

In partnership with



Consumer safety... ...it all hinges on safe products!

Multi Hinge-Joint Ladder Surveillance Survey

The latest market surveillance study from the Ladder Association, in partnership with the Test & Research Centre, to investigate the safety of multi hinge-joint ladders being sold on the UK market.

ladderassociation.org.uk/step-up

September 2023

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01 INTRODUCTION

The Ladder Association is committed to helping make sure that all ladders sold, whether online or in store, are safe to use.

Ongoing research and independent safety testing has highlighted a real and serious issue with the availability and use of substandard ladders on the UK market - and sadly, the issue is neither new nor improving.

Recent tests carried out by the UK-based test laboratory and certification body, Test & Research Centre, showed that 70% of the multi hinge-joint ladders tested (often referred to as multi-purpose ladders) did not conform to product standard EN 131-4 (known in the UK as BS EN 131 Part 4:2020).



70% of the multi hinge-joint ladders tested in this latest study failed the required safety tests, were non-compliant and, in the majority of cases, were unsafe to use

The Ladder Association believes that the majority, if not all, multi hinge-joint ladders for sale in the UK are imported.

Importers have a legal responsibility to only place safe products on the market for consumers to use. When a product is imported into the UK, the importer is legally required to take on the responsibility of ensuring the product is safe.

But if the importer is an entity in name only (e.g. a shell company), who is responsible for ensuring the product is safe? If there is a fault and a recall is required, who will the authorities contact? And when it comes to online marketplaces surging in popularity and used by 9 in 10 adults who use the internet¹ - they pass the sole responsibility for product safety to the seller.

But, if the seller does not care and has no threat of legal consequence due to being virtually anonymous and based overseas, our current legal framework is allowing people's lives to be put at risk. This must stop.

The Ladder Association's limited scope testing clearly demonstrates there is a real and serious issue with the availability and use of substandard ladders on the UK market. Worse still, these ladders are being knowingly and fraudulently marked and sold as 'EN 131 compliant' in a deliberate attempt to mislead consumers.

The Ladder Association again calls for urgent action from the UK Government to make regulatory changes to hold suppliers and online platforms accountable for ensuring the products they sell are compliant and safe to use.

Placing a 'duty of care' on the importers, suppliers and sellers is simply not enough - they must have a *legal* responsibility to only place safe products on the market.

We welcome the recent launch of the longawaited Product Safety Review by the Office for Product Safety and Standards (OPSS) and consultation with stakeholders in a bid develop a product safety regime that addresses concerns about the ease in which unsafe products can be sold online. In consultation with our members, the Ladder Association will be submitting evidence to help tackle this growing issue of unsafe products being sold on the UK market.

This project is part of the Ladder Association's wider market surveillance initiative 'Step Up to Safe Ladders', and follows two earlier studies on telescopic ladders. The reports are available at: https://ladderassociation.org.uk/step-up/

Note: This multi hinge-joint surveillance report only relates to portable ladders that fall within the scope of product standard EN 131-4.

02 ABOUT THE LADDER ASSOCIATION

Founded in 1947, the Ladder Association is the not-for-profit lead industry body dedicated to promoting the safe use of portable ladders.

Members include manufacturers, rental companies, training providers and ladder users. Separately, these businesses innovate and compete. But when it comes to advancing user safety, they all work together.

Membership of the Ladder Association shows clear commitment to adhere to the Ladder Association Code of Practice which puts safety at the heart of everything members do:

- Ladder Association Manufacturers only make ladders that comply with EN 131 (or international equivalents) and those products must be certified by a third-party Conformity Assessment Body and be subject to ongoing surveillance;
- Ladder Association Suppliers only supply ladders that are certified to EN 131 (or international equivalents);
- Ladder Association Training Providers conduct training in approved centres, using Ladder Association trained instructors, and only use equipment that complies to EN 131.

The Ladder Association works closely with a number of organisations to support codes of good practice, minimum standards for equipment, trained and qualified operatives and education in the work at height sector. These include the Health & Safety Executive (HSE), the Office for Product Safety and Standards (OPSS), the British Standards Institution (BSI) and other National Standards Bodies, the Access Industry Forum (AIF) and the Royal Society for the Prevention of Accidents (RoSPA). The Ladder Association has spearheaded a number of hugely successful safety campaigns:

- Our award-winning 'Get a Grip' initiative which promoted a very clear message "If it's right to use a ladder, use the right ladder and get trained to use it safely";
- Our 'Step Up to Safe Ladders' market surveillance campaign to stop the sale of unsafe and potentially dangerous ladders in the UK.

The Ladder Association currently offers five training courses delivered through a network of audited and approved training centres:

- Ladder & Stepladder User;
- · Ladder & Stepladder Inspection;
- Ladder & Stepladder Combined Use and Inspection;
- Steps & Step Stools for Users;
- Ladders for Managers.

In addition to administering the LadderCard training scheme, the Ladder Association publishes safety guidance, Code of Practice and technical notes - all free to download from our website https://ladderassociation.org.uk

Ladders are an everyday tool in homes and workplaces across the world, allowing millions of people to work at height quickly and easily. They're a versatile and vital piece of equipment, that can be used for a whole range of jobs.

But too many people still fall from ladders. The consequences of these falls can be lifechanging, for both the injured party and their families. The Ladder Association wants everyone who climbs a ladder to come back down safely.

Working at height can be risky enough, without the additional danger of unsafe equipment.

03 THE AIM OF MARKET SURVEILLANCE

Market surveillance is the activity carried out by authorities to ensure that products on the market conform to the applicable laws and regulations, and comply with existing health and safety requirements.

Consumer confidence is built on trust; consumers need to be confident in the products they buy, either through trusting the product brand or the distributor selling the product.

In the UK, product market surveillance is the responsibility of the OPSS, Trading Standards and the HSE.

Here, market surveillance is delivered across the product spectrum by a range of national and local authorities, and through the Market Surveillance Governance Group (MSGG)¹. MSGG was created in 2020 and is led by the OPSS.

In addition, the National Product Safety Group (NPSG), established in 2012, coordinates the regulatory activity specifically on consumer product safety. It brings together local authority market surveillance representatives, relevant Government departments, the OPSS, HSE and the Chartered Trading Standards Institute.

Market surveillance work at points of entry into the UK is one of the regulatory tools used to detect, disrupt and deter unsafe goods from entering the market. The OPSS has responsibility for developing national capacity for product safety in the UK. One of the ways it does this is to enhance capability to understand the data on imports and fund regulatory activity at UK ports and borders.

Local authorities are responsible for Trading Standards, they are the frontline when it comes to consumer product safety. Since 2010 Local Authority budgets have been cut². In England alone, there has been a real-terms reduction in total spending by Trading Standards of 39%. As expected, this has a knock on effect of reduced intelligence gathering.

