

**Test Report**

**On Behalf of**

**ZHEJIANG LEADER INDUSTRY & TRADE CO., LTD.**

**ALUMINUM MULTIPURPOSE LADDER**


**Model: AY-503, AY-502, AY-504, AY-505,  
AY-506, AY-507, AY-508**

**Prepared For :** ZHEJIANG LEADER INDUSTRY & TRADE CO.,  
LTD.  
2TH FLOOR BUILDING 6, NO.8 LONGTAI ROAD,  
LONGSHAN TOWN, YONGKANG, JINHUA,  
ZHEJIANG PROVINCE, CHINA

**Prepared By :** Eport (Shenzhen) Electronics Co., Ltd.  
Rm 5-508, Haibin City Plaza, 46 Section, Baoan  
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**Date of Test** : July 11-18, 2023  
**Date of Report** : July 19-20, 2023  
**Report Number** : EPTC-LD-S230J660

<b>Test Report</b> <b>EN 131-1:2015+A1:2019</b> <b>Ladders –</b> <b>Part 1: Terms, types, functional sizes</b> <b>EN 131-2:2010+A2:2017</b> <b>Part 2: Specification for requirements testing, marking</b> <b>EN 131-3:2018</b> <b>Part 3: User instructions</b> <b>EN 131-4:2020</b> <b>Part 4: Single or multiple hinge-joint ladders</b>	
<b>Testing laboratory</b> .....	Eport (Shenzhen) Electronics Co., Ltd.
<b>Address</b> .....	Rm 5-508, Haibin City Plaza, 46 Section, Baoan District, Shenzhen, P.R.C
<b>Testing location</b> .....	Eport (Shenzhen) Electronics Co., Ltd. Rm 5-508, Haibin City Plaza, 46 Section, Baoan District, Shenzhen, P.R.C
<b>Applicant Name</b> .....	ZHEJIANG LEADER INDUSTRY & TRADE CO., LTD.
<b>Address</b> .....	2TH FLOOR BUILDING 6, NO.8 LONGTAI ROAD, LONGSHAN TOWN, YONGKANG, JINHUA, ZHEJIANG PROVINCE, CHINA
<b>Standard</b> .....	EN 131-1:2015+A1: 2019 & EN 131-2:2010+A2: 2017 & EN 131-3: 2018 & EN 131-4: 2020
<b>Result</b> .....	Comply with: EN 131-1:2015+A1: 2019 & EN 131-2:2010+A2: 2017 & EN 131-3: 2018 & EN 131-4: 2020
<b>Procedure deviation</b> .....	N.A.
<b>Non-standard</b> .....	N.A.
<b>Type of verdict object</b> .....	ALUMINUM MULTIPURPOSE LADDER
<b>Trademark</b> .....	N.A.
<b>Model/type reference</b> .....	AY-503
<b>Manufacturer Name</b> .....	ZHEJIANG LEADER INDUSTRY & TRADE CO., LTD.
<b>Address</b> .....	2TH FLOOR BUILDING 6, NO.8 LONGTAI ROAD, LONGSHAN TOWN, YONGKANG, JINHUA, ZHEJIANG PROVINCE, CHINA
<b>Material</b> .....	ALUMINUM

<b>Possible case verdicts :</b>	
Case does not apply to the verdict object ..... :	N (.A.)
Verdict object does meet the requirement .....:	P(ass)
Verdict object does not meet the requirement ... :	F(ail)
<b>Name and address of the testing laboratory:</b> <u>Eport (Shenzhen) Electronics Co., Ltd.</u> <u>Rm 5-508, Haibin City Plaza, 46 Section, Baoan District, Shenzhen, P.R.C</u>	
<b>Reported by :</b> _____ Signature	<u>James</u> Date
<u>James Wang / Project Engineer</u> Name and Title	
<b>Approved by :</b> _____ Signature	<u>July 20, 2023</u> Date
<u>Eliza Chen / Manager</u> Name and Title	

<b>General remarks:</b>	
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"(see remark #)" refers to a remark appended to the report.

"(see appended table)" refers to a table appended to the report.

Throughout this report a comma is used as the decimal separator.

The test results presented in this report relate only to the object tested.

This report shall not be reproduced except in full without the written approval of the testing laboratory.

Attached with:

- A. 1 page of photo documentation

**Remark 1:**

1. All tests were conducted on AY-503 unless otherwise special.
2. All models are the same material and load capacity (max.150kg)

**Remark 1:**

Copy of marking plate see appendix 2

EN 131-1			
Clause	Requirement – Test	Result - Remark	Verdict
<b>4.</b>	<b>Functional sizes</b>		<b>P</b>
<b>4.1</b>	General		<b>P</b>
	The drawings are examples only and products need not correspond. However, dimensions are binding.		<b>P</b>
	The rungs and steps of a ladder shall be equally spaced with a tolerance of $\pm 2\text{mm}$ .		<b>P</b>
	In addition to the requirements on the complete ladder, sections which can be dismantled without the use of tools shall conform, section by section, with the requirements for one piece leaning ladders or leaning rung ladders.		<b>P</b>
<b>4.2</b>	Leaning rung ladders		<b>P</b>
<b>4.2.1</b>	General		<b>P</b>
	Functional sizes are given in Table 2.		<b>P</b>
	The minimum permanently available base width for leaning rung ladders shall be derived from the formula $b_2$ in Table 2. Combination and multi-hinge ladders shall also meet the minimum base width requirements in leaning ladder modes of use. For leaning ladders the method of achieving the permanently available minimum base width is at the discretion of the manufacturer but it shall be permanently incorporated in the design and not provided by removable components or accessories. It is permissible for a device which provides the required base width to be supplied for assembly by the end user with the use of tools. It is permissible for the design to allow for the base width $b_2$ or its position to be temporarily adjusted by the user. Where the base width can be temporarily adjusted by the user then instructions and markings shall be provided in accordance with the requirements of EN 131-3.	$b_2=660\text{mm}$	<b>P</b>
<b>4.2.2</b>	One-piece leaning rung ladders		<b>N</b>
<b>4.2.3</b>	Sectional ladders		<b>N</b>
<b>4.2.4</b>	Extending ladders		<b>N</b>
	If the top ladder element is more than 3 000 mm then it should not be separable if the design introduces new hazards in use.		<b>N</b>

