

Test Conducted :

Number to test sample	:	1 piece
Sample description	:	Stair type steps
Defects observed before testing	:	No defects
Defects observed after testing	:	No defects were found, see attached photos

Test Conducted :

(EN 14183:2003) Step Stools

Clause	Test Method / Requirement	Result
4. Functional dimensions, designations, requirements		
Functional dimensions for all types of step stools	h : height from the floor to the top surface of the platform or seat h _{max} = 1000mm Actual size = 378mm	PASS
	a : Height from the floor to the top surface of the lowest step and between the top surface of subsequent steps, platform or seat. a _{max} = 250mm Actual size = 181mm	PASS
	b ₁ : Width of platform or seat. b _{1min} = 300mm Actual size = 380mm	PASS
	b ₂ : Width across the outer edges of legs at floor level. b _{2min} = b ₁ + 0.1h. = 417mm Actual size = 432mm	PASS
	b ₃ : Width of each step. b _{3min} = 250mm. Actual size = 380mm	PASS
	b ₅ : Depth of platform or seat. b _{5min} = 200mm, b _{5max} = 600mm Actual size = 260mm	PASS
	b ₆ : Depth across the outer edges of the legs at floor level b _{6min} = b ₅ + 0.1h = 297mm Actual size = 635mm	PASS
	b ₇ : Depth of all steps. b _{7min} = 80mm Actual size = 260mm	PASS
	b ₈ : Depth of stair type step stool. b _{8min} = 150mm Actual size = 260mm	PASS

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Clause	Test Method / Requirement	Result
Functional dimensions for all types of step stools	α : Angle between the horizontal and the leading edges of all climbing supports. $\alpha_{\min} = 45^\circ$, $\alpha_{\max} = 70^\circ$, When the heights $\leq 500\text{mm}$, $\alpha_{\max} = 80^\circ$ Actual angle = 35°	N/C SEE REMAEK 1
	β : Angle between the horizontal and an imaginary line drawn between the rear edge of the rear legs at floor level and the rear edge of the platform or seat. $\beta_{\min} = 45^\circ$, $\beta_{\max} = 87^\circ$ Actual angle = 85°	PASS
4.1 General	If the top surface is less than 240mm×400mm, the step stool or stair type steps with a height of more than 750mm shall have a handrail.	N/A SEE REMAEK 2
4.2 Step stool with fixed or folding legs	There shall be no gap between the projection of the steps to the ground.	N/A SEE REMAEK 2
4.3 Rigid or folding stair type steps	There shall be a minimum of 150mm not overlapping distance between the steps.	PASS
4.5 Dome type step stool	The platform shall have a minimum area of 600cm ² and shall include a square of 200mm×200mm	N/A SEE REMAEK 2
5. Additional requirements		
5.1 Materials		
5.1.1 General		
The requirements for materials only apply to load – bearing components.		
5.1.2 Plastic	When using plastic materials, ageing and temperature resistance have to be taken into account. Glass-fibre reinforced plastics shall be protected against penetration of water and dirt. The surface shall be smooth. The fibres shall be embedded.	N/A SEE REMAEK 2
5.1.3 Steel	Parts made of steel shall have a thickness of at least 0.9mm.	N/A SEE REMAEK 2

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Clause	Test Method / Requirement	Result
5.1.4 Aluminium	Parts made of aluminium shall have a thickness of at least 1.2mm	PASS
5.2 Steps and platforms	Top surfaces of steps and platforms shall have resistance against slipping. The contact surface of the coverings shall adhere firmly to the steps. Steps and platforms shall be firmly and durably connected to the stiles When loaded as specified in 6.2, the platform and the steps shall show no signs of damage, such as fractures, or cracks	PASS
5.3 Slip resistance		
5.3.1 Feet or bottom end of stiles	Feet or bottom end of stiles shall be soled with a slip resistant material. Requirements of 5.3 are considered to be met if successfully tested according to 6.3.	PASS
5.3.2 Roller and wheels	Where rollers or wheels are fitted, step stool and rigid steps shall be designed so as to prevent any accidental displacement when loaded. Rollers shall either be automatically locked or automatically disabled once the step stool or rigid steps are loaded.	N/A SEE REMAEK 2
5.4 Opening restraint and compression security devices	Step stool and stair type steps shall be prevented from unintended folding when deployed for use.	N/A SEE REMAEK 2
5.5 Design	Finger traps shall be avoided as far as possible. All connections shall be durable and have a strength corresponding to the strain. The connections shall be designed in a manner that arising notch tensions remain low. Screws and nuts shall be secured against self-acting slackening. Welding of joints is permitted if welding procedures and welding personnel are suitable.	PASS
5.6 Surface finish	In order to avoid injuries, accessible edges, corners, and protruding parts shall be free of burrs, chamfered or rounded. Metal parts susceptible to corrosion shall be protected by means of a paint coating or other coating. Under normal conditions aluminium alloy products are not likely to corrode and need no protection. If wooden parts are coated, the coating shall be transparent and permeable to water vapour.	PASS