¹ Office for Product Safety and Standards – UK Market Surveillance Programme 2021/2022:

Recognising that Trading Standards have reduced capacity and capability, the Ladder Association, as the not-for-profit industry body, considers it should take the lead role to step up and offer valuable support and resource with market surveillance activity. The knowledge and insight provided through our members will help Trading Standards and the OPSS with market intelligence, in instances where substandard products are found.

The Ladder Association understands, from its members and stakeholders like Test & Research Centre, that there are serious concerns regarding substandard multi hinge-joint ladders contaminating the UK supply chain.

The main aim of the Ladder Association is to improve the safe use of ladders and help to ensure that only safe, compliant ladders are used at home and at work.

Of particular concern is the route to market, with a high volume of products being sold online, and the difficulty faced in policing online platforms.

This project is part of the Ladder Association's wider market surveillance initiative 'Step Up to Safe Ladders', and follows two earlier studies on telescopic ladders.

Further information on the initiative and the reports from the studies, can be found on the Ladder Association website:

https://ladderassociation.org.uk/step-up/



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04 DRIVE TO IMPROVE SAFETY AND PRODUCT CONFORMITY

The Ladder Association exists to promote the safe use of ladders and stepladders at home and at work, and to ensure any work at height using ladders, is carried out as safely as possible.

Guidance produced by the Ladder Association helps users to undertake tasks safely, using the right equipment, and with the correct training.

The equipment should be manufactured to the correct product standard to ensure it meets the minimum safety requirement. If products do not meet the requirements of the relevant standard, even if used correctly, user safety is compromised and lives can be put at risk.

With the expansion of online stores and marketplaces, there is no longer any real differentiation between 'Trade' and 'Domestic' users. An item aimed at either market can be purchased by the other.

Recent research by the OPSS into consumer attitudes to product safety¹ found:



only 17% of consumers consider safety when purchasing a product

- Decisions were instead largely driven by cost and quality;
- The fact that consumers rarely consider the safety of their products reflects an inherent trust in the product safety system to protect them. Across all phases of the research, consumers were consistently found to trust and believe that an effective system is in place in the UK;

- This trust in the system was based on several assumptions. There was a common assumption amongst consumers that manufacturers would not risk reputational damage by making unsafe products, that retailers would thoroughly check the manufacturers they purchased from, and that regulations are in place to stop potentially dangerous products from entering the market;
- The research showed that consumers believed that manufacturers have the greatest responsibility for setting product safety standards, ensuring they were met and resolving any product safety issues, with the government playing a secondary role;
- Research participants in workshops, who were given a more detailed explanation about how the system currently works in practice, raised some concerns. First and foremost, consumers were concerned about the extent to which the system appeared to be reliant on consumer awareness of, and engagement with, safety - particularly around registering appliances and responding to recalls. This was not consistent with their assumption that the system would protect them without their input. Consumers expressed further concern about the distribution of responsibilities across different factors, including different levels of government. Consequently, consumers sought reassurance that central government are providing an overall leadership role in setting and upholding safety standards;
- Overall, consumers expect the government to show strong leadership in setting and upholding legal safety requirements.

As can be seen from the OPSS research, UK consumers trust the product safety system, as they assume that manufacturers and distributors value their reputation above all else. And for many companies that is true, they value their brand name and will usually go above and beyond to maintain it.

But what happens when a brand is of little or no value? When the manufacturer or supplier changes their company name, product name or business address so frequently to evade the authorities because they simply do not care? Or the product is being sold through an online platform or marketplace, where no distributor checks are being made?

Consumer-to-consumer and business-toconsumer online marketplaces such as Amazon, eBay, Wish and OnBuy provide a platform for individuals and companies to sell products. Too many of these e-commerce corporations take little or no responsibility for the quality or safety of the products sold on their platforms and place the responsibility for safety firmly with the seller.

The Ladder Association believes they appear only to take action when highlighted in the media.¹

One of the key aims of this surveillance survey is to find out if substandard products are being falsely sold and marketed in the UK as being compliant with product standard.

05 UK LEGISLATION AND REGULATIONS

In the UK, portable ladders such as multi hinge-joint ladders, have no specific legislation or regulations. The sale and use of these products fall under different regulations depending on their use. In either case, conformity to a British (BS) or European (EN) standard would offer a published level of product conformity and safety.

Consumers / Domestic users

For consumers, the safety of portable ladders falls under The General Product Safety Regulations 2005² (GPSR).

This places a duty on producers (manufacturers) to only supply products to the market that are safe:

- A product is defined as "intended for consumers or likely, under reasonably foreseeable conditions, to be used by consumers even if not intended for them and which is supplied or made available";
- A safe product is defined as "a product which, under normal or reasonably foreseeable conditions of use...does not present any risk or only the minimum risks compatible with the product's use, considered to be acceptable and consistent with a high level of protection for the safety and health of persons."

Where a product is imported into the UK, the importer takes on the responsibility of the manufacturer to ensure that products are safe.

Placing a product on the market which is produced to a voluntary national standard (e.g. EN 131-4) could demonstrate conformity to the general safety requirement;

These regulations are enforced by local authority Trading Standards.

Workplace users

In the workplace, portable ladder use is covered by the following regulations, enforced by the Health and Safety Executive:

- Provision and Use of Work Equipment Regulations 1998³ – which places requirements on employers to provide and maintain suitable work equipment for employees;
- Work at Height Regulations 2005⁴, Schedule
 6 which places requirements on employers to provide safe equipment, and risk assessed safe methods, to their employees for working at height.

⁴ Legislation.gov.uk – The Provision and Use of Work Equipment Regulations 1998 - https://www.legislation.gov.uk/uksi/2005/735/contents

¹ Huffington Post – Amazon removes more car seats from sale - https://www.huffingtonpost.co.uk/entry/amazon-child-car-seats-safet_uk_5e4a5a10c5b64ba29751eff7 ² Legislation.gov.uk – The General Product Safety Regulations 2005 - https://www.legislation.gov.uk/uksi/2005/1803/contents

³ Legislation.gov.uk – The General Product Salety Regulations 2003 - https://www.legislation.gov.uk/uksi/2003/1603/contents/made

06 CONSUMER SAFETY

As previously mentioned, under GPSR, the general safety requirement is that only "safe products" shall be placed on the market and that the product "means a product which is intended for consumers or likely, under reasonably foreseeable conditions, to be used by consumers even if not intended for them".

By placing a product on the market, consumers have the right to assume it is safe, whether it is placed there by the manufacturer, through a distributor, or via an online marketplace.

The GPSR regulations explain ways which a supplier can demonstrate a product is safe, in the form of a hierarchy.

