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NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA

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GB/T 14214-2019

Replacing GB/T 14214-2003

**Spectacle frames - General requirements and test
methods**

眼镜架 通用要求和试验方法

(ISO 12870:2016, Ophthalmic optics - Spectacle frames -

Requirements and test methods, MOD)

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Foreword

This Standard is drafted in accordance with the rules given in GB/T 1.1-2009.

This Standard replaces GB/T 14214-2003 "Spectacle frames - General requirements and test methods". Compared with GB/T 14214-2003, the main technical changes of this Standard are as follows:

- Delete tensile properties from mechanical stability (see 5.7.1 of the 2003 edition);
- CHANGE "Plating adhesion" to "Adhesion of coating layer" (see 4.7.2; 5.8.1 of the 2003 edition);
- ADD test methods for materials other than metallic materials (see 8.5);
- Modify the test conditions for resistance to perspiration: The lowest part of the sample is 15 mm $\pm$ 3 mm above the solution, which is changed to not less than 12 mm (see 8.4.2.1; 9.7.2.1 of the 2003 edition);
- ADD the requirements for nickel release and corresponding test method (see 4.2.2 and 5.2);
- ADD the requirements for resistance to optical radiation and corresponding test method (see 4.10 and 8.9).

This Standard uses the redraft law to modify and adopt ISO 12870:2016 "Ophthalmic optics - Spectacle frames - Requirements and test methods".

Compared with ISO 12870:2016, this Standard has a lot of adjustments in structure. Annex A lists the comparison table for clause-subclause number of this Standard and ISO 12870:2016.

The main technical differences between this Standard and ISO 12870:2016 and their reasons are as follows:

- As for the normative references, this Standard has adjusted the technical differences, to adapt to the technical conditions of China. The adjustments are mainly reflected in Clause 2 "Normative references". The specific adjustments are as follows:
 - ADD GB/T 11533 (see 7.2.1);
 - Replace ISO 105-A02 with GB/T 250-2008 identical to the international standard (see 4.10);

- Replace ISO 11381 with GB/T 197 which modifies and adopts the international standard (see 4.5);
- Replace ISO 3696 with GB/T 6682 which modifies and adopts the international standard (see 8.4.1.4);
- Replace ISO 105-B02 with GB/T 8427 which modifies and adopts the international standard (see 8.9.1.2);
- Replace ISO 7998 with GB/T 26397 which modifies and adopts the international standard (see Clause 3);
- Replace ISO 8624:2011 with GB/T 38004 identical to the international standard (see 4.4);
- Replace ISO/TS 24348:2014 with GB/T 38009 which modifies and adopts the international standard (see 4.2.2);
- Delete ISO 8596 and ISO 11380;
- ADD terms and definitions "metal frame", "plastic frame", "boxed measurement system", "boxed center", "distance between centre", "horizontal boxed lens size", "distance between lenses", and "overall length of side" (see 3.4 to 3.11);
- ADD "4.7.2 Adhesion of coating layer" requirement and "8.5 Adhesion of coating layer" test method;
- Unify the material used for rimless and semi-rimless frames in 6.1.1 "test lens" and modify it to "resin material";
- In Table 1, add the provision that "The subclauses with which compliance is optional for dimensional tolerances of rimless and semi-rimless mounts (4.4) do not include the overall length of side";
- ADD "9.2 Label identification".

The following editorial changes have been made to this Standard:

- Modify standard name;
- Delete ISO 12870:2016 Clause 11 "Reference to this International Standard", Annex A (Informative) "Recommendations for the design of spectacle frames", and Annex C (Informative) "European requirements and legislation on nickel release";
- ADD Annex A (Informative) "Comparison table for clause-subclause

Spectacle frames - General requirements and test methods

1 Scope

This Standard specifies the technical requirements for spectacle frames, the selection of test samples, sample pretreatment and requirements, testing, inspection and compliance, test methods, and marking.

This Standard applies to various types and styles of spectacle frames made of metal, plastic, and natural organic materials, including rimless mounts, semi-rimless mounts, and folding spectacle frames.

This 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 documents are indispensable for the application of this document. For the dated references, only the editions with the dates indicated are applicable to this document. For the undated references, the latest edition (including all the amendments) are applicable to this document.

GB/T 197 General purpose metric screw threads - Tolerances (GB/T 197-2018, ISO 965-1:2013, MOD)

GB/T 250-2008 Textiles - Tests for colour fastness - Grey scale for assessing change in colour (ISO 105-A02:1993, IDT)

GB/T 6682 Water for analytical laboratory use - Specification and test methods (GB/T 6682-2008, ISO 3696:1987, MOD)

GB/T 8427 Textiles - Tests for color fastness - Color fastness to artificial light: Xenon arc (GB/T 8427-2019, ISO 105-B02:2014, MOD)

GB/T 11533 Standard for logarithmic visual acuity charts

GB/T 26397 Ophthalmic optics - Terminology (GB/T 26397-2011, ISO 13666:1998, MOD)

GB/T 38004 Spectacle frames - Measuring system and terminology (GB/T 38004-2019, ISO 8624:2011, IDT)

GB/T 38009 Spectacle frames - Requirement and method for the detection of nickel release (GB/T 38009-2019, ISO/TS 24348:2014, MOD)

3 Terms and definitions

The terms and definitions defined in GB/T 26397 and the following ones apply to this document. In order to facilitate the use, some of the terms and definitions in GB/T 26397 are repeatedly listed below.

3.1 Spectacle frames model

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

Note: For this Standard, if the design, material, or surface treatment of the frames is changed, the frames model is considered to have changed.

3.2 Natural organic material

Material that has not been synthesized from other raw materials and, when processed, remains essentially in its original state.

Example: Natural horn, bamboo and wood.

Note: Processing in this case is defined as cutting, shaping, bending, polishing and heating.

3.3 Custom-made spectacle frames

Spectacle frame made to special order for a named patient.

Note: Spectacle frames specially manufactured for wearers with unusual facial characteristics are custom-made spectacle frames.

3.4 Metal frame

The main part of the front frame of spectacle frames is made of metal material.

[GB/T 26397-2011, definition 3.15.1]

3.5 Plastic frame

The main part of the front frame of spectacle frames is made of plastic material.

[GB/T 26397-2011, definition 3.15.2]

3.6 Boxed measurement system

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