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Clause	Test Method / Requirement	Result
5.7 Hinged (turning points)	Hinges shall connect the legs of the step stool durably. Hinges shall be designed in such a manner that no abutment of the step stool parts over the hinges if formed during use of the step stool. The hinge pin shall be secured against unintentional loosening. The diameter of steel hinge pins shall not be less than 5.0mm or screw M6. Pins of other materials shall have at least the same strength. If the pin has several shearing points there is no restriction as to the hinge pin diameter.	N/A SEE REMAEK 2
5.8 Padding	An assembled seat may have padding, which shall not exceed a thickness of 20mm in an unload state.	N/A SEE REMAEK 2
6 Test methods		
6.2 Vertical static load test of steps and platforms	All type of products covered by this standard shall be subjected to this test on each step, platform and seat. The padding of a padded seat shall be removed for this test. The product shall be placed on a firm, flat surface and deployed for use as detailed in the instructions for use. Loading shall be applied centrally and evenly distributed over an area of 100mm×100mm. Firstly apply a pre-load of 200N for the duration of 1 min. After this remove the pre-load and set measuring equipment to read the resulting position of the surface as a datum. Apply a load of 2600N for the duration of 1 min and then remove the load. Measure and record the permanent deflection from the datum. Also measure the width of the surface being tested. Examine and record any cracks or ruptures of materials. Any permanent deflection of metal or plastic parts shall be max. 1.5% of the width of the platform or the step. Measurement shall be carried out 1 min after load removal.	PASS
6.3 Determination of friction coefficient	Position the product on a 2mm plain decorative high-pressure laminate HPL EN 438-S333. Apply a load F of 125 N to the centre of the bottom step. Using appropriate measuring equipment measure the minimum horizontal pulling force Z required to overcome friction and cause the product to slide. Measure the weight of the product in Newtons G. Calculate the coefficient of friction using: Friction coefficient $\mu = Z / (G+F)$ shall be ≥ 0.2 .	PASS

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Clause	Test Method / Requirement	Result
	Duration: 1 min.	
6.4 Seat suitability test	This test only applies to step stools with padded seats. To test the seat as suitable for use as a climbing support, place a disc with a mass of 0.1kg and a diameter of 100mm on the centre of the seat. Place a cylindrical mass of 2kg with a diameter of 100mm on the disc. Measure and record the settlement of the disc due to the 2kg mass after 1 min. When tested, the settlement shall not exceed 10mm.	N/A SEE REMAEK 2
7 Instructions for use	Suitable instructions for use have to be provided by the manufacturer. This shall include the maximum total load of not more than 150kg	PASS
8 Marking	All marking shall be clear and durable and prominently positioned on the product. The marking shall include: 1. Manufacturer's declaration of suitability of use. The manufacturer shall advise of any limit of use to which the product is allowed and any environment for which it is unsuitable. 2. Name of the manufacturer and/or supplier 3. Product designation in accordance to clause 4 4. Year and month of manufacture and/or serial number 5. Maximum total load	PASS

Remark 1: N/C =Not conducted as per client's request.

Remark 2: N/A =Not applicable due to the design of the sample.

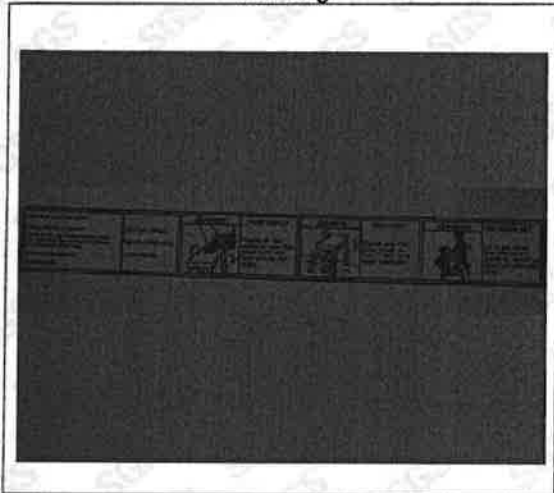
Remark 3: As per client's request, the test result for angle α was not conducted, and other test results, excluding instruction and marking, were copied from SHT002910952.