At the top of the hierarchy is what is known as a presumption of conformity. Products can be presumed to be safe if they are produced in accordance with legal requirements (e.g. pressure vessels). Next are products produced in accordance with Designated Standards, as published by the UK Government. The government ensures that the standards designated for the GB market meet the required levels of safety, in sectors such as Chemicals and Construction.

For portable ladders, there are no specific regulations or designated standards. This is why it is illegal to place CE and UKCA marks on portable ladders.

Working down the hierarchy, the conformity of a product to the general safety requirement is assessed against:

- Voluntary national standards (BS, BS EN);
- Product safety codes of good practice in the sector concerned;
- The state of the art and technology, and;
- Reasonable consumer expectations concerning safety.

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For portable ladders, such as multi hinge-joint ladders, the appropriate voluntary standard is EN 131-4.

Did you know?...

Online marketplaces have been used by an estimated 9 in 10 adults who use the internet¹.



As research has shown, consumers generally trust the product safety system (see Section 04) but there is a growing concern about products sold through online marketplaces.

So much so, that in November 2021, the OPSS issued online marketplace product safety advice², warning consumers about the risks:

"Many consumers may be unaware that online platforms are not always the seller of the products on their websites, but often act as an intermediary between an independent company and the buyer. And that buying products from businesses based overseas, or who fail to provide an address, increases the risks."

The COVID-19 pandemic drove a huge increase in online sales. **In February 2021, the proportion spent online peaked at 36.8% - up from 19.5% in January 2019.** Latest figures from June 2023 show online retail sales remains above the pre-pandemic levels³.

In addition, a recent National Audit Office report⁴ also highlighted the pace of change for consumer online spending, but further noted product safety regulation had not kept pace, as the sector grew.

¹ Office for National Statistics – Retail sales, Great Britain: June 2023 - https://www.ons.gov.uk/businessindustryandtrade/retailindustry/bulletins/retailsales/june2023
² OPSS – Government issues online marketplace product safety message - https://www.ons.gov.uk/povernment/news/government-issues-online-sales-product-safety-message
³ Office for National Statistics – Retail sales, Great Britain: Nov 2021 - https://www.ons.gov.uk/businessindustryandtrade/retailindustry/bulletins/retailsales/november2021
⁴ National Audit Office – Protecting consumers from unsafe products - https://www.nao.org.uk/wp-content/uploads/2021/02/Protecting-consumers-from-unsafe-products.pdf

Selling platforms, including online stores and social media sites, can be used by anyone to sell products, but the selling platforms assume no responsibility for the safety of goods sold by third parties.

They have become increasingly popular with people who sell from home rather than business premises, or from overseas, both of which present challenges for regulators to investigate or take enforcement action.

Buying online can present challenges as users are unable to inspect the product prior to purchase, they cannot review any stated conformity with product standard and they are unable to 'get a feel' for the quality of the product. "A recent study that sampled potentially risky products from online marketplaces found that **66% failed safety tests**¹."



This project will help to understand if consumers of multi hinge-joint ladders are unknowingly putting themselves at risk of buying substandard products.

07 UK LADDER MARKET SNAPSHOT

 The Ladder Association estimates that the UK ladder market is worth in excess of £124 million per annum².

 Based on an average price of £80.00 per ladder, this equates to approximately 1.55 million ladders being sold in the UK each year².

That's one ladder every 20 seconds!

 It is estimated that over a million UK businesses and 10 million workers are estimated to carry out work involving some form of work at height every year³.



10 S work at height every year

¹ National Audit Office – Protecting consumers from unsafe products - https://www.nao.org.uk/wp-content/uploads/2021/02/Protecting-consumers-from-unsafe-products.pdf ² The Ladder Association Member Market Survey November 2020

³ APPG on Working at Height Report 'Staying Alive: Preventing Serious Injury and Fatalities while Working at Height':

https://workingatheight.info/wp-content/uploads/2020/03/Staying-alive.pdf

08 ACCIDENT ESTIMATES

Domestic accidents

Between 1978 and 2002, the Departments of Trade and Industry and Business, Innovation & Skills (predecessors to the Department for Business, Energy and Industrial Strategy) collated accident data via the Home Accident Surveillance System (HASS) and the Leisure Accident Surveillance System (LASS), two linked databases holding details of home and leisure accidents that caused a serious enough injury to warrant a visit to A&E.

In 2003, the Government announced it would no longer fund the collection and publication of HASS and LASS data.¹

Workplace accidents

Falls from height remain the leading cause of fatal accidents in UK workplaces.³

In 2022/23, 135 workers were killed at work. Of these, **40 were killed as a result of a fall from height**, however no data was published to provide insight into what equipment was being used at the time, or what caused the fall.

That being said, the 2022/23 figure was 11 more than the previous year, when 29 people died at work due to a fall from height.

Main kinds of fatal accident for workers, 2022/23

In addition to fatal accidents, in 2021/22 there were over **5,000 reported non-fatal injuries** that resulted from a worker falling from height.

The most recent data (in 2002) showed there

ladders in the UK.²

injured at work.

were almost 46,000 non-fatal accidents involving

What is known, is that approximately every

people are attending A&E after sustaining

And this doesn't take into account fatalities,

those who don't go to the hospital, or those

11 minutes of every hour, of every day,

an injury involving a ladder.

The table below shows that overall, the number of non-fatal fall from height injuries per year has remained fairly static since 2014.

Non-fatal injuries to employees: 2014-2022

7,000



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¹APPG on Working at Height Report 'Staying Alive: Preventing Serious Injury and Fatalities while Working at Height': https://workingatheight.info/wp-content/uploads/2020/03/Staying-alive.pdf ²RoSPA – Accident Statistics - https://www.rospa.com/resources/statistics#has

³ HSE Work-related fatal injuries in Great Britain: https://www.hse.gov.uk/statistics/fatals.htm

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Hospital admissions

Detailed hospital data from NHS England¹, NHS Wales² and Public Health Scotland³ includes various categories for hospital admissions. One category is "Falls on or from a ladder" and analysis of this data gives an annual snapshot of ladder fall admissions over time.

This data shows:

- Between 2014/15 and 2021/22 on average **7,723** people find themselves in hospital after falling on or from a ladder each year, with numbers remaining fairly stable year to year;
- Typically each year, **91%** of admissions were due to an emergency as the result of a fall on or from a ladder;
- The average time spent in hospital, if admitted, is between 2 and 4 days;
- The average age of patients admitted is between **58 and 60 years old**, with little variation over time. The highest number of patients admitted are aged 50-79 and around **80%** of them are male;
- The total number of bed days due to ladder-related incidents in 2021/2022 was at least 22,300.







average patient age is **58-60 years old** with highest number of admissions age 50-79





Each number above represents a real person who may have suffered life-changing injuries after falling on or from a ladder. It is important to learn from these incidents to prevent the same things happening again in future.

