

# DIN EN ISO 12870:2012-07 (E)

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

---

### Contents

Page

Foreword .....	
1 Scope .....	4
2 Normative references .....	4
3 Terms and definitions .....	4
4 Requirements .....	5
4.1 General .....	5
4.2 Physiological compatibility .....	6
4.3 Measurement system .....	7
4.4 Dimensional tolerances on nominal size .....	7
4.5 Tolerance on screw threads .....	7
4.6 Dimensional stability at elevated temperature .....	7
4.7 Resistance to perspiration .....	7
4.8 Mechanical stability .....	8
4.9 Resistance to ignition .....	9
4.10 Resistance to optical radiation .....	9
5 Selection of test samples .....	9
5.1 General .....	9
5.2 Testing for nickel release .....	9
5.3 Change in spectacle frame model .....	9
6 Preparation and conditioning of test samples .....	9
6.1 Test lenses .....	9
6.2 Sample conditioning and test conditions .....	10
7 Testing, inspection and compliance .....	10
7.1 Testing .....	10
7.2 Inspection and examination .....	11
7.3 Compliance .....	11
8 Test methods .....	12
8.1 General .....	12
8.2 Test for dimensional stability at elevated temperature .....	12
8.3 Test for resistance to perspiration .....	13
8.4 Bridge deformation and lens retention test .....	14
8.5 Endurance test .....	16
8.6 Test for resistance to ignition .....	17
8.7 Test for resistance to optical radiation .....	18
8.8 Nickel release .....	19
9 Marking .....	19
10 Additional information to be supplied by the manufacturer or other person placing the product on the market .....	22
11 Reference to ISO 12870 .....	23

<b>Annex A (informative) Recommendations for the design of spectacle frames .....</b>	<b>24</b>
<b>Annex B (informative) Examples of layout of test equipment.....</b>	<b>26</b>
<b>Annex C (informative) Examples of locations for cutting metal spectacle frames before testing for nickel release.....</b>	<b>29</b>
<b>Annex D (informative) European requirements and legislation on nickel release.....</b>	<b>30</b>
<b>Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EC Directive 93/42/EEC.....</b>	<b>31</b>
<b>Bibliography .....</b>	<b>33</b>