

Australian Standard[®]

Spectacles

Part 2: Spectacle frames

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Part 2: Spectacle frames

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PREFACE

This Standard was prepared by the Standards Australia Committee on Ophthalmic Optics to become Part 2 of the complete revision of AS 2228—1978, *Spectacle lenses*.

This Standard is now divided into two parts. Part 1 gives separate consideration to semi-finished lens blanks, finished stock lenses and surfaced edged and mounted lenses, and separate optical and geometric tolerances for each type are given.

Part 2 contains the basic requirements for unglazed spectacle frames, and includes performance requirements, testing requirements, a method of frame measurement and specifications for frame marking.

During the development of the Standard, reference was made to the following documentation:

BS

3521 Glossary of terms relating to ophthalmic lenses and spectacle frames
Part 2: Glossary relating to spectacle frames

6625 Specification for spectacle frames

ISO

7998 Optics and optical instruments — Spectacle frames — Vocabulary and lists of equivalent terms

8624 Optics and optical instruments — Ophthalmic optics — Measuring system for spectacle frames

9456 Optics and optical instruments — Ophthalmic optics — Marking of spectacle frames

Acknowledgment is made of the assistance received from these sources.

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STANDARDS AUSTRALIA

Australian Standard Spectacles

Part 2: Spectacle frames

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard specifies requirements for unglazed spectacle frames made from all types of materials and intended for use with corrective lenses.

It establishes two grades based on performance:

- (a) Grade A: all spectacle frames except those specified as grade B.
- (b) Grade B: metal spectacle frames for younger children where it is anticipated that the period of use will not exceed one year.

Measuring and marking methods for spectacle frames are also specified.

NOTES:

- 1 Requirements for spectacle lenses are given in AS 2228.1.
- 2 This Standard does not apply to products used for eye protection against industrial hazards (which are covered by AS 1337) other than frames for safety spectacles, or to frames for non-prescription sunglasses (which are covered by AS 1067, Parts 1 and 2).

1.2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS

1067 Sunglasses and fashion spectacles

1067.1 Part 1: Safety requirements

1067.2 Part 2: Performance requirements

1337 Eye protectors for industrial applications

2228 Spectacles

2228.1 Part 1: Spectacle lenses

2331 Methods of test for metallic and related coatings

2331.3.1 Method 3.1: Corrosion and related property tests—Neutral salt spray (NSS) test

1.3 DEFINITIONS For the purposes of this Standard, the definitions given in Table 3.1 and those below shall apply.

1.3.1 General definitions

1.3.1.1 Spectacle frame—a device for supporting spectacle lenses before the eyes, usually resting on the bridge of the nose and being held in place by sides which project towards or over the ears.

1.3.1.2 Spectacles—a spectacle frame to which lenses have been mounted.

1.3.2 Types of frames

1.3.2.1 Combination frame—a frame in which some essential parts of the front are made of plastics or similar material, and other essential parts are made of metal. (See Figures 1.1 and 1.2.)

1.3.2.2 Metal frame—a frame in which the front is made primarily of metal. (See Figure 1.3.)

1.3.2.3 Plastic frame—a frame in which the front is made primarily of a plastics material or of a natural material of similar properties. (See Figure 1.4.)

1.3.2.4 Rimless spectacle frame—a spectacle frame without rims to support the lenses, the bridge and sides being attached directly to the lenses. (See Figure 1.5.)

1.3.2.5 Semi-rimless spectacle frame—a spectacle frame in which the rim does not fully enclose the lens, being continuous from the bridge to each side around only part of the lens (usually the upper part). The lens is often supported around the rest of its circumference by a retaining cord. (See Figure 1.5.)

1.3.3 Parts of frames—general terms

1.3.3.1 Anatomic side—a side in which the drop is shaped to conform with the back of the ear.

1.3.3.2 Barrel—that part of a hinge which encloses the screw or pin. See also front plate.

1.3.3.3 Brace bar—see bridge brace.

1.3.3.4 Bridge—that part of the front which forms the main connection between the lenses or rims. The bridge assembly is generally taken to include the pads, if any. In the presence of a bridge brace, it may be called the lower bridge.

1.3.3.5 Bridge brace—a strengthening bar joining the rims, additional to the main bridge. Also known as the brace bar or upper bridge.

1.3.3.6 Browbar—the bar of a combination frame to which the sides, bridge, rims and sometimes the pads are attached.

1.3.3.7 Browbar lug—the screw, rivet or pin attaching the rims to the browbar of a combination frame.

1.3.3.8 Butt—that part of a side to which the lug or hinge is attached. Also known as a cable.

1.3.3.9 Cable—see butt.

1.3.3.10 Closing block—see rimlock.

1.3.3.11 Collet—the ferrule separating the tip from the butt of a side.

1.3.3.12 Comfort bridge—see saddle bridge.

1.3.3.13 Concealed hinge—see hidden hinge.

1.3.3.14 Core—the wire which is sometimes moulded into a side to provide flexibility and strength.

1.3.3.15 Counterplate—a backing plate to which screws or rivets are fastened.

1.3.3.16 Curl side—a side with a spring drop which conforms to the back of the ear. Also known as a riding bow side.

1.3.3.17 Drop—that part of a side which is curved down to fit behind the ear, and extending from the earbend to the tip.

1.3.3.18 Drop end side—see hockey side.

1.3.3.19 Earbend—the bend in a side that defines the beginning of the drop.

1.3.3.20 End cover—see tip.

1.3.3.21 Endpiece—see lug.

1.3.3.22 Eyewire—see rim.

1.3.3.23 Flex hinge—see sprung hinge.

1.3.3.24 Front—the part of the frame or mount comprising the bridge, rims (if any) and hinges (or lugs (or both)).

1.3.3.25 Front plate—the plate to which the hinge barrel is attached.

1.3.3.26 Golf side—see hockey side.

1.3.3.27 Half-hinge—each of the two parts of a hinge which is attached either to the front or the side and assembled to the other half-hinge by means of a screw, rivet or pin. Also known as a half joint. See also hinge.