Whilst the exact circumstances around the hospital admissions is unknown, the Ladder Association do know from experience that unsafe equipment is one of a number of key reasons that accidents occur. We must commit to taking steps to ensure that people only ever work at height using ladders that are known and proven to be safe.

¹NHS England – Hospital Episode Statistics (HES): https://digital.nhs.uk/data-and-information/data-tools-and-services/data-services/hospital-episode-statistics ²NHS Wales Informatics Service, PEDW Statistics - 2014-2022

³ Public Health Scotland - IR2023-00534: Number of emergency admissions in Scotland due to falls on/from a ladder (January 2011 - December 2022)

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9 PRODUCT SELECTION

The focus of this project is multiple hinge-joint ladders (otherwise know as multi-purpose ladders). These have become popular in recent years as they have:

- Small storage foot print when stored;
- Multiple use modes leaning, standing, platform etc.

Multiple hinge-joint ladders should be produced in accordance with EN 131-4, which was last updated in 2020.

You can learn more about ladder standards on the Ladder Association website: https://ladderassociation.org.uk/standards

The common parts and design of a multiple hinge-joint ladder are:

- **Rungs** usually square with a minimum depth of 25-35mm;
- Stiles usually rectangular;
- **Hinges** steel locking hinges that joint the typically 4 sections of the ladder in 2 or 3 positions;
- Stabiliser bar made typically from rectangular tubing with slip-resistant feet.

Figure 1: Multi hinge-joint ladder set up in different configurations (images © WernerCo)

A multiple hinge-joint ladder can be folded, for use as a standing ladder, opened out as a leaning ladder and also used in stand-off position.

It can also be folded into other positions, for example, to be used as a work platform or for use on stairs (See Figure 1, below).



A total of 10 multiple hinge-joint ladders were tested in this product surveillance study.

An internet search for "multipurpose ladder" returned many products, the top ten of which were shortlisted (with duplicates and incorrectly listed products removed).

These top ten products were purchased anonymously either from physical stores or online for home delivery. This included the top 3 products listed on Amazon and eBay - an accurate reflection of how these products reach the market.

9 out of 10 products claimed conformity to EN 131-4 in one form or another, either on the sales information, product literature or as a label on the product itself.

See Sections 11 and 12 and note that some samples could not be further tested due to structural failure of the ladder in an earlier test.

The Challenge for Trading Standards

Trading Standards have powers to investigate business and business premises, if they have product safety concerns. However, for online marketplaces, sellers do not need to be based in the UK.

As an example, two ladders purchased on eBay were sold by companies with almost identical company names, both had the same brand names, but were being sold through different marketplace store names/sellers registered in Guangzhou, China. On delivery, both products were identical.

When a product is imported into the UK, the importer is legally required to take on the responsibility of ensuring the product is safe. But if the importer is an entity in name only (e.g. a shell company), who is responsible for ensuring the product is safe? If there is a fault and a recall is required, who will the authorities contact? The vast number of sellers, stores and companies trading via online marketplaces under different guises makes it extremely difficult for action to be taken, other than notifying the marketplace of the substandard products.

A key goal for this project was to investigate the extent to which substandard multi hinge-joint ladders are contaminating the supply chain, with little or no checks being made by the importer.



10 LIMITED SCOPE TESTING

The ladders selected all fall under the product standard EN 131-4.¹

The standard has requirements for:

- · Functional and dimensional requirements;
- · Strength tests;
- Deflection tests;
- Durability (cyclic) tests;
- Stability tests;
- Markings and user instructions.

To assess a sample ladder against the full requirements of the standard could take several weeks, as the durability tests take several days each to complete.

Therefore, it was agreed between the stakeholders and leaning on the experience of the Test & Research Centre, that a limited number of tests and dimensional requirements would be carried out for this project.

The limited scope of testing focused on the key strength tests, deflection tests and dimensional characteristics. Whilst the durability of the ladders, markings (labels) and user instructions are important, if the product cannot withstand the main strength tests then it is not fit for purpose.

In addition, by focusing on a limited scope of testing, a greater number of ladders could be examined, making the project more costeffective for all stakeholders.

This is a common approach which Trading Standards take with sample assessment.

Specific clauses were agreed with the stakeholders which would assess the main strength characteristics of the samples provided.

The tests are performed in a specific sequence, as listed in Annex A of EN 131-4. The sequence uses test requirements from EN 131-2 and EN 131-4, generally with deflection tests followed by strength and overturning tests.

In the last revision of EN 131-4, requirements were harmonised with requirements referenced to EN 131-2. This means that testing requirements are consistent across different types and designs of ladders.

The limited scope of tests from EN 131-4 agreed for this project were:

- Clause 4 Functional dimensions
- EN 131-2 Clause 5.4 Lateral deflection
- EN 131-2 Clause 5.3 Bending test of the stiles
- EN 131-2 Clause 5.2 Strength test of the ladder in the position of use
- EN 131-4 Clause 6.2.3 Strength test for ladders with more than one pair of hinges
- EN 131-2 Clause 5.6 Vertical load on rung
- EN 131-2 Clause 5.8 Test of opening restraint and hinges of standing ladders
- EN 131-4 Clause 6.2.5.3 Strength test of the ladder and decking components
- EN 131-4 Clause 6.2.5.4 Stability test of the ladder in the platform position.

Detailed explanation of all tests can be found in Appendix 1.

