

DIN EN 1836:2007-11 (E)

Personal eye-equipment - Sunglasses and sunglare filters for general use and filters for direct observation of the sun (includes Amendment A1:2007)

Contents		Page
Foreword		3
1	Scope	4
2	Normative references	4
3	Terms and definitions	5
4	Filter requirements	9
4.1	Transmittance	9
4.2	Optical power of oculars	13
4.3	Scattered light	14
4.4	Material and surface quality	15
4.5	Robustness	15
4.6	Resistance to radiation	15
4.7	Ignition	16
5	Requirements for complete sunglasses (frames with filters)	16
5.1	General	16
5.2	General construction	16
5.3	Mechanical requirements	16
5.4	Ignition	16
5.5	Materials for the manufacture of complete sunglasses	17
6	Testing	17
6.1	General	17
6.2	Transmittance	17
6.3	Optical power values	22
6.4	Scattered light	22
6.5	Material and surface quality	22
6.6	Robustness	23
6.7	Resistance to radiation	23
6.8	Ignition	24
6.9	Conditioning and test conditions for complete sunglasses	24
6.10	Test for mechanical requirements for complete sunglasses	25
7	Information and labelling	27
7.1	General	27
7.2	Complete sunglasses	27
7.3	Uncut finished lenses and replacement lenses (unmounted sunglass filters)	29
7.4	Transmittance or reflectance claims	29
7.5	Robustness claims	29
Annex A (normative)	Cut-on filter for UV filtering	30
Annex B (normative)	Spectral functions for the calculation of luminous transmittance and relative visual attenuation coefficients (quotients)	32
Annex C (normative)	Spectral functions for the calculation of solar UV transmittance values and blue-light transmittance	34

Annex D (normative) Spectral function for the calculation of infrared transmittance	36
Annex E (informative) Use of sunglare filters	38
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 89/686/EEC	41
Bibliography	43