<b>EN 131-1</b>			
<b>Clause</b>	<b>Requirement – Test</b>	<b>Result - Remark</b>	<b>Verdict</b>
	The design of the stabilizer shall not create the possibility of foreseeable misuse or introduce additional hazards. See Figure 32.		<b>N</b>
	The dimension of the overlap depends on calculation and design of the ladder. It is determined by the manufacturer. The function and carrying capacity of the overlap shall be verified by means of the test according to EN 131-2.		<b>N</b>
<b>4.3</b>	Standing rung ladders		<b>N</b>
	The legs are connected with hinge joints and shall be secured from sliding apart. Functional size are given in Table 3.		<b>N</b>
<b>4.4</b>	Combination ladders		<b>N</b>
<b>4.4.1</b>	General	Be used as standing ladders, the ladder parts be secured from sliding apart	<b>N</b>
<b>4.4.2</b>	Two-piece combination ladder	$b_1=370\text{mm}$ , $b_2=660\text{mm}$	<b>P</b>
	If the top ladder element is more than 3000mm then it should not be separable if the design introduces new hazards in use. See Figure 32.		<b>P</b>
<b>4.4.3</b>	Three-piece combination ladder		<b>N</b>
	If the top ladder element is more than 3 000 mm then it should not be separable if the design introduces new hazards in use. See Figure 32.		<b>N</b>
<b>4.5</b>	Leaning step ladders		<b>N</b>
	The permissible inclination $\alpha$ applies to the height of the touch-down surface above floor level, when the steps are in horizontal position. Functional sizes are given in Table 6.		<b>N</b>
<b>4.6</b>	Standing step ladders		<b>N</b>
	The legs are connected with hings joints and shall be secured from sliding apart.		<b>N</b>
	During the use of tadder the steps shall be in horizontal position.		<b>N</b>
	The projection of the handrail onto the platform shall not go beyond the latter.		<b>N</b>
	The radius of the horizontal edges of a platform shall be max 15 mm (see Figure 37) in order to avoid slipping at the edges of the platform.		<b>N</b>

EN 131-1			
Clause	Requirement – Test	Result - Remark	Verdict
	Functional sizes are given in Table 7.		<b>N</b>
<b>4.7</b>	Standing rung and step ladder		<b>N</b>
	The rung section shall be designed in accordance with 4.3 and the step section in accordance with 4.6.		<b>N</b>

<b>EN 131-2</b>			
<b>Clause</b>	<b>Requirement – Test</b>	<b>Result - Remark</b>	<b>Verdict</b>
<b>4.</b>	<b>Requirements</b>		<b>P</b>
<b>4.1</b>	General		<b>P</b>
	Be based upon a maximum total load of 150kg		<b>P</b>
	Ladder are determined to be use by one person at a time per ascending leg of ladder		<b>P</b>
<b>4.2</b>	Materials		<b>P</b>
<b>4.2.1</b>	Aluminium – alloy	Have an elongation A <sub>5</sub> at rupture of minimum 5% and a thickness of at least 1.2mm	<b>P</b>
<b>4.2.2</b>	Steel		<b>N</b>
<b>4.2.3</b>	Plastics	Made from Fibreglass with 2.5-3.0 mm material Protected against penetration of water and dirt, The surface smooth, The fibres embedded, The Barcol hardness>35	<b>N</b>
<b>4.2.4</b>	Timber		<b>N</b>
<b>4.2.4.1</b>	Different kind of timber		<b>N</b>
<b>4.2.4.2</b>	General requirements		<b>N</b>
<b>4.2.4.3</b>	Knots		<b>N</b>
<b>4.2.4.3.1</b>	Knots in stiles and supporting elements		<b>N</b>
<b>4.2.4.3.2</b>	Knots in rungs, steps, braces		<b>N</b>
<b>4.2.4.4</b>	Moisture content at time of manufacture		<b>N</b>
<b>4.2.4.5</b>	Laminated wood		<b>N</b>
<b>4.2.4.6</b>	Adhesives		<b>N</b>
<b>4.3</b>	Design		<b>P</b>
	Shearing points or squeeze points shall be avoided		<b>P</b>
	All connections shall be durable and have a strength corresponding to the strain		<b>P</b>

<b>EN 131-2</b>			
<b>Clause</b>	<b>Requirement – Test</b>	<b>Result - Remark</b>	<b>Verdict</b>
	The connections shall be designed in a manner that arising notch tensions remain low		<b>P</b>
	Screws and nuts shall be secured against self-acting slackening		<b>P</b>
	Nails are allowed when their function is related to the production process		<b>P</b>
	Welding of joints is permitted if welding procedures and welding personnel are suitable		<b>P</b>
<b>4.4</b>	Surface finish		<b>P</b>
	Accessible edges, corners, and protruding parts	Be free of burrs, chamfered or rounded	<b>P</b>
	Metals parts susceptible to corrosion shall be protected by means of a paint coating or other coating		<b>P</b>
	Wooden parts shall be treated on all sides	Not use wooden	<b>N</b>
	The coating be transparent and permeable to water vapour		<b>P</b>
<b>4.5</b>	Hinges		<b>N</b>
	Hinges shall connect the legs of the standing rung ladders and the standing step ladders durably		<b>N</b>
	Hinges shall be designed in such a manner that no abutment of the ladder parts over the hinges is formed during use of the ladder		<b>N</b>
	The hinge pin is to be secured against unintentional loosening		<b>N</b>
	The diameter of steel hinge pins shall not be less than 5.3mm		<b>N</b>
	If the pin has several shearing points there is no restriction as to the hinge pin diameter		<b>N</b>
<b>4.6</b>	Opening restraints	No such devices, be instead of locking devices	<b>P</b>
	The legs of the standing ladders shall be prevented from opening beyond the normal use configuration by means of opening restraints		<b>P</b>