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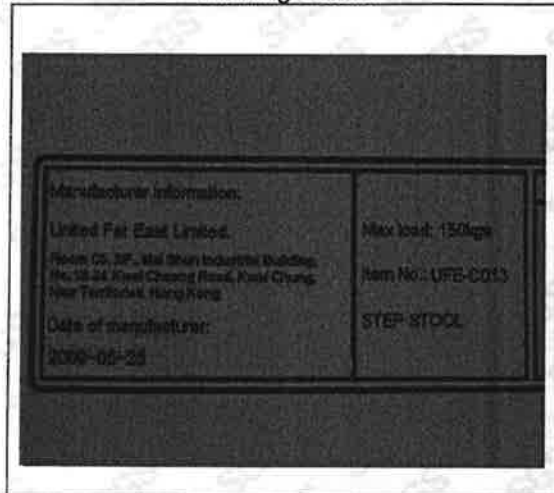


Sample Photo:

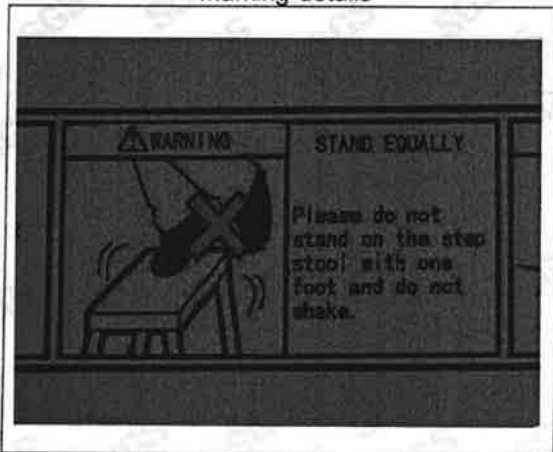
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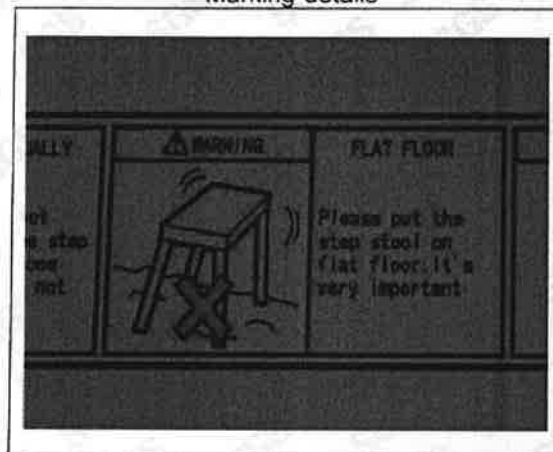
Marking-details



Marking-details



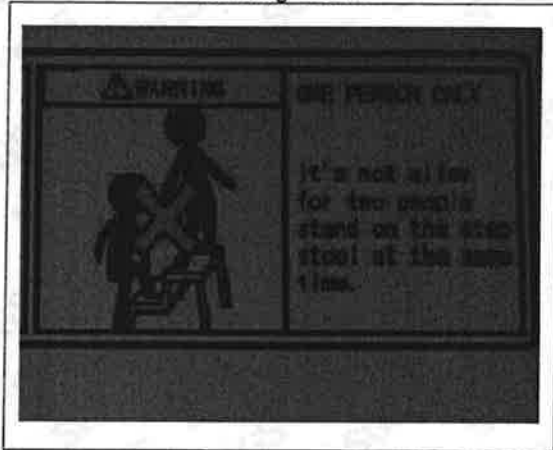
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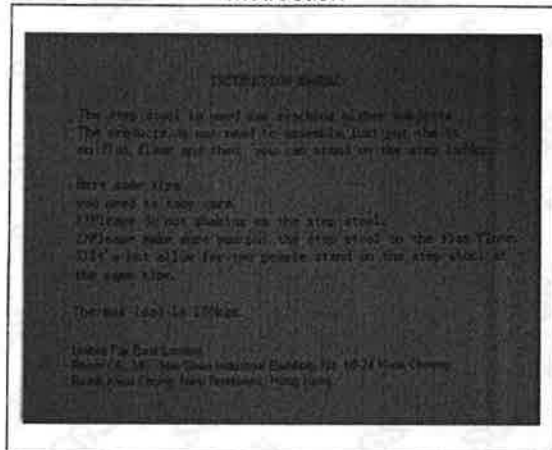
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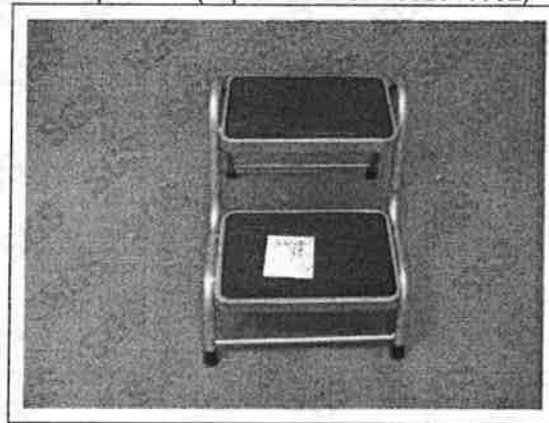
Marking-details



Instruction



Sample view (copied from SHT002910952)



End of Report

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