Australian Standard®

Sunglasses and fashion spectacles

Part 1: Safety requirements

This Australian Standard was prepared by Committee CS/53, Sunglasses. It was approved on behalf of the Council of Standards Australia on 22 June 1990 and published on 17 September 1990.

The following interests are represented on Committee CS/53:

Attorney-General's Department, Federal Bureau of Consumer Affairs
Australian Chamber of Commerce
Australian Consumers Association
Australian Federation of Consumer Organizations
Australian Optometrical Association
Australian Radiation Laboratory
Australian Ski Federation
Confederation of Australian Industry
CSIRO, Division of Applied Physics
Department of Defence
Guild of Dispensing Opticians
Optical Distributors and Manufacturers Association of Australia
Queensland University of Technology
Retail Traders Association of Australia
Royal Australian College of Ophthalmologists
Ski Industries Association of Australia
Sunglass Association of Australia
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PREFACE

This Standard was prepared by the Standards Australia Committee on Sunglasses to supersede in part, AS 1067—1983, *Sunglasses and fashion spectacles — Non-prescription types*.

The Standard is now divided into two Parts. Part 1 (AS 1067.1) deals with safety requirements and Part 2 (AS 1067.2) with performance details for lenses, frames, and assembled sunglasses and fashion spectacles.

Both Parts 1 and 2 include technical and editorial modifications made necessary by the decision to incorporate AS 1067—1983 in legislation, and shortcomings identified during the application of that edition. It should be noted that with the publication of the revised Standard, only Part 1 (AS 1067.1) is incorporated in legislation.

Although the Standards specify requirements for the safety and performance of sunglasses and fashion spectacles having lenses of zero refractive power, they may also be applied to sunglasses having prescription type lenses.

The two Standards differ from the 1983 edition in that they now cover children's sunglasses. They do not however cover toy sunglasses, ski goggles, spectacles for special purposes such as protection in solaria used for cosmetic purposes, and eye protection against sources of radiation other than from the sun. It should be noted that where sunglasses are worn by a child there is no need for the glasses to comply with the dimensional requirements.

Appendices describing methods for the determination of spectral transmittance, and examples of calculation of mean transmittance and coloration limits are included.

This Standard was prepared with due regard to the content of current and proposed sunglasses specifications of other countries and the International Standard Organization. However, the primary basis for the requirements in this Standard is the published scientific literature relevant to the maintenance of safe, comfortable and efficient vision with sunglasses.

A list of references which were of particular value during the preparation of this Standard is given in Appendix F, and acknowledgment of the assistance is made. It must be stressed, however, that the list of references given should by no means be considered to be comprehensive.

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STANDARDS AUSTRALIA

Australian Standard

Sunglasses and fashion spectacles

Part 1: Safety requirements

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard sets out safety requirements for sunglasses and fashion spectacles having plano lenses of nominally zero refractive power.

The following types of sunglasses and fashion spectacles are covered by this Standard:

(a) Spectacles having conventional frames.

(b) Rimless sunshields with a one-piece front or of the visor type.

(c) Clip-on and slip-on type sunglasses.

(d) Children's sunglasses.

The sunglasses described in this Standard are not intended to provide protection against sources of radiation other than natural sunlight.

Ski goggles are exempt from the requirements of this Standard.

This Standard does not apply to tinted glasses identified as night-driving glasses. The wearing of sunglasses or tinted glasses of any kind for night driving is strongly discouraged.

This Standard makes no provision for statistical sampling or quality control procedures for assessing the quality of sunglasses and fashion spectacles. Where compliance with this Standard is to be assessed on the basis of statistical sampling and inspection, the sampling plan should be in accordance with AS 1199 and should take into account the guidance given in AS 1399.

NOTES:

1 Sunglasses and fashion spectacles covered by this Standard are not necessarily suitable for eye protection in industrial environments. Eye protectors suitable for industrial application are specified in AS 1337 in addition to the requirements of this Standard.

2 Requirements for filters for eye protectors designed for protection against sources of optical radiation other than natural sunlight are specified in AS 1338.

3 Requirements for eye protection in solaria are specified in AS 2635.

4 Requirements for eye protection whilst working with or near lasers are specified in AS 2211.

5 Requirements for eye protectors for automotive purposes are specified in AS 1609.

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

AS	
1067	Sunglasses and fashion spectacles — Non-prescription types
1067.2	Part 2: Performance requirements
1199	Sampling procedures and tables for inspection by attributes
1337	Eye protectors for industrial applications
1338	Filters for eye protectors
1399	Guide to AS 1199 — Sampling procedures and tables for inspection by attributes
1609	Eye protectors for motor cyclists and racing car drivers
2211	Code of practice for laser safety
2635	Installation, maintenance and operation of solaria for cosmetic purposes

1.3 DEFINITIONS For the purpose of this Standard, the definitions below apply.

1.3.1 Radiation

1.3.1.1 *Visible radiation* — radiation capable of causing visual sensation directly. The limits are not well defined and vary from individual to individual. The lower limit is generally taken to be between 380 nm and 400 nm and the upper limit between 760 nm and 780 nm.

1.3.1.2 *Ultraviolet radiation* — optical radiation for which the wavelengths of the monochromatic components are smaller than those for visible radiation and larger than about 100 nm.

1.3.1.3 *Erythemal ultraviolet radiation* — ultraviolet radiation of wavelength of less than 325 nm that elicits, after sufficient exposure, a delayed response of inflammation or reddening of the human skin.