

# DIN EN ISO 12870:2026-01 (E)

## Ophthalmic optics - Spectacle frames - Requirements and test methods (ISO 12870:2024)

---

<b>Contents</b>		<b>Page</b>
Foreword.....		v
<b>1</b>	<b>Scope</b> .....	<b>1</b>
<b>2</b>	<b>Normative references</b> .....	<b>1</b>
<b>3</b>	<b>Terms and definitions</b> .....	<b>2</b>
3.1	General terms.....	2
3.2	Types of frame.....	3
3.3	Term describing frame materials.....	4
<b>4</b>	<b>Requirements</b> .....	<b>5</b>
4.1	General.....	5
4.2	Construction.....	7
4.3	Risk management.....	7
4.4	Biological compatibility.....	7
4.5	Nickel release (optional).....	8
4.6	Clinical evaluation.....	8
4.7	Measurement system.....	8
4.8	Dimensional tolerances on nominal size.....	8
4.9	Tolerance on screw threads (optional).....	9
4.10	Dimensional stability at elevated temperature.....	9
4.11	Resistance to perspiration.....	9
4.12	Mechanical stability.....	10
4.12.1	Bridge deformation.....	10
4.12.2	Lens retention characteristics.....	10
4.12.3	Endurance.....	11
4.13	Resistance to ignition.....	11
4.14	Resistance to optical radiation (optional).....	11
<b>5</b>	<b>Selection of test samples</b> .....	<b>11</b>
5.1	General.....	11
5.2	Testing for nickel release.....	11
5.3	Change in spectacle frame model.....	11
<b>6</b>	<b>Preparation and conditioning of test samples</b> .....	<b>12</b>
6.1	Test lenses.....	12
6.2	Sample conditioning and test conditions.....	12
<b>7</b>	<b>Testing, inspection and conformity</b> .....	<b>12</b>
7.1	Testing.....	12
7.2	Inspection and examination.....	13
7.3	Conformity.....	13
<b>8</b>	<b>Test methods</b> .....	<b>14</b>
8.1	General.....	14
8.2	Test for dimensional stability.....	14
8.2.1	Apparatus.....	14
8.2.2	Procedure.....	15
8.3	Test for resistance to perspiration.....	15
8.3.1	Apparatus and reagents.....	15
8.3.2	Procedure.....	16
8.4	Bridge deformation and lens retention.....	16

8.4.1	Apparatus.....	16
8.4.2	Procedure.....	17
8.5	Endurance test.....	18
8.5.1	Apparatus.....	18
8.5.2	Procedure.....	19
8.6	Test for resistance to ignition.....	20
8.6.1	Apparatus.....	20
8.6.2	Procedure.....	20
8.7	Test for resistance to optical radiation.....	21
8.7.1	Apparatus.....	21
8.7.2	Procedure.....	21
<b>9</b>	<b>Marking.....</b>	<b>22</b>
<b>10</b>	<b>Additional information to be supplied by the manufacturer or other person placing the product on the market.....</b>	<b>23</b>
<b>11</b>	<b>Reference to this document.....</b>	<b>23</b>
<b>Annex A</b>	<b>(informative) Recommendations for the design of spectacle frames.....</b>	<b>24</b>
<b>Annex B</b>	<b>(informative) Chemicals that can be harmful to health.....</b>	<b>26</b>
<b>Annex C</b>	<b>(informative) European requirements and legislation on nickel release.....</b>	<b>27</b>
<b>Annex D</b>	<b>(informative) Examples of layout of test equipment.....</b>	<b>28</b>
<b>Annex E</b>	<b>(normative) Long wavelength pass filter.....</b>	<b>31</b>
<b>Annex F</b>	<b>(informative) Identification marking or labelling of handling requirements (optional).....</b>	<b>35</b>
	<b>Bibliography.....</b>	<b>36</b>