<b>EN 131-2</b>			
<b>Clause</b>	<b>Requirement – Test</b>	<b>Result - Remark</b>	<b>Verdict</b>
	If chains are used, all chain links with the exception of the first one shall be free to move		<b>N</b>
	The opening restraints shall satisfy the tests according to clause 5.8		<b>P</b>
<b>4.7</b>	Rungs/steps/platforms		<b>P</b>
	Be made of metal or plastics shall have a textured surface on the working fact to reduce slipping	Be metal	<b>P</b>
	The contact surface of the coverings shall adhere firmly to the rungs or steps		<b>P</b>
	Rungs and steps shall be firmly and durably connected to the stiles		<b>P</b>
	For wooden rungs		<b>N</b>
	Round rungs shall have a diameter greater than or equal to 25mm	Not be round rungs	<b>N</b>
	The top surface of flat standing surfaces shall have an angle less than or equal to 25° to the horizontal.		<b>N</b>
	For leaning ladders the angle related to the stile shall be 65° to 90° for rungs and 60° to 70° for steps		<b>P</b>
<b>4.8</b>	Platform		<b>N</b>
<b>4.9</b>	Ladder feet and anti-skid devices		<b>P</b>
	Bottom ends of the ladder shall be slip resistant	By safety rubber shoes	<b>P</b>
<b>4.10</b>	Extending and sectional ladders		<b>N</b>
<b>4.10.1</b>	Rung/step hooks/locking devices		<b>N</b>
<b>4.10.2</b>	Ropes		<b>N</b>
<b>5.</b>	<b>Testing</b>		<b>P</b>
<b>5.1</b>	General		<b>P</b>
<b>5.2</b>	Strength test of stiles		<b>P</b>

<b>EN 131-2</b>			
<b>Clause</b>	<b>Requirement – Test</b>	<b>Result - Remark</b>	<b>Verdict</b>
	Ladder class 1: Non- professional Test load F : 2250N	The ladder shall remain functional with no fracture or visible cracks. The ladder shall sustain the load without ultimate failure. Permanent deformation shall be allowed.	<b>P</b>
	Ladder class 1.44: Non- professional Test load F : 2700N	The ladder shall remain functional with no fracture or visible cracks. The ladder shall sustain the load without ultimate failure. Permanent deformation shall be allowed.	<b>N</b>
<b>5.3</b>	Bending test of the stiles		<b>P</b>
	A test load F of 750N shall be applied vertically on the centre of the ladder for a duration of at least 1 minute		<b>P</b>
<b>5.4</b>	Lateral deflection test of the ladder		<b>P</b>
	A pre-load of 100N shall be applied for the duration of one minute		<b>P</b>
	A load F of 250N shall be applied to the lower stile equidistant from the supports		<b>P</b>
<b>5.5</b>	Bottom stile ends test	Neither fracture nor visible cracks	<b>P</b>
	A vertical force F of 1100N is placed in the middle of the load block and is maintained for one min.		<b>P</b>
<b>5.6</b>	Vertical load on rungs, steps and platforms		<b>P</b>
	A pre-load F of 200N be applied for the duration of one min.		<b>P</b>
	For rungs and steps, a test load F of 2600N be applied vertically on the mid-point for the duration of one min.	After test, the max permanent deformation $\leq$ 5% b1	<b>P</b>

<b>EN 131-2</b>			
<b>Clause</b>	<b>Requirement – Test</b>	<b>Result - Remark</b>	<b>Verdict</b>
	For platform, a test load F of 2600N be applied vertically in the centre and at a corner of the front edge for the duration of one min	After test, the max permanent deformation $\leq$ 5% b1	<b>N</b>
<b>5.7</b>	Torsion test of rungs and steps		<b>P</b>
	A torque M of 50Nm be applied on the midpoint alternately 10 times in clockwise and 10 times in counter-clockwise direction for a period of 10s each	No relative movement in the connection between stile and rung	<b>P</b>
<b>5.8</b>	Test of opening restraints and hinges of standing ladders		<b>P</b>
	The test load F of 1300N be applied to each uppermost rung as close as possible to the stiles for a duration of 1min		<b>P</b>
<b>5.9</b>	Test for ladder rung/step hooks of extending ladders and combination ladders	Be combination ladders	<b>N</b>
	A uniformly distributed test load F of 3500N be applied vertically to the upper part of the ladder for a period of 1 min	No permanent distortion in locking devices	<b>N</b>
<b>5.10</b>	Kick-up test of the platform of standing ladders		<b>N</b>
	A force F of 100N be applied to the pivoted edge of the platform at an angel of 90° to the horizontal	Not lift from its stop by more than 6°	<b>N</b>
<b>5.11</b>	Feet pull test		<b>P</b>
<b>5.11.1</b>	For ladder feet made of one part		<b>P</b>
<b>5.11.2</b>	For feet made of one part on stabilizer bars supplied by the ladder manufacturer		<b>P</b>
	A load of 150N be applied to a free foot in the position and direction most likely to separate the foot from the stabilizer bar for 1 min	Remain functional and show a movement from its original position of less than or equal to 4mm	<b>P</b>
<b>5.11.3</b>	For ladder feet and feet of stabilizer bars made of more than one part		<b>N</b>
<b>5.12</b>	Test on handrails		<b>P</b>
<b>5.12.1</b>	Standing ladder top handrail	Not show any visible permanent deformation	<b>N</b>

