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NSAI Standards

Irish Standard
I.S. EN ISO 12870:2014

Ophthalmic optics - Spectacle frames - Requirements and test methods (ISO 12870:2012)

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 12870

October 2014

ICS 11.040.70

Supersedes EN ISO 12870:2012

English Version

Ophthalmic optics - Spectacle frames - Requirements and test methods (ISO 12870:2012)

Optique ophtalmique - Montures de lunettes - Exigences et méthodes d'essai (ISO 12870:2012)

Augenoptik - Brillenfassungen - Anforderungen und Prüfverfahren (ISO 12870:2012)

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Contents

Page

Foreword 3

Annex ZA (informative) **Relationship between this European Standard and the Essential Requirements of EU Directive 93/42/EEC on Medical Devices** 4

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Foreword

The text of ISO 12870:2012 has been prepared by Technical Committee ISO/TC 172 “Optics and photonics” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 12870:2014 by Technical Committee CEN/TC 170 “Ophthalmic optics” the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2015, and conflicting national standards shall be withdrawn at the latest by April 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 12870:2012.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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The text of ISO 12870:2012 has been approved by CEN as EN ISO 12870:2014 without any modification.

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Annex ZA
(informative)

Relationship between this European Standard and the Essential Requirements of EU Directive 93/42/EEC on Medical Devices

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to Essential Requirements of the New Approach Directive 93/42/EEC on Medical Devices.

Once this standard is cited in the Official Journal of the European Union under that Directive and has been implemented as a national standard in at least one Member State, compliance with the clauses of this standard given in table ZA confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding Essential Requirements of that Directive and associated EFTA regulations.

Table ZA.1 — Correspondence between this European Standard and Directive 93/42/EEC on Medical Devices

Clauses/sub-clauses of this EN	Essential Requirements (ERs) of Directive 93/42/EEC	Qualifying remarks/notes
4.2.1, 4.2.2, 4.2.3	7.2	Testing according to 8.8. The requirement of 4.2.3 (i.e. 0,5 µg/cm^2/week) is the requirement set forth by Entry 27 of Annex XVII to REACH. The test in 8.8 makes reference to EN 16128 and EN 12472. See also explanations in Annex D.
4.6 to 4.9	7.3	Testing according to 8.2 to 8.6
4.2.2, 4.2.3	7.5	Testing according to 8.8. Essential Requirement 7.5 is only partly addressed in ISO 12870. To the extent that it is covered in ISO 12870, testing according to 8.8. The requirement of 4.2.3 (i.e. 0,5 µg/cm^2/week) is the requirement set forth by Entry 27 of Annex XVII to REACH. The test in 8.8 makes reference to EN 16128 and EN 12472. See also explanations in Annex D.
4.8	9.1	Testing according to 8.4 and 8.5.
4.9	9.3	Testing according to 8.6.
9,10	13.1	—
9,10	13.3	The statement in 10.4 is true for the countries of the Community [cf. ER 13.3 a)].

WARNING — Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

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INTERNATIONAL STANDARD

ISO 12870

Third edition
2012-04-01

Ophthalmic optics — Spectacle frames — Requirements and test methods

Optique ophtalmique — Montures de lunettes — Exigences et méthodes d'essai

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Contents

Page

Foreword ... iv

1 Scope ... 1

2 Normative references ... 1

3 Terms and definitions ... 1

4 Requirements ... 2
4.1 General ... 2
4.2 Physiological compatibility ... 3
4.3 Measurement system ... 4
4.4 Dimensional tolerances on nominal size ... 4
4.5 Tolerance on screw threads ... 4
4.6 Dimensional stability at elevated temperature ... 4
4.7 Resistance to perspiration ... 4
4.8 Mechanical stability ... 5
4.9 Resistance to ignition ... 6
4.10 Resistance to optical radiation ... 6

5 Selection of test samples ... 6
5.1 General ... 6
5.2 Testing for nickel release ... 6
5.3 Change in spectacle frame model ... 6

6 Preparation and conditioning of test samples ... 6
6.1 Test lenses ... 6
6.2 Sample conditioning and test conditions ... 7

7 Testing, inspection and compliance ... 7
7.1 Testing ... 7
7.2 Inspection and examination ... 8
7.3 Compliance ... 8

8 Test methods ... 9
8.1 General ... 9
8.2 Test for dimensional stability at elevated temperature ... 9
8.3 Test for resistance to perspiration ... 10
8.4 Bridge deformation and lens retention test ... 11
8.5 Endurance test ... 13
8.6 Test for resistance to ignition ... 14
8.7 Test for resistance to optical radiation ... 15
8.8 Nickel release ... 16

9 Marking ... 18

10 Additional information to be supplied by the manufacturer or other person placing the product on the market ... 19

11 Reference to ISO 12870 ... 20

Annex A (informative) **Recommendations for the design of spectacle frames** ... 21

Annex B (informative) **Examples of layout of test equipment** ... 23

Annex C (informative) **Examples of locations for cutting metal spectacle frames before testing for nickel release** ... 26

Annex D (informative) **European requirements and legislation on nickel release** ... 27

Bibliography ... 28

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 12870 was prepared by Technical Committee ISO/TC 172, *Optics and photonics*, Subcommittee SC 7, *Ophthalmic optics and instruments*.

This third edition cancels and replaces the second edition (ISO 12870:2004) which has been technically revised.

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Ophthalmic optics — Spectacle frames — Requirements and test methods

1 Scope

This International Standard specifies fundamental requirements for unglazed spectacle frames designed for use with all prescription lenses. It is applicable to frames at the point of sale by the manufacturer or supplier to the retailer.

This International Standard is applicable to all spectacle frame types, including rimless mounts, semi-rimless mounts and folding spectacle frames. It is also applicable to spectacle frames made from natural organic materials.

NOTE See Annex A for recommendations on the design of spectacle frames.

This International Standard is not applicable to complete custom-made spectacle frames or to products designed specifically to provide personal eye protection.

2 Normative references

The following referenced documents are indispensable for the application 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 105-A02, *Textiles — Tests for colour fastness — Part A02: Grey scale for assessing change in colour*

ISO 105-B02, *Textiles — Tests for colour fastness — Part B02: Colour fastness to artificial light: Xenon arc fading lamp test*

ISO 3160-1, *Watch cases and accessories — Gold alloy coverings — Part 1: General requirements*

ISO 3696:1987, *Water for analytical laboratory use — Specification and test methods*

ISO 7998, *Ophthalmic optics — Spectacle frames — Lists of equivalent terms and vocabulary*

ISO 8596, *Ophthalmic optics — Visual acuity testing — Standard optotype and its presentation*

ISO 8624:2011, *Ophthalmic optics — Spectacle frames — Measuring system and terminology*

ISO 11380, *Optics and optical instruments — Ophthalmic optics — Formers*

ISO 11381, *Optics and optical instruments — Ophthalmic optics — Screw threads*

ISO/TS 24348, *Ophthalmic optics — Spectacle frames — Method for the simulation of wear and detection of nickel release from coated metal and combination spectacle frames*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 7998 and ISO 8624 and the following apply.

3.1
spectacle frame model
spectacle frame produced to a common design, using the same materials (but not necessarily the same pigmentation) and surface treatment

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