Examples of safety critical tests carried out by the Test & Research Centre









11 TEST RESULTS

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Sample 7	Sample 8	Sample 9	Sample 10
Test Report Number	T1154-01	T1155-01	T1156-01	T1157-01	T1158-01	T1159-01	T1160-01	T1161-01	T1162-01	T1163-01
Purchased From	B&Q	BPS	eBay	eBay	eBay	Amazon	Amazon	Amazon	Ladders UK Direct	Toolstation
Price	£99.00	£159.99	£76.00	£159.47	£159.47	£93.49	£161.99	£162.99	£139.00	£119.99
Marketplace Store	N/A	N/A	Luckysunny	Okpackage	Luckylaud	Songmics	Hengmei	Aufun	N/A	N/A
Item Number	N/A	N/A	125627985957	403805599644	392909121713	B01FXCOXI8 or X000JCB9L1	B08TQHH13Q	B08Z3QVB5S	N/A	N/A
Marketplace Business	N/A	N/A	gugngzhoucheng- zonggongyinglian- youxiangongsi	guangzhouhuanqi- umaokejiyouxian- gongsi	guangzhoucheng- zonggongyinglian- youxiangonsi	EUZIEL Internation- al GmbH	Foshan Heng Mei Su Liao Zhi Pin Co Ltd	Shen Zhen Shi Ao Feng Technology Co Ltd	N/A	N/A
Brand Name	Mac Allister	BPS	Winholder	Winholder	N/A	Songmics	Hengmei	AUFUN	Abbey	Werner
Product Code	C10A	N/A	N/A	N/A	N/A	GLT36M	N/A	N/A	MPL34	75012
Sections x Rungs	3.17m - 4x3	4.75m - 4x4	3.5m - 4x3	5.7m - 4x5	5.7m - 4x5	3.5m - 4x3	4.7m - 4x4	4.7m - 4x4	3.4m - 4x3	3.39m - 4x3
Advertised as conforming to EN 131-4?	Website states "Stand- ard - EN 131"	Website Claims "Fully Certified" to EN 131 Parts 1 & 2 1993 - no certificate on website	"This tool is suitable for commercial & domestic use. Conforming to GPSG & EN 131 standards and CE regulations"	"Certified to CE and European Safety Standard EN 131, keep you safe."	"Certified to CE and European Safety Standard EN 131, keep you safe."	Listing claims EN 131 with TUV Rheinland Certificate - expired.	"Complies with EN 131"	"Conforms to European safety standard EN 131"	"Certified to EN 131 Professional" "Kitemarked to EN 131"	No
UKCA or CE mark advertised online?	No	No	Yes	Yes	Yes	No	No	No	No	No
UKCA or CE mark on product or packaging?	No	No	No	No	No	No	Yes	Yes	No	No
EN 131 Professional or Non-Professional	Professional	Not marked - Tested as Non-Pro	Not marked - Tested as Non-Pro	Not marked - Tested as Non-Pro	Not marked - Tested as Non-Pro	Not marked - Tested as Non-Pro	Not marked - Tested as Non-Pro	Not marked - Tested as Non-Pro	Professional	Professional
4.1 - Functional dimensions	Pass	Fail	Fail	Fail	Fail	Pass	Fail	Fail	Pass	Pass
4.2 Hinged ladder in 'platform position'	N/A - no decking components supplied	Fail	N/A - no decking components supplied	Fail	Fail	Fail	Fail	Fail	Pass	Pass
4.3 Hinged ladder in 'stand-off' position	Pass	Pass	Fail	Fail	Fail	Fail	Fail	Fail	Pass	Pass
5.4 - Lateral deflection	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
5.3 - Bending test	Pass	Fail	Pass	Fail	Fail	Pass	Fail	Fail	Pass	Pass
5.2 - Strength test	Pass	Pass	Pass	Fail	Fail	Pass	Fail	Fail	Pass	Pass
5.6 - Vertical load on rung	Pass	Pass	Pass	N/T	N/T	Pass	N/T	N/T	Pass	Pass
5.8 - Opening restraint test	Pass	Pass	Pass	N/T	N/T	Pass	N/T	N/T	Pass	Pass
6.2.3 - Additional strength test of ladders with more than one hinge	Pass	Pass	Pass	N/T	N/T	Pass	N/T	N/T	Pass	Pass
6.2.5.3 - Strength test of the ladder and decking components	N/A	Pass	N/A	N/T	N/T	Pass	N/T	N/T	Pass	Pass
6.2.5.4 - Stability test of the ladder (platform mode)	N/A	Fail	N/A	N/T	N/T	Pass	N/T	N/T	Pass	Pass
OVERALL RESULT	PASS	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	FAIL	PASS	PASS

Key: Pass = Met requirements, Fail = Did not meet requirements, N/T = Not tested due to structural failure of ladder in earlier test, N/A = Not applicable as components not supplied

14 N.B. Detailed results and photographs of testing can be found in Appendix 2

12 SUMMARY OF TESTING FINDINGS

- Of the 10 sample ladders tested, 3 passed the requirements of EN 131-4 for multiple hinge-joint ladders.
- Samples bought from physical stores (samples 1 and 10) complied with the requirements assessed.

Of the 7 ladders that failed to meet all the requirements:

- 4 buckled during the strength test before the full test load could be applied (samples 4, 5, 7 & 8). This meant that further tests in the sequence could not be undertaken. All 4 claimed in marketing material and/or markings that they "complied with EN 131" or "were certified to EN 131";
- 6 samples had a base width which was smaller than required for leaning or standing ladders (samples 2, 3, 4, 5, 7 & 8). This reduction in width means they will be less stable than ladders that meet or exceed EN 131, increasing the risk of the ladder toppling in use;
- 1 ladder (sample 6) failed on the angle of the legs only, as they were slightly over the upper limit of 75 degrees.
- Out of the 10 ladders sampled, 5 claimed to be UKCA or CE compliant, either on the advertising or on the packaging. Ladders cannot be UKCA or CE marked, as there are no regulations which permit this for any type of ladder. Any claim of this type is false and potentially illegal.

All 6 samples purchased online from Amazon or eBay failed the safety tests.

These samples were purchased based on their rank on eBay and Amazon, with **one seller being** ranked as a #1 top seller on Amazon.

The 3 samples purchased from eBay were sold by 3 different stores and 3 different businesses. However, samples 4 and 5 appear identical (including all packaging), although this is not obvious from the content of the eBay listing.

Samples 7 and 8 listed on Amazon were sold by different stores and businesses, however, on arrival appear identical.

This information suggests that identical substandard products are being sold with different names and branding, giving a false impression of greater product variety for consumers.

13 CONCLUSION

With 3 of the 10 multi hinge-joint ladders tested passing the limited scope requirements, there are clearly products on the market which have been designed and conform to EN 131-4.

In contrast, and far more worrying though, is the significant number of ladders tested that have inherent design features which make the product incompatible with the requirements of the standard.

6 of the samples had a base width smaller than required for leaning or standing ladders. The base width of leaning ladders over 3 metres in length was increased some years ago as part of the revision to EN 131-1 to improve leaning ladder safety and make ladders more stable. Ladders sampled here were clearly designed without this requirement being implemented, compromising stability and user safety.

The physical tests highlight more concerning findings. 4 of the samples buckled during the strength test. This is extremely concerning as when in use, the ladder could buckle beneath the user, causing a fall from height and possible injury.

We again saw clear evidence from product labeling, the packaging or the product description online, that manufacturers, importers and sellers are knowingly and fraudulently claiming compliance to the product standard in a deliberate attempt to mislead consumers.

All 6 samples purchased from the well-known online giants, Amazon and eBay, failed the safety tests. Given we selected the products due to their ranking in Google search results, we know these products are appearing online at the top of the search listings. Consumers are therefore more likely to see, browse and buy these substandard products based on this availability and 'top ranking' position.