1.3.3.28 Half-joint—see half-hinge.

1.3.3.29 Hidden hinge—a hinge whose mounting surfaces are fully contained by the front or side (or both) so that only the barrel is visible. Also known as a concealed hinge. See also recessed hinge.

1.3.3.30 Hinge—may be either—

- (a) the hinge linking the side and the front; or
- (b) that part of, or attachment to, the rim which provides the means of pivoting the side or closing the rim upon the lens (or both). Also known as a joint.

For examples of hinge types and components, see Figure 1.6.

1.3.3.31 Hockey side—a side resembling a hockey stick, with a single sharp bend defining the drop. Also known as drop end side, golf side or skull side.

1.3.3.32 Hood—see top rim.

1.3.3.33 Interconnected pad—see twin pad.

1.3.3.34 Joint—see hinge, half-hinge.

1.3.3.35 Keyhole bridge—a bridge designed to contact the nose on the pads only, and not on the interconnecting bar. See also saddle bridge.

1.3.3.36 Library side—a side which is straight, or in which the bend defining the drop is slight.

1.3.3.37 Lower bridge—see bridge.

- 1.3.3.38** *Lug*—an extension at each end of the front or side (or both) which incorporates the hinge or to which the hinge is attached. Also known as endpiece. For examples of lug types, see Figure 1.7.
- 1.3.3.39** *Mitre*—the chamfer of a hinge, front plate or lug which allows the two half-hinges or lugs to mate.
- 1.3.3.40** *Monoblock hinge*—a combination in one unit of a hinge, barrel, rimlock and lug.
- 1.3.3.41** *Open bridge*—see saddle bridge.
- 1.3.3.42** *Pad*—an extension of, or attachment to, the bridge or the rim to bear on the nose.
- 1.3.3.43** *Pad arm*—the arm which connects a pad to the front or bridge.
- 1.3.3.44** *Pinless hinge*—a hinge which is moulded into the front or side and does not require rivets or pins for attachment.
- 1.3.3.45** *Recessed hinge*—a hinge whose surfaces are flush with the surfaces of the front or side (or both). See also hidden hinge.
- 1.3.3.46** *Retaining cord*—the cord in a semi-rimless frame which surrounds the lens between the limits of the rim.
- 1.3.3.47** *Riding bow side*—see curl side.
- 1.3.3.48** *Rim*—that part of a frame which partly or completely surrounds the lens. Also known as an eyewire.
- 1.3.3.49** *Rimlock*—the block at each end of a metal rim through which a screw passes to close the rim. Also known as a closing block or tube.
- 1.3.3.50** *Rivet plate*—a trim plate to which one, two or more rivets are mounted and used to attach a hinge to a front or side. Also known as a shield rivet.
- 1.3.3.51** *Saddle bridge*—a bridge in which all points are designed to contact the nose. Also known as a comfort bridge or open bridge.
- 1.3.3.52** *Shield rivet*—see rivet plate.
- 1.3.3.53** *Side*—an extension of, or attachment to, the front passing towards or over the ear. Also known as a side arm or temple. For examples of side types, see Figure 1.8.
- 1.3.3.54** *Side arm*—see side.
- 1.3.3.55** *Skull side*—see hockey side.
- 1.3.3.56** *Spinning*—see winding.
- 1.3.3.57** *Sprung hinge*—a hinge which is designed to allow the side to be opened beyond the normal fitting position to prevent damage. Also known as a flex hinge.
- 1.3.3.58** *Strap*—that part of the bridge or lug of a rimless frame designed for attachment to the lens.
- 1.3.3.59** *Stud*—the screw, rivet or pin which connects the pad to the pad arm.
- 1.3.3.60** *Temple*—see side.
- 1.3.3.61** *Tip*—may be either —
- (a) a plastics moulding over the drop of a metal side, or the spring drop of a curl side; or
 - (b) the part of a side which is furthest from the butt.
- Also known as an end cover.
- 1.3.3.62** *Top rim*—the plastic or metal fashion trim of a combination frame attached to the upper part of the rim. Also known as a hood.
- 1.3.3.63** *Trim*—any part attached to a front or side primarily for fashion purposes.
- 1.3.3.64** *Twin pad*—a single moulded piece comprising both pads and an interconnecting bar. Also known as a twinned pad or interconnected pad.
- 1.3.3.65** *Tube*—see rimlock.
- 1.3.3.66** *Open bridge*—see saddle bridge.
- 1.3.3.67** *Upper bridge*—see bridge brace.
- 1.3.3.68** *Winding*—the spiral metal winding which commonly dads the tip of a curl side. Also known as spinning.