<b>EN 131-2</b>			
<b>Clause</b>	<b>Requirement – Test</b>	<b>Result - Remark</b>	<b>Verdict</b>
	A vertical load of 300N be applied to the top centre of the hand for 1min		<b>N</b>
<b>5.12.2</b>	Side handrail		<b>N</b>
<b>5.13</b>	Maximum extension of ladder	The lower stile ends of the upper sections are no permitted to pass the second rung from top of the section underneath.	<b>N</b>
<b>5.14</b>	3-part combination ladder in A-position test	The free movement of the top section be less than or equal to 5°	<b>N</b>
<b>5.15</b>	Torsion test for standing ladders		<b>P</b>
	A vertical load $F1$ of 736 N uniformly distributed, is applied to topmost rung or step or the platform of the ladder.		<b>P</b>
	A horizontal load $F2$ of 137 N shall be applied to the end of the load bar towards the rear of the ladder perpendicular to the bar and parallel to the ground.		<b>P</b>
<b>5.16</b>	Test methods for plastic ladders		<b>N</b>
<b>5.16.1</b>	Thermoset plastics and composite materials		<b>N</b>
	Ageing test condition: - test duration be 500 h; - the temperature chosen for the black standard is $(65 \pm 3) ^\circ\text{C}$ ; - the relative humidity chosen is $(65 \pm 3) \%$ ; - the specimens be exposed to a xenonarc light; - the cycle be conducted without any dark period under continuous illumination for $(102 \pm 0,5)$ min and a sprinkling period of $(18 \pm 0,5)$ min;		<b>N</b>
	Shock test: - the shocks be administered perpendicular to the longitydinaldirection of the fibres; - the shocks be delivered in flat position (f) and in normal position(n)	The difference before and after the shock test $\leq 20\%$	<b>N</b>

<b>EN 131-2</b>			
<b>Clause</b>	<b>Requirement – Test</b>	<b>Result - Remark</b>	<b>Verdict</b>
	Bending test: Test be conducted in accordance with the 3 point loading method(methob A- Class IV)	The difference before and after the bending test $\leq$ 20%	<b>N</b>
<b>5.16.2</b>	Reinforced thermoplastics		<b>N</b>
	Ageing test: - test duration be 500 h; - the specimens be exposed to a xenonarc light; - the temperature chosen for the black standard is (65 $\pm$ 3) °C; - the relative humidity chosen is (65 $\pm$ 3) %; - the cycle be conducted without any dark period under continuous illumination for (102 $\pm$ 0,5) min and a sprinkling period of (18 $\pm$ 0,5) min;		<b>N</b>
	Tensile test		<b>N</b>
<b>5.16.3</b>	Dielectric test	For use in voltage is less than AC 1000V and DC 1500V	<b>N</b>
	The electrical voltage is greater than 1000 V, then the ladders shall complay with EN 61478		<b>N</b>
	The section is immersed for 24 h in water with a resistivity of (100 $\pm$ 15) $\Omega$ x m then bach and hung uprihht for 4 h, frequency 40Hz and 62Hz, 1 KV/s to test in carried out on the adjacent rungs and in contact withc the stiles (rails).	No flashover, no puncture and no temperature rise occurs on the stiles.	<b>N</b>
<b>5.17</b>	Durability test for standing ladders		<b>P</b>
	This test is for standing ladders or any ladder that can be used as a standing ladder.		<b>P</b>
	The test has criteria of 10 000 cycles for non-professional class		<b>P</b>
	50 000 cycles for professional class		<b>N</b>
<b>5.18</b>	Base slip test for leaning ladders		<b>P</b>
	The ladder feet shall not move outwards more than 40 mm with respect to the origin for measurement.		<b>P</b>

EN 131-2			
Clause	Requirement – Test	Result - Remark	Verdict
5.19	Strength test for lateral type stabilizers on leaning ladders which are in the plane of the ladder		P
	After removal of the test load the ladder, stabilizers and their connections shall remain functional with no fracture or visible cracks.		P
5.20	Strength test for pole type stabilizers on leaning ladders which are not in the plane of the ladder		N
	After removal of the test load the ladder, stabilizers and their connections shall remain functional with no fracture or visible cracks.		N
5.21	Torsion test for leaning ladders		P
<b>6.</b>	<b>Markings</b>		<b>P</b>
	Ladders should be marked with the relevant parts of EN 131 to which they fully comply and the year of revision(s)	EN131	P
	The marking shall be durable and contain the following:		P
	The marking and user instructions in accordance with EN 131-3		P
	Marking shall be durable		P
<b>7.</b>	<b>Certification</b>		<b>P</b>
	This standard may be a basis for a certification.	EN131-2	P

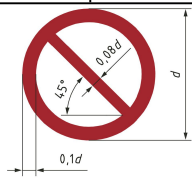
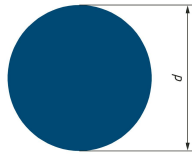
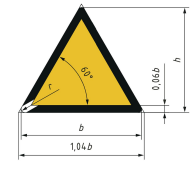
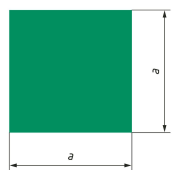

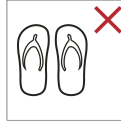
EN 131-3			
Clause	Requirement – Test	Result - Remark	Verdict
<b>4.</b>	<b>Provision of safety marking and user instructions</b>		<b>P</b>
	The producer shall be responsible for the content of the safety marking and user instructions and the provision of the instructions with each other		<b>P</b>
	The distributor should ensure that the safety marking and user instructions are provided for each ladder		<b>P</b>
	The user instruction shall indicate that it shall be read before using the ladder.		<b>P</b>
	The ladder owner should ensure that user instructions are available to the user		<b>P</b>
	the user instructions are provided in the official languages of the country where the ladder is placed on the market.	English	<b>P</b>
	The following list of text within supplementary safety information symbols need not be translated:		<b>P</b>
	a) max.;		-
	b) min.;		-
	c) H20;		-
	d) Oil,		-
	e) Up;		-
	f) Stop.		-

<b>5.</b>	<b>Reasons for accidents</b>		<b>P</b>
	a) loss of stability		<b>P</b>
	1) incorrect choice of ladder;		-
	2) incorrect positioning of the ladder;		-
	3) slide outwards at the bottom;		-
	4) side slip, and top flip for leaning ladders;		-
	5) falling sideways;		-


















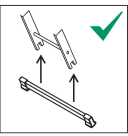
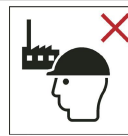



