respect of this report and only accepts liability to the Client insofar as is expressly contained in the terms and conditions governing Intertek's provision of services to you. Intertek makes no warranties or representations either express or implied with respect to this report save as provided for in those terms and conditions. We have aimed to conduct the review on a diligent and careful basis and we do not accept any liability to you for any loss arising out of or in connection with this report, in contract, tort, by statute or otherwise, except in the event of our gross negligence or wilful misconduct. This report shall not be reproduced unless with prior written approval from Intertek Testing Services Shenzhen Ltd.