The Ladder Association's limited scope testing clearly confirms there is a real and serious issue with the availability and use of substandard multi hinge-joint ladders on the UK market.

Worse still, a significant proportion of these ladders are being knowingly and fraudulently marked and sold as 'EN 131 compliant' in a deliberate attempt to mislead consumers.

14 CALL FOR ACTION

Following the results of the surveillance activity, the Ladder Association calls for action to be taken in the following areas, in order to address the sale of dangerous goods - particularly from online marketplaces - once and for all:

1) Increase awareness of the issues with enforcement agencies

- a. For the subject of substandard multi hinge-joint ladders to be raised nationally with Trading Standards, through the National Product Safety Group, the Market Surveillance Governance Group, Chartered Trading Standards Institute and the Office for Product Safety and Standards (OPSS);
- b. Through increased awareness, collate a greater body of evidence and obtain further intelligence.

2) Increase intelligence of the UK multi hinge-joint ladders market

- a. The Ladder Association will investigate what additional intelligence can be gathered on multi hinge-joint ladders in the UK market;
- b. Provide good quality data to Trading Standards and OPSS that will help them better understand routes to market and where best to focus efforts.

3) Increase awareness with online retailers, marketplaces and social media selling platforms

a. Currently, the responsibility lies with the individual or company selling the products via the online marketplaces. As they may be based outside the UK, more needs to be done to raise awareness of the issues with the marketplaces themselves, so they can take swift corrective action.

4) Raise awareness with consumers of substandard ladders in the media

- a. Deliver a campaign to engage with consumers, partnering with other safety bodies and groups, to help consumers stay safe when buying multi hinge-joint ladders online;
- b. Cover this issue across mainstream media. The 'Step Up to Safe Ladders' campaign has already been picked up in trade press and smaller media outlets, but we need widespread awareness of the extent of the problem in mainstream media and consumer affairs programmes;

5) Undertake further surveillance projects at regular intervals

- a. This project is a snapshot of the products on the market at the time. Market surveillance is a regular, ongoing process and should be increased or reduced based on risk;
- b. Based on the findings so far, it would seem appropriate to undertake this project again in the next 12 months.

6) Work with the OPSS and All-Party Parliamentary Groups (APPGs) to lobby for changes to product safety regulations

- a. Evidence shows that many of the ladders sold through the online platforms have limited or no actual presence in the UK. This makes enforcement action almost impossible;
- b. The regulations in the UK have not kept pace with trends in online commerce¹, however we welcome the recent launch of the Product Safety Review by the OPSS and the consultation for stakeholders to give their views on the long-term approach to product safety, and ensure the regulatory framework is fit for the future;
- c. The findings of this market surveillance report serve as further evidence that changes need to be made to hold suppliers and online platforms accountable for selling safe products.

7) Widen the powers of the Office for Product Safety & Standards (OPSS)

- a. To obligate online marketplaces to monitor ladders offered for sale on their platforms and stipulate that all products listed meet the General Product Safety Regulations 2005, have appropriate certification, and are safe for use;
- b. Empower the OPSS to take representative enforcement action against the online marketplaces;
- c. Strengthen consumers' rights to bring civil actions against the online marketplaces.

8) Add EN 131-4 to the list of designated standards on GOV.UK

- a. From 1 January 2021, the GB regulatory framework enables the relevant Secretary of State to 'designate' standards for regulatory conformity purposes. The government ensures that the standards designated for the GB market meet the required levels;
- b. Designated standards can help manufacturers demonstrate their products, services or processes comply with GB law. By following designated standards, manufacturers can claim, 'presumption of conformity' with the corresponding essential requirements or essential characteristics;

15 GUIDANCE FOR CONSUMERS

- Take some time to research before you buy. You can carry out a quick online check of the company or brand to check their business location and visibility in the market. If they don't have a UK/EU address then it can make it much more difficult to contact them if you have an issue after you buy;
- Check product reviews. These are a great way of hearing first-hand from other consumers and often give valuable insight in the product quality, mainly if it falls below standard. But beware, some companies and brands post fake positive reviews, so read them carefully, note where the reviewer is based or how many reviews they have previously posted;
- Don't make decisions solely on price. But, if something is very cheap, you should question why. That's not to say it's poor quality, but it's certainly a prompt to make you do a bit more homework. Genuine quality products can cost more to manufacture due to the enhanced testing and cost of materials, but equally, a higher price doesn't necessarily mean quality;
- Remember, online platforms take little or no responsibility for the quality or safety of the products sold on their platforms and place the responsibility for safety firmly with the seller. Don't assume product safety and compliance checks have been carried out by them before they placed them online for sale;

- Don't assume physical stores sell only safe products. They could knowingly - or unknowingly - be stocking products that don't meet product standard EN 131. Check labelling for print quality or spelling errors, check product quality as best you can, and speak to the retailer if you have any questions;
- Avoid ladders that are CE or UKCA Marked. Despite what you might think, ladders cannot be CE or UKCA marked, so avoid any that bear those markings;
- Buy from a Ladder Association member. Members are committed to high standards of safety, and by joining the Association, they pledge to only make or sell ladders that comply with EN 131 (or international equivalents) and are certified by a third-party Conformity Assessment Body. A full list of members can be found on the Ladder Association website: https://ladderassociation.org.uk
- When you receive your ladder, check it. Check the product, the instruction manual (every ladder should come with one) and the labelling on the ladder itself;
- If you think the ladder is unsafe, dangerous or not made to standard, don't use it! You should then contact your local Trading Standards team or report via our website: https://ladderassociation.org.uk/step-up

APPENDIX 1 DETAILED EXPLANATION OF TESTS

Each test selected in the limited scope assesses a different aspect of the ladders' design and performance.

EN 131-4 lists the sequence that the tests needs to be undertaken, the details of which are shown below. Requirements from EN 131-2 are also specified.

EN131-4 Clause 4.1 – Functional dimensions

Dimensions of single and multiple hinge joint ladders are cross referenced to EN 131, making the dimensional requirements for these ladders common with leaning and standing ladders.

EN131-4 Clause 4.2 – Hinged ladder in 'platform position'

Dimensional requirements where the hinged ladder can be placed into a platform position, with an upper limit of 1m for the height of the platform above the ground.



EN131-4 Clause 4.3 – Hinged ladder in 'standoff position'

Dimensional requirements where the hinged ladder can be placed into standoff position, with an upper limit of the stand off of 1.2m.



EN131-4 Clause 6.2.3 – Additional strength test of ladders with more than one hinge

A test of the hinged ladder, similar to the strength test (EN 131-2 clause 5.2) where the test load, with professional (2700N) or nonprofessional (2250N), is applied to the rung nearest the upper hinge joint. The load is applied via the rung adjacent to one stile (pictured right).