<b>EN 131-3</b>			
<b>Clause</b>	<b>Requirement – Test</b>	<b>Result - Remark</b>	<b>Verdict</b>
	6) condition of the ladder;		-
	7) stepping off an unsecured ladder at height;		-
	8) ground conditions;		-
	9) adverse weather conditions;		-
	10) collision with the ladder;		-
	b) from handling		<b>P</b>
	1) transferring the ladder to the work position;		-
	2) erecting and dismantling the ladder;		-
	3) carrying items up the ladder;		-
	c) slip trip and fall of user		<b>P</b>
	1) inappropriate footwear;		-
	2) contaminated rungs or steps;		-
	3) unsafe user practices;		-
	4) ground conditions;		-
	d) structural failure of ladder		<b>P</b>
	1) condition of the ladder;		-
	2) overloading the ladder;		-
	3) unintended use;		-
	e) electrical hazards		<b>P</b>
	1) incorrect selection of type of ladder for electrical work;		-
	2) unavoidable live working;		-
	3) positioning ladders too close to live electrical equipment;		-
	4) ladders damaging electrical equipment;		-
<b>6.</b>	<b>Marking and user instruction</b>		<b>P</b>


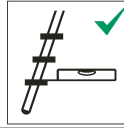

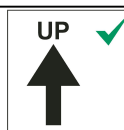
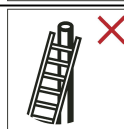



<b>EN 131-3</b>			
<b>Clause</b>	<b>Requirement – Test</b>	<b>Result - Remark</b>	<b>Verdict</b>
<b>6.1</b>	General		<b>P</b>
	All marking detailed under Clause 6 shall be fixed permanently, according to EN 131-2, to the ladder surface.		<b>P</b>
	In 6.3, the minimum requirements for marking and user instructions are specified.		<b>P</b>
	The user instruction shall list the items to be inspected and checked. Details of how to obtain the pass/fail criteria shall be in the user instructions or marked on the ladder;		<b>P</b>
	The user instruction shall be supplied with the ladder and should be made available on the producer's website also.		<b>P</b>
	The user instruction shall include identity and address of the producer and/or distributor including website address.	ZHEJIANG LEADER INDUSTRY & TRADE CO., LTD.  2TH FLOOR BUILDING 6, NO.8 LONGTAI ROAD, LONGSHAN TOWN, YONGKANG, JINHUA, ZHEJIAGN PROVINCE, CHINA	<b>P</b>
	User instructions shall repeat all safety markings which are on the ladder.		<b>P</b>
	The maximum number of safety signs should be reduced to a number that users are able to identify and comply with when using the ladder.		<b>P</b>
<b>6.2</b>	Basic marking on the ladder		<b>P</b>
	Basic marking information may be given in the form of safety signs or text. The marking shall include:		<b>P</b>
	a) Identity and address of the producer and/or distributor including website address for information about the ladder;	ZHEJIANG LEADER INDUSTRY & TRADE CO., LTD.  2TH FLOOR BUILDING 6, NO.8 LONGTAI ROAD, LONGSHAN TOWN, YONGKANG, JINHUA, ZHEJIAGN PROVINCE, CHINA	<b>-</b>





<b>EN 131-3</b>			
<b>Clause</b>	<b>Requirement – Test</b>	<b>Result - Remark</b>	<b>Verdict</b>
	NOTE EU Directive 2001/95/EC requires an address of the distributor inside the European Community if the producer is established outside the European Community.		-
	b) Type of ladder and possible modes of use;	ALUMINUM MULTIPURPOSE LADDER	-
	c) Classification of use “professional” or “non-professional” as specified in EN 131-2;		-
	d) Number of the general standard EN 131 or if a dedicated standard exists, the number of this standard (e.g. EN 131-4).;		-
	e) Month and year of production and/or serial number (may also be stamped);	July, 2023	-
	f) Weight of the ladder (in kg) and maximal total load (in kg);	Weight: 14kgs Max Load: 150kg	-
	g) Insulation, if any. Information a), b), c) and f) shall also appear on the packaging or be otherwise clearly visible to the consumer before the purchase.		-
<b>6.3</b>	Safety marking and user instructions		<b>P</b>
<b>6.3.1</b>	General		<b>P</b>
	The basic safety marking shall be attached to all ladders and ladder parts which can be used separately as an easily viewed symbol.		<b>P</b>
	The marking to indicate the top most rung/step that shall be used for standing on, shall be placed;		<b>P</b>
	— on the stile of the ladder adjacent to or on the last /allowed; or		-
	— on the first /not allowed rung/step; or		-
	— on the label for safety marking.		-
	NOTE 1 EU Directive 2001/45/EC requires that a secure handhold and secure support is available to the user at all times.		-




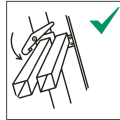
EN 131-3				
Clause	Requirement – Test	Result - Remark	Verdict	
	The user instructions shall be written in the official languages of the country where the ladder is placed on the market in accordance with EN 82079-1.		-	
	NOTE 2 According to EN 82079-1 the minimum size of text in the user instruction is 9 PT.		-	
<b>6.3.2</b>	Safety signs		<b>P</b>	
<b>6.3.2.1</b>	Basic safety signs		<b>P</b>	
	The geometric shape of basic safety signs shall be in accordance with ISO 3864-1, ISO 3864-3 and be based upon the EN ISO 7010 template for safety signs with a minimum size $d$ and $h$ of 15 mm		<b>P</b>	
				
	a) Prohibition sign	b) Mandatory action sign	c) Warning sign	d) Safe condition sign
<b>6.3.2.2</b>	Supplementary safety information symbols		<b>P</b>	
	The minimum height $h$ of supplementary safety information symbols is 15 mm.		-	
		a) Necessary action		b) Not allowed
<b>6.3.3</b>	Basic safety marking and user instructions for all ladders	See marking label	<b>P</b>	
	1) Warning, fall from the ladder. This warning sign shall appear on each marking on the ladder at the first place.		-	
	2) Refer to instruction manual/booklet		-	
	3) Inspect the ladder after delivery. Before every use visually check the ladder is not damaged and is safe to use. Do not use a damaged ladder.		-	
	4) Maximum total load		-	

