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Fibre reinforced plastics — Telescopic ladder — Requirements and test methods

Plastiques renforcés de fibres de verre — Échelle télescopique — Exigences et méthodes d'essai

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Foreword

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This document was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 11, *Products.*

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

This document relates only to telescopic ladders made of fibre-reinforced plastic materials. Therefore, the test methods and technical requirements for the aging performance of the ladders are increased.

This document is applicable to different countries and regions in the world, considering the weight difference between people in different countries and regions, and also in order to reduce the weight of the ladder and more convenient to carry, so the maximum total weight of the ladder is divided into two grades: 100 kg and 150 kg.

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Fibre reinforced plastics — Telescopic ladder — Requirements and test methods

1 Scope

This document specifies the terms and definitions, technical requirements, test methods and inspection rules for telescopic ladders made of fibre-reinforced plastics.

This document applies to the manufacture, selection, inspection and use of telescopic ladders made of fibre-reinforced plastics.

NOTE 1 Annex A provides guidance for inspection rules of the telescopic ladders.

NOTE 2 Annex B classifies all the tests covered in this document into 8 test blocks and specifies the sequence of tests within the same test block.

It does not apply to ladders with a length over 5 m.

NOTE 2 Ladders with a length over 5 m can use this document as a reference.

The scope of this document does not relate to the “live working” and “explosive atmospheres”.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 179-1, *Plastics — Determination of Charpy impact properties — Part 1: Non-instrumented impact test*

ISO 4892-2:2013, *Plastics — Methods of exposure to laboratory light sources — Part 2: Xenon-arc lamps*

ISO 7599, *Anodizing of aluminium and its alloys — Method for specifying decorative and protective anodic oxidation coatings on aluminium*

ISO 14125, *Fibre-reinforced plastic composites — Determination of flexural properties*

ISO 14644-1, *Cleanrooms and associated controlled environments — Part 1: Classification of air cleanliness by particle concentration*

ISO 14713-2, *Zinc coatings — Guidelines and recommendations for the protection against corrosion of iron and steel in structures — Part 2: Hot dip galvanizing*

ISO 16293-2, *Glass in building — Basic soda lime silicate glass products — Part 2: Float glass*

IEC 62321-3-1, *Determination of certain substances in electrotechnical products — Part 3-1: Screening test methods — Screening of electrotechnical products for lead, mercury, cadmium, total chromium andtotal bromine using X-ray fluorescence spectrometry*

IEC 62321-4, *Determination of certain substances in electrotechnical products — Part 4: Determination of mercury in polymers, metals and electronics by CV-AAS, CV-AFS, ICP- OES and ICP-MS*

EN 59, *Glass reinforced plastics — Determination of indentation hardness by means of a Barcol hardness tester*

EN 131-3, *Ladders — Part 3: Marking and user instructions*

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EN 10088-2, *Stainless steels — Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

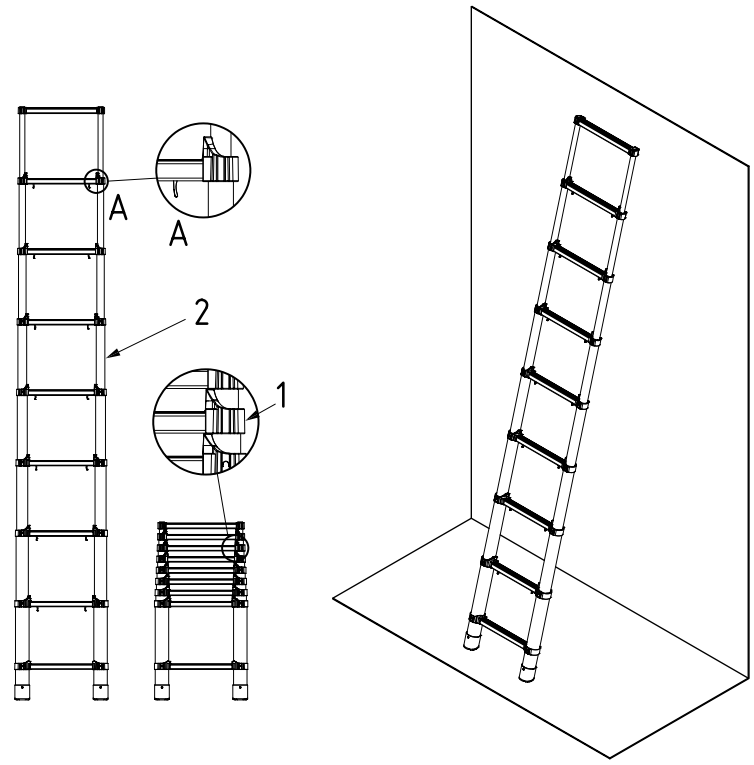
ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
telescopic ladder
ladder consisting of three or more rung/step sections with telescopic stiles

Note 1 to entry: See Figure 1.



Key
1 bracket
2 stile
A rung/step section locking mechanism

Figure 1 — Example of structure of a telescopic ladder

3.2
free-standing telescopic ladder
ladder (with rungs or steps) which has its own support with opening restraints

Note 1 to entry: See Figure 2.

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