

ISO 18527-3:2020 (E)

Eye and face protection for sports use — Part 3: Requirements and test methods for eyewear intended to be used for surface swimming

Contents

	Foreword
	Introduction
1	Scope
2	Normative references
3	Terms and definitions
4	General requirements for eyewear
4.1	Physiological compatibility
4.2	Construction and adjustment
4.3	Cleaning and/or disinfection
4.4	Lens material and surface quality
4.5	Headform(s)
4.6	Resistance to corrosion
4.7	Retention by headband (Sit and fit)
4.8	Mandatory and optional requirements
5	Transmittance of the lenses
5.1	General
5.2	Transmittance and filter categories
5.3	General transmittance requirements
5.3.1	Uniformity of luminous transmittance and transmittance matching
5.3.2	Variations due to thickness variations
5.4	Special transmittance requirements
5.4.1	Photochromic lenses
5.4.2	Polarizing lenses
5.5	Claimed solar absorption/transmittance properties (optional)
5.5.1	General
5.5.2	Solar blue-light absorption/transmittance
5.5.3	Solar UV absorption/transmittance
5.5.4	Anti-reflective coated lenses (optional)
5.5.5	Reduced reflection coated lenses (optional)
6	Scattered light
7	Refractive power and prismatic power
7.1	Non-prescription nominally plano or afocal lenses
7.1.1	Refractive power
7.1.2	Spatial deviation
7.1.3	Prism imbalance
7.2	Non-prescription mass-produced powered lenses
7.3	Prescription lenses
7.3.1	Spherical and cylindrical power
7.3.2	Prismatic power of unmounted lenses
7.3.3	Prism imbalance for mounted prescription lenses
8	Mechanical strength
8.1	General
8.2	Failure criteria after impact

- 9 Other requirements for lenses**
 - 9.1 Minimum optical aperture**
 - 9.1.1 Recreational and competitive use**
 - 9.1.2 Specialist competitive use (optional)**
 - 9.2 Field of view**
 - 9.3 Temporal flange lenses**
 - 9.4 Resistance to fogging (optional)**
 - 9.4.1 Pre-conditioning**
 - 9.4.2 Testing**
- 10 Other requirements**
 - 10.1 Leakage**
 - 10.2 Compressive strength of eyewear**
 - 10.3 Adhesion of water seal to eyecup**
 - 10.4 Headband**
 - 10.4.1 Adjustment**
 - 10.4.2 Resistance to slipping**
 - 10.4.3 Resistance to breaking**
 - 10.5 Nosebridge strap**
- 11 Test methods**
 - 11.1 Leakage**
 - 11.1.1 Apparatus**
 - 11.1.2 Procedure**
 - 11.1.3 Report**
 - 11.2 Compressive strength of eyewear**
 - 11.2.1 Apparatus**
 - 11.2.2 Procedure**
 - 11.2.2.1 Samples**
 - 11.2.2.2 Eyewear flat with lenses and eyecups facing upwards**
 - 11.2.2.3 Eyewear on edge**
 - 11.2.3 Test report**
 - 11.3 Adhesion of a foam-style water seal to the eyecup**
 - 11.3.1 Apparatus**
 - 11.3.2 Procedure**
 - 11.3.3 Test report**
 - 11.4 Slip resistance of the headband**
 - 11.4.1 Apparatus**
 - 11.4.2 Procedure**
 - 11.4.3 Test report**
 - 11.5 Method for determining the strength of the headband**
 - 11.5.1 Apparatus**
 - 11.5.1.1 Elongation tensile testing device, capable of applying a force to provide the necessary extension.**
 - 11.5.2 Procedure**
 - 11.5.3 Test report**
 - 11.6 Method for determination of the tensile strength and slip resistance of the nosebridge strap**
 - 11.6.1 Apparatus**
 - 11.6.2 Procedure**
 - 11.6.3 Test report**
 - 12 Labelling and information to be supplied by the manufacturer**
 - 12.1 Complete eyewear**
 - 12.2 Mandatory markings on swimming eyewear**
 - 12.3 Information to be supplied by the manufacturer with each eyewear**
 - 12.4 Additional information to be available from the manufacturer**
 - 13 Selection of test samples**
 - 13.1 General**
 - 13.2 Preparation and conditioning of test samples**

Annex A (informative) Selection and use of swimming eyewear

- A.1 Fit
- A.1.1 General
- A.1.2 Headband
- A.1.3 Nosebridge strap (if applicable)
- A.2 Instructions for fitting, adjustment and removal of eyewear

Annex B (informative) Types of eyewear

Page count: 24