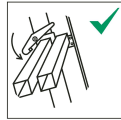
<b>EN 131-3</b>			
<b>Clause</b>	<b>Requirement – Test</b>	<b>Result - Remark</b>	<b>Verdict</b>
	5) Do not use the ladder on a unlevel or unfirm base.		-
	6) Do not overreach.		-
	7) Do not erect ladder on contaminated ground.		-
	8) Maximum number of users		-
	9) Do not ascend or descend unless you are facing the ladder.		-
	10) Keep a secure grip on the ladder when ascending and descending. Maintain a handhold whilst working from a ladder or take additional safety precautions if you cannot.		-
	11) Avoid work that imposes a sideways load on ladders, such as side-on drilling through solid materials.		-
	12) Do not carry equipment which is heavy or difficult to handle while using a ladder.		-
	13) Do not wear unsuitable footwear when climbing a ladder.		-
	14) Do not use the ladder if you are not fit enough. Certain medical conditions or medication, alcohol or drug abuse could make ladder use unsafe.		-
	15) Do not spend long periods on a ladder without regular breaks (tiredness is a risk).		-
	16) Prevent damage of the ladder		-
	17) Ensure the ladder is suitable for the task.		-
	18) Do not use the ladder if contaminated,		-
	19) Do not use the ladder outside in adverse weather conditions		-
	20) For professional use a risk assessment		-
	21) When positioning the ladder take into account risk of collision with the ladder		-





EN 131-3					
Clause	Requirement – Test			Result - Remark	Verdict
	22) Warning, electricity hazard				-
	23) Use non-conductive ladders for unavoidable live electrical work.				-
	24) Do not use the ladder as a bridge.				-
	25) Do not modify the ladder design.				-
	26) Do not move a ladder while standing on it.				-
	27) For outdoor use caution to the wind.				-
	28) If a ladder is delivered with stabilizer bars and these bars should be fixed by the user before the first use this shall be described on the ladder and in the user instruction.				-
	29) Ladder for domestic use				-
	30) Ladder for professional use				-
	<b>Shows the minimum requirements for safety marking, user instructions and the mandatory symbols for all ladders.</b>				-
 EN ISO 7010-W008 1	 EN ISO 7010-M002 2	 3	 4	 5	 6
 7	 8	 9	 10	 11	 12
 13	 14	 EN ISO 7010-W012 22	 22	 24	 28
 29	 29	 30	 30		




EN 131-3			
Clause	Requirement – Test	Result - Remark	Verdict
<b>6.3.4</b>	Leaning ladders	See marking label	<b>P</b>
	Shows in addition to the basic requirements (see 6.3.3) the minimum requirements for safety marking, user instructions and the mandatory symbols for leaning ladders.		<b>P</b>
	1) Leaning ladders with rungs shall be used at the correct angle.		-
	2) Leaning ladders with steps shall be used that the steps are in a horizontal position.		-
	3) Ladders used for access to a higher level shall be extended at least 1 m above the landing point and secured, if necessary.		-
	4) Only use the ladder in the direction as indicated, only if necessary due to design of ladder.		-
	5) Do not lean the ladder against unsuitable surfaces.		-
	6) Ladder shall never be moved from the top.		-
	7) Do not stand on the top three steps/rungs of a leaning ladder. For telescopic ladders the last metre shall not be used (see 6.3.9).		-
<b>6.3.5</b>	Standing ladders	See marking label	<b>N</b>
	Shows in addition to the basic requirements (see 6.3.3) the minimum requirements for safety marking, user instructions and the mandatory symbols for standing ladders.		<b>N</b>
	1) Do not step off the side of standing ladder onto another surface.		-
	2) Open the ladder fully before use.		-






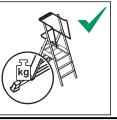


<b>EN 131-3</b>			
<b>Clause</b>	<b>Requirement – Test</b>	<b>Result - Remark</b>	<b>Verdict</b>
	3) Use the ladder with restraint devices engaged only.		-
	4) Standing ladders shall not be used as a leaning ladder unless it is designed to do so.		-
	5) Do not stand on the top two steps/rungs of a standing ladder without a platform and a hand/knee rail.		-
	6) Any horizontal surface which looks like a platform on a standing ladder that is not designed for standing on shall be clearly indicated on that surface.		-
<b>6.3.6</b>	Combination ladders	See marking label	<b>P</b>
	The combination ladder is designed to be used as a leaning ladder, the safety marking and user instructions shall comply with the requirements of 6.3.4.		<b>P</b>
	The combination ladder is designed to be used as a standing ladder, the safety marking and user instructions shall comply with 6.3.5.		<b>N</b>
	Shows in addition to the requirements of 6.3.3 and 6.3.4 and/or 6.3.5 where relevant, the minimum requirements for safety marking, user instructions and the mandatory symbols for combination ladders.		<b>N</b>
	NOTE See EN 131-1 for the definition of a combination ladder.		<b>N</b>

EN 131-3			
Clause	Requirement – Test	Result - Remark	Verdict
	<p>1) Do not climb above the rung or tread recommended by the producer, of a combination ladder used in the standing ladder position, with extending ladder at the top or in the stairway position. The minimum requirement shall always be: Do not climb above the top four steps/rungs. When the safety marking is indicated on the rung, the minimum height of these symbols shall be 15 mm and the minimum width shall be 30 mm. Alternatively, the rungs or treads not to be used may be indicated on the ladder.</p>	  <p>to be indicated on the rung</p>  <p>to be indicated on the ladder</p>	-
	<p>2) Locking devices shall be checked and be fully secured before use if not operated automatically.</p>		-
	<p>The symbol shows a particular design which might differ from the real product. The manufacturer may use a different symbol showing the particular design of his specific product.</p>		