EN131-4 Clause 6.2.5.3 – Strength test of the ladder and decking components

A test of the hinged ladder, in the platform mode, where the professional (2700N) or nonprofessional (2250N) test load is applied to the centre of the platform adjacent to one stile.



EN131-4 Clause 6.2.5.4 – Stability test of the ladder (platform mode)

With the ladder in the platform position, a load of 750N is applied to one stile in the centre of the platform, whilst a horizontal pulling force of 300N is applied to the centre of the platform. The ladder must withstand the overturning load without overturning.



EN131-2 Clause 5.2 – Strength test in the position of use

With the ladder placed in the position of use, against a wall at 65 degrees, a test load is applied to the rung nearest the centre of the ladder adjacent to one stile.

The test load is based on the ladder class as stated in the user instructions or markings.

For a Non-Professional class ladder the test load is 2250N (229kg).

For Professional class it is 2700N (275kg).



The ladder must withstand the test load without rupture of parts, locking mechanisms and indicators must be operational, and no relative movement between brackets and rungs/stiles.

Permanent deformation is acceptable provided that the ladder remains fully functional and does not impair the fitness for use or safety of the ladder.

EN131-2 Clause 5.3 – Bending test of the stiles

With the ladder placed horizontally and supported by rollers at both ends, a preload (100N / 10.2kg) and then a test load (750N / 76.4kg) is applied at the centre of the ladder across both stiles. The deflection measured under load must be less than a limit calculated based on the length of the ladder.



EN131-2 Clause 5.4 – Lateral deflection

With the ladder placed horizontally on its side and supported by rollers at both ends, a preload (100N / 10.2kg) and then a test load (250N / 25.5kg) is applied to the centre of the ladder on the lower stile. The deflection measured under load must be less than a limit calculated based on the length of the ladder.



EN131-2 Clause 5.6 – Vertical load on rung

With the ladder in the position of use, a preload (200N / 20.3kg) and then a test load (2600N / 265kg) is applied to the centre of the weakest rung design. The permanent deformation after removal of the test load must be less than 0.5% of the inner width of the rung.



EN131-2 Clause 5.6 – Opening restraint test With the ladder set in standing ladder position, on multi-directional rollers, a test load (2600N / 265kg) is applied to the uppermost rung. The ladder must support the test load without collapse. The test is then repeated with the load applied to the opposite side.



APPENDIX 2 DETAILED RESULTS AND PHOTOGRAPHS OF TESTING

Sample #1 – Mac Allister C10A 3.17m 4x3

EN 131 Clauses:	Result	Comment		
EN 131-4				
4.1 - Functional dimensions	Pass			
4.2 - Hinge ladder in 'platform position'	N/A	No decking components supplied		
4.3 - Hinge ladder in 'stand-off' position	Pass			
6.2.3 - Additional strength test of ladders with more than one hinge	Pass			
6.2.5.3 - Strength test of the ladder and decking components	N/A			
6.2.5.4 - Stability test of the ladder (platform mode)	N/A			
EN 131-2				
5.4 – Lateral deflection	Pass			
5.3 – Bending test	Pass			
5.2 - Strength test	Pass			
5.6 – Vertical load on rung	Pass			
5.8 – Opening restraint device test	Pass			
OVERALL RESULT	PASS			







Sample #2 - BPS 4.75m 4x4

EN 131 Clauses:	Result	Comment	
EN 131-4			
4.1 - Functional dimensions	Fail	Base width too small, 2nd standing mode puts legs at too shallow angle	
4.2 - Hinge ladder in 'platform position'	Fail	Platform higher than 1m limit	
4.3 - Hinge ladder in 'stand-off' position	Pass		
6.2.3 - Additional strength test of ladders with more than one hinge	Pass		
6.2.5.3 - Strength test of the ladder and decking components	Pass		
6.2.5.4 - Stability test of the ladder (platform mode)	Fail	Did not support 300N side load – max 256N	
EN 131-2			
5.4 – Lateral deflection	Pass		
5.3 – Bending test	Fail	Limit = 88.02mm. Deflection = 94.33mm	
5.2 - Strength test	Pass		
5.6 – Vertical load on rung	Pass		
5.8 – Opening restraint device test	Pass		
OVERALL RESULT	FAIL		











Sample #3 – eBay unbranded 3.5m 4x4

EN 131 Clauses:	Result	Comment			
EN 131-4					
4.1 - Functional dimensions	Fail	Base width too small, 2nd standing mode puts legs at too shallow angle			
4.2 - Hinge ladder in 'platform position'	N/A	No decking components supplied			
4.3 - Hinge ladder in 'stand-off' position	Fail	Leg angle greater the 75 deg limit			
6.2.3 - Additional strength test of ladders with more than one hinge	Pass				
6.2.5.3 - Strength test of the ladder and decking components	N/A				
6.2.5.4 - Stability test of the ladder (platform mode)	N/A				
EN 131-2	EN 131-2				
5.4 – Lateral deflection	Pass				
5.3 – Bending test	Pass				
5.2 - Strength test	Pass				
5.6 – Vertical load on rung	Pass				
5.8 – Opening restraint device test	Pass				
OVERALL RESULT	FAIL				







Sample #4 – eBay unbranded 5.7m 4x5

EN 131 Clauses:	Result	Comment		
EN 131-4				
4.1 - Functional dimensions	Fail	Base width too small, 2nd standing mode puts legs at too shallow angle		
4.2 - Hinge ladder in 'platform position'	Fail	Platform greater than 1m limit (1.45m)		
4.3 - Hinge ladder in 'stand-off' position	Fail	Stand-off greater than 1.2m limit (1.49m)		
6.2.3 - Additional strength test of ladders with more than one hinge	N/T	Test not performed due to structural failure in earlier test		
6.2.5.3 - Strength test of the ladder and decking components	N/T	Test not performed due to structural failure in earlier test		
6.2.5.4 - Stability test of the ladder (platform mode)	N/T	Test not performed due to structural failure in earlier test		
EN 131-2	EN 131-2			
5.4 – Lateral deflection	Pass			
5.3 – Bending test	Fail	Over limit by 82.56mm (58%)		
5.2 – Strength test	Fail	Left stile buckled before full load could be applied.		
5.6 – Vertical load on rung	N/T	Test not performed due to structural failure in earlier test		
5.8 – Opening restraint device test	N/T	Test not performed due to structural failure in earlier test		
OVERALL RESULT	FAIL			









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Sample #5 – eBay unbranded 5.7m 4x5