<b>6.3.7</b>	Extending ladders		<b>N</b>
	Shows in addition to the requirements of 6.3.3 and 6.3.4 the minimum requirements for safety marking, user instructions and the mandatory symbols for extending ladders.		<b>N</b>
	NOTE See EN 131–1 for the definition of an extending ladder.		<b>N</b>
	1) Locking devices shall be checked and be fully secured before use if not operated automatically.		-
	<p>The symbol shows a particular design which might differ from the real product. The manufacturer may use a different symbol showing the particular design of his specific product.</p>		-
	2) The loose end of the rope shall be tied to the ladder		-
<b>6.3.8</b>	Single or multi-hinge joint ladders	See marking label	<b>P</b>

EN 131-3			
Clause	Requirement – Test	Result - Remark	Verdict
	The single or multi-hinge joint ladder is designed to be used as a leaning ladder, the safety marking and user instructions shall comply with the requirements of 6.3.4.		P
	The single or multi-hinge joint ladder is designed to be used as a standing ladder, the safety marking and user instructions shall comply with 6.3.5.		P
	Shows in addition to the requirements of 6.3.3 and 6.3.4 and/or 6.3.5 and 6.3.7 where relevant, the minimum requirements for safety marking, user instructions and the mandatory symbols for single or multi-hinge joint ladders.	6.3.3 and 6.3.4	P
	NOTE See EN 131-4 for the definition of single or multi-hinge joint ladders.		P
	1) Single or multiple joint ladders should be unfolded/folded when lying on the ground and not in its use position.		-
	2) If the ladder is used as a platform, only deckings recommended by the ladder producer shall be used. The decking shall be secured before use		-
	3) Prohibited positions (see EN 131-4:2007, Clause 7): M-position, upside-down position (only if necessary due to design of ladder).		-
	4) Max. load of platform in scaffold position (see EN 131-4:2007, Clause 7) declared by the manufacturer (120 kg to 150 kg) (only if necessary due to design of ladder).		-
	5) Ensure that the hinges are locked.		-
The symbol shows a particular design which might differ from the real product. The manufacturer may use a different symbol showing the particular design of his specific product.			
6.3.9	Telescopic ladders	See marking label	N

<b>EN 131-3</b>			
<b>Clause</b>	<b>Requirement – Test</b>	<b>Result - Remark</b>	<b>Verdict</b>
	The telescopic ladder is designed to be used as a leaning ladder, the safety marking and user instructions shall comply with the requirements of 6.3.4.		<b>N</b>
	The telescopic ladder is designed to be used as a standing ladder, the safety marking and user instructions shall comply with 6.3.5.		<b>N</b>
	Table 7 shows in addition to the requirements of 6.3.3 and 6.3.4 and/or 6.3.5 where relevant, the minimum requirements for safety marking, user instructions and the mandatory symbols for telescopic ladders.		<b>N</b>
	NOTE See EN 131-6 for the definition of telescopic ladders.		-
	1) All locking mechanisms for all extended rungs/steps shall be checked and be locked before use.		-
	2) Instruction for handling of locking mechanisms including indication of locked or unlocked position.		-
	3) Do not bring your hands / fingers in rung area		-
	The symbol shows a particular design which might differ from the real product. The manufacturer may use a different symbol showing the particular design of his specific product.		-
	4) Do not stand on the last metre of a telescopic ladder.		-
<b>6.3.10</b>	Mobile ladders with platform	See marking label	<b>N</b>
	Shows in addition to the basic requirements (see 6.3.3) the additional requirements for safety marking, user instructions and the mandatory symbols for mobile ladders with platform.		<b>N</b>
	NOTE See EN 131-7 for the definition of mobile ladders with platform.		<b>N</b>

EN 131-3			
Clause	Requirement – Test	Result - Remark	Verdict
	1) Do not step off the side of the mobile platform ladder onto another surface.		-
	2) Fully open before use (foldable mobile platform ladders).		-
	3) Use the ladder with restraint devices engaged only (only if necessary due to design of ladder).		-
	4) Any horizontal surface which looks like a platform on a mobile platform ladder that is not designed for standing on shall be clearly indicated on that surface, (only if necessary due to design of ladder).		-
	5) Use only with stabilizer (if part of the ladder).		-
	The symbol shows a particular design which might differ from the real product. The manufacturer may use a different symbol showing the particular design of his specific product.		-
	6) Use only with ballast (if part of the ladder).		-
	The symbol shows a particular design which might differ from the real product. The manufacturer may use a different symbol showing the particular design of his specific product.		-
	7) Use only with activated brakes (if part of the ladder).		-
	8) Do not use ladders outdoors which are not intended for this purpose.		-

<b>7.</b>	<b>Repair, maintenance and storage</b>		<b>P</b>
	Repairs and maintenance shall be carried out by a competent person and be in accordance with the producer's instructions.		<b>P</b>

<b>EN 131-3</b>			
<b>Clause</b>	<b>Requirement – Test</b>	<b>Result - Remark</b>	<b>Verdict</b>
	NOTE A competent person is someone who has the skills to carry out repairs or maintenance, e.g. by a training by the manufacturer.		<b>P</b>
	For repair and replacement of parts, e.g. feet, if necessary contact the producer or distributor.		<b>P</b>
	Ladders should be stored in accordance with the producer's instructions.		<b>P</b>
	Ladders made of or using thermoplastic, thermosetting plastic and reinforced plastic materials should be stored out of direct sunlight.		<b>N</b>
	Ladders made of wood should be stored in a dry place and shall not be coated with opaque and vapour-tight paints.		<b>N</b>

EN 131-4			
Clause	Requirement – Test	Result - Remark	Verdict

<b>4.</b>	<b>Functional dimensions</b>		<b>P</b>
<b>4.1</b>	General		<b>P</b>
	Ladders can be used as leaning ladders, the functional dimensions for leaning ladders shall apply.	See EN 131-1	<b>P</b>
	Ladders can be used as standing ladders, the functional dimensions for leaning ladders shall apply.	See EN 131-1	<b>P</b>
<b>4.2</b>	Hinged ladders in “platform” position		<b>P</b>
<b>4.3</b>	Hinged ladders in “stand-off” position		<b>P</b>