EN 131 Clauses:	Result	Comment			
EN 131-4					
4.1 - Functional dimensions	Fail	Base width too small, 2nd standing mode puts legs at too shallow angle			
4.2 - Hinge ladder in 'platform position'	Fail	Platform greater than 1m limit (1.45m)			
4.3 - Hinge ladder in 'stand-off' position	Fail	Stand-off greater than 1.2m limit (1.49m)			
6.2.3 - Additional strength test of ladders with more than one hinge	N/T	Test not performed due to structural failure in earlier test			
6.2.5.3 - Strength test of the ladder and decking components	N/T	Test not performed due to structural failure in earlier test			
6.2.5.4 - Stability test of the ladder (platform mode)	N/T	Test not performed due to structural failure in earlier test			
EN 131-2	EN 131-2				
5.4 – Lateral deflection	Pass				
5.3 – Bending test	Fail	Over limit by 82.56mm (58%)			
5.2 - Strength test	Fail	Left stile buckled before full load could be applied.			
5.6 – Vertical load on rung	N/T	Test not performed due to structural failure in earlier test			
5.8 – Opening restraint device test	N/T	Test not performed due to structural failure in earlier test			
OVERALL RESULT	FAIL				



Sample #6 – Amazon GLT36M 3.5m 4x3

EN 131 Clauses:	Result	Comment		
EN 131-4	EN 131-4			
4.1 - Functional dimensions	Pass			
4.2 - Hinge ladder in 'platform position'	Fail	Leg angle greater than 75 deg limit (75.6)		
4.3 - Hinge ladder in 'stand-off' position	Fail	Leg angle greater than 75 deg limit (76)		
6.2.3 - Additional strength test of ladders with more than one hinge	Pass			
6.2.5.3 - Strength test of the ladder and decking components	Pass			
6.2.5.4 - Stability test of the ladder (platform mode)	Pass			
EN 131-2				
5.4 – Lateral deflection	Pass			
5.3 – Bending test	Pass			
5.2 – Strength test	Pass			
5.6 – Vertical load on rung	Pass			
5.8 – Opening restraint device test	Pass			
OVERALL RESULT	FAIL			









Sample #7 – Amazon Hengmei 4.7m 4x4

EN 131 Clauses:	Result	Comment	
EN 131-4			
4.1 - Functional dimensions	Fail	Base width too small, 2nd standing mode puts legs at too shallow angle	
4.2 - Hinge ladder in 'platform position'	Fail	Platform higher then 1m limit (1.23m) Leg angle greater than 75 deg limit (77.3)	
4.3 - Hinge ladder in 'stand-off' position	Fail	Standoff greater than 1.2m limit (1.23m) Leg angle greater than 75 deg limit (77.9)	
6.2.3 - Additional strength test of ladders with more than one hinge	N/T	Test not performed due to structural failure in earlier test	
6.2.5.3 - Strength test of the ladder and decking components	N/T	Test not performed due to structural failure in earlier test	
6.2.5.4 - Stability test of the ladder (platform mode)	N/T	Test not performed due to structural failure in earlier test	
EN 131-2			
5.4 – Lateral deflection	Pass		
5.3 - Bending test	Fail	Over limit by 18.29mm (20%)	
5.2 - Strength test	Fail	Left stile buckled before full load could be applied.	
5.6 – Vertical load on rung	N/T	Test not performed due to structural failure in earlier test	
5.8 - Opening restraint device test	N/T	Test not performed due to structural failure in earlier test	
OVERALL RESULT	FAIL		



Manufacturer: Foshan Heng Mei Su Liao Zhi Pin Co.,Ltd. Address: Gui Cheng Jie Dao, NanHai FoShan
Guangdong CN 528251
EC REP UKCA SERVICE LTD 21 Ellesmere Avenue, Worsley, Manchester, UK, #28 GAL
(€@\$\$©\$5









Sample #8 – Amazon Hengmei/Aufun 4.7m 4x4

EN 131 Clauses:	Result	Comment		
EN 131-4				
4.1 - Functional dimensions	Fail	Base width too small, 2nd standing mode puts legs at too shallow angle		
4.2 - Hinge ladder in 'platform position'	Fail	Platform higher then 1m limit (1.23m) Leg angle greater than 75 deg limit (77.2)		
4.3 - Hinge ladder in 'stand-off' position	Fail	Standoff greater than 1.2m limit (1.23m) Leg angle greater than 75 deg limit (77.2)		
6.2.3 - Additional strength test of ladders with more than one hinge	N/T	Test not performed due to structural failure in earlier test		
6.2.5.3 - Strength test of the ladder and decking components	N/T	Test not performed due to structural failure in earlier test		
6.2.5.4 - Stability test of the ladder (platform mode)	N/T	Test not performed due to structural failure in earlier test		
EN 131-2	EN 131-2			
5.4 – Lateral deflection	Pass			
5.3 – Bending test	Fail	Over limit by 19.16mm (21%)		
5.2 – Strength test	Fail	Left stile buckled before full load could be applied.		
5.6 – Vertical load on rung	N/T	Test not performed due to structural failure in earlier test		
5.8 – Opening restraint device test	N/T	Test not performed due to structural failure in earlier test		
OVERALL RESULT	FAIL			







Sample #9 – Abbey Access MPL34 3.4m 4x3

EN 131 Clauses:	Result	Comment		
EN 131-4				
4.1 - Functional dimensions	Pass			
4.2 - Hinge ladder in 'platform position'	Pass			
4.3 - Hinge ladder in 'stand-off' position	Pass			
6.2.3 - Additional strength test of ladders with more than one hinge	Pass			
6.2.5.3 - Strength test of the ladder and decking components	Pass			
6.2.5.4 - Stability test of the ladder (platform mode)	Pass			
EN 131-2				
5.4 – Lateral deflection	Pass			
5.3 – Bending test	Pass			
5.2 - Strength test	Pass			
5.6 – Vertical load on rung	Pass			
5.8 – Opening restraint device test	Pass			
OVERALL RESULT	PASS			







Sample #10 - Werner 75012 3.39m 4x3

EN 131 Clauses:	Result	Comment
EN 131-4		
4.1 - Functional dimensions	Pass	
4.2 - Hinge ladder in 'platform position'	Pass	
4.3 - Hinge ladder in 'stand-off' position	Pass	
6.2.3 - Additional strength test of ladders with more than one hinge	Pass	
6.2.5.3 - Strength test of the ladder and decking components	Pass	
6.2.5.4 - Stability test of the ladder (platform mode)	Pass	
EN 131-2		
5.4 – Lateral deflection	Pass	
5.3 – Bending test	Pass	
5.2 – Strength test	Pass	
5.6 – Vertical load on rung	Pass	
5.8 – Opening restraint device test	Pass	
OVERALL RESULT	PASS	









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Multi Hinge-Joint Ladder Surveillance Survey, Version 1, Revision 0, September 2023

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