<b>5.</b>	<b>Requirements</b>		<b>P</b>
<b>5.1</b>	General		<b>P</b>
	Be based upon a maximum total load of 150kg		<b>P</b>
	Hinge-joint ladders are determined to be used by one person at a time		<b>P</b>
<b>5.2</b>	Decking component	The decking component be secured against unintentional movement and have an antiskid working surface	<b>P</b>
<b>5.3</b>	Ladder hinged in the longitudinal direction		<b>P</b>
	All hinges should be locked in the position of use except for the centre hinge in the standing ladder position, which may be unlocked. The storage position(folded) is not required to be lockable.		<b>P</b>

<b>6.</b>	<b>Test methods</b>		<b>P</b>
<b>6.1</b>	General	See EN 131-2	<b>P</b>
<b>6.2</b>	Tests method for hinge ladders		<b>P</b>

<b>EN 131-4</b>			
<b>Clause</b>	<b>Requirement – Test</b>	<b>Result - Remark</b>	<b>Verdict</b>
<b>6.2.1</b>	Principle		<b>P</b>
<b>6.2.2</b>	Strength test for ladders with hinges in longitudinal direction	Test load: Non-professional : 2250N Professional : 2700N	<b>P</b>
	Maximum extended ladder, removed the lateral or pole type stabilizers if have, the ascendance side cannot be determined by the construction, be used new ladder rotated 180° to second test.	<i>F</i> be applied to the centre of the ladder, a period of 1 min.	<b>P</b>
<b>6.2.3</b>	Additional strength test for ladders with more than one pair of hinges in longitudinal	Non-professional : 2250N Professional : 2700N	<b>P</b>
	Maximum extended ladder, removed the lateral or pole type stabilizers if have, the ascendance side cannot be determined by the construction, be used new ladder rotated 180° to second test.	<i>F</i> be applied to the rung or tread nearest top hinge of the ladder, a period of 1 min.	<b>P</b>
<b>6.2.4</b>	Cyclic test of hinge joint	Test all hinge joints types 4000 cycles	<b>P</b>
<b>6.2.5</b>	Test of the ladder in the platform position		<b>P</b>
<b>6.2.5.1</b>	General		<b>P</b>
<b>6.2.4.2</b>	Strength test of the decking component		<b>P</b>
	A pre-load <i>F</i> 100 N and test load <i>F</i> 1471 N for a period of 1min.	Deformation under load and residual deformation be all less than or equal to 1% of the decking component length or width.	<b>P</b>
<b>6.2.4.3</b>	Safety test of the ladder and decking components in the platform position	The test load Non-professional : 2250N Professional : 2700N	<b>P</b>
	Position a 200 mm x 200 mm rigid steel plate at the centre platform's longitudinal axis for a period of 1 min.	After test, the decking components for compliance with 6.1	<b>P</b>
<b>6.2.4.4</b>	Stability test of the ladders in the platform position		<b>N</b>
	Apply a load of 750 N distributed over a 200 mm x 200 mm rigid steel at the centre of platform's longitudinal axis.	A horizontal force <i>F</i> of 300N, not overturn	<b>N</b>
<b>6.2.4.5</b>	Test of decking component sliding		<b>N</b>

<b>EN 131-4</b>			
<b>Clause</b>	<b>Requirement – Test</b>	<b>Result - Remark</b>	<b>Verdict</b>
	A horizontal force of 300N be attached alternatively to the middle of each side of the deck component for a period of 1 min per each side.	Movement are not exceed 5mm in the lateral direction and the longitudinal	<b>N</b>
<b>6.2.6</b>	Cyclic test of hinge joints for lateral hinge ladders	4000 cycles	<b>P</b>
<b>6.2.7</b>	Capacity to pass from storage positions to working position in lateral direction	150N	<b>P</b>

<b>7.</b>	<b>Marking</b>		<b>P</b>
	Ladders shall meet the marking requirements of EN 131-3. marking shall comply with the requirements for durability according to EN 131-2.		<b>P</b>
	- prohibited positions shall be shown with a visually attached pictogram or text		<b>P</b>
	- marking shall indicate the possible level adjust position	See manual	<b>P</b>
	- maximum platform weight to be specified	See manual	<b>P</b>

<b>8.</b>	<b>User instructions</b>		<b>P</b>
	User instruction in accordance with EN131-3 shall be provided		<b>P</b>
	For hing ladders according to Clause 3, the following information be stated in the user manual or on the ladder		<b>N</b>
	When the hinge ladder is used as access equipment for a higher level, the ladder has to be secured against unintentional sideways sliding.		<b>N</b>

## Appendix 1

The whole views of 'ALUMINUM MULTIPURPOSE LADDER'

Model: AY-503

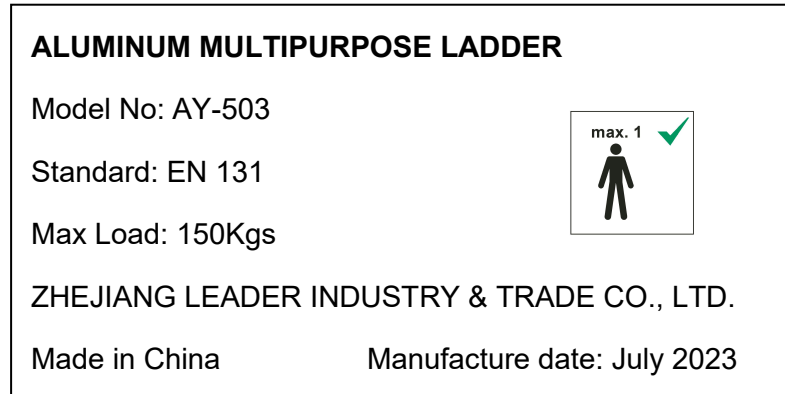


## Appendix 2

The product marking label view of 'ALUMINUM MULTIPURPOSE LADDER'

Model: AY-503

### Marking label



### Warning marking



--- END OF REPORT ---