

International Standard



4856

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Personal eye-protectors — Synoptic tables of requirements for oculars and eye-protectors

Protecteurs individuels de l'œil — Tableaux récapitulatifs des spécifications pour les oculaires et les protecteurs de l'œil

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Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 4856 was developed by Technical Committee ISO/TC 94, *Personal safety — Protective clothing and equipment*, and was circulated to the member bodies in September 1981.

It has been approved by the member bodies of the following countries :

Australia	Germany, F.R.	Romania
Austria	Hungary	South Africa, Rep. of
Belgium	India	Sweden
Canada	Israel	Switzerland
Czechoslovakia	Netherlands	Thailand
Egypt, Arab Rep. of	Norway	USSR
France	Poland	

The member bodies of the following countries expressed disapproval of the document on technical grounds :

Denmark
United Kingdom
USA

Personal eye-protectors — Synoptic tables of requirements for oculars and eye-protectors

1 Scope and field of application

This International Standard provides a survey of the requirements which have to be met by the various types of oculars and eye-protectors as well as by the combination of both with the exception of filters and eye-protectors against laser radiation, specifications of which are given in ISO 6161.

2 References

General and particular requirements are stated in the following documents :

ISO 4007, *Personal eye-protectors — Vocabulary.*

ISO 4849, *Personal eye-protectors — Specifications.*

ISO 4850, *Personal eye-protectors for welding and related techniques — Filters — Utilisation and transmittance requirements.*

ISO 4851, *Personal eye-protectors — Ultra-violet filters — Utilisation and transmittance requirements.*

ISO 4852, *Personal eye-protectors — Infra-red filters — Utilisation and transmittance requirements.*

ISO 4853, *Personal eye-protectors — Daylight filters — Utilisation and transmittance requirements.*¹⁾

ISO 6161, *Personal eye-protectors — Filters and eye-protectors against laser radiation.*

The test methods corresponding to these specifications are described in the following two documents :

ISO 4854, *Personal eye-protectors — Optical test methods.*

ISO 4855, *Personal eye-protectors — Non-optical test methods.*

3 Synoptic tables

Requirements to be met by the different types of oculars are given in table 1.

Requirements for frames and mounted oculars are given in table 2.

Depending on the risk the different types of eye-protectors have to be fitted with the particular oculars according to table 3.

1) At present at the stage of draft.

Table 1 — Synoptic table of requirements for oculars

Requirements			Type of oculars							Testing	
			Welding filters	Ultra-violet filters	Infra-red filters	Daylight filters	Clear protective lenses against impacts	Clear protective visors against high-speed particles	Clear cover plates		
	ISO	According to clause or sub-clause								ISO	According to clause or sub-clause
Dimensions	4849	7.1.1	+	+	+	+	+	+	+	by measuring	
Optical requirements	4849	7.1.2.1.1	+	+	+	+	+	+	+	4854	3 or annex A
Diffusion of light	4849	7.1.2.2	+	+	+	+	+	+	+	4854	4
Quality of material and surface	4849	7.1.3	+	+	+	+	+	+	+	4854	5
Oculars for protection against high mass, low-speed particles	4849	7.1.4 and 7.1.4.1	— 1)	— 1)	— 1)	— 1)	+	—	—	4855	3
Protection against high-speed particles	4849	7.2.2.2	— 1)	— 1)	— 1)	— 1)	—	+	—	4855	9
Stability at elevated temperature	4849	7.1.5	+	+	+	+	+	+	+	4855	4
Stability to ultra-violet radiation	4849	7.1.6	+	+	+	+	+	+	+	4855	5
Ignition	4849	7.2.2.1	+	+	+	+	+	+	+	4855	6
Suitability for disinfection	4849	7.1.8	+	+	+	+	+	+	+	4855	8
Transmittance variations	4849	7.2.1.1	+	+	+	+	—	—	—	4849 and 4854	7.2.1.1 and 6
Transmittance of clear protective lenses and cover plates	4849	7.2.1.1.1	—	—	—	—	+	+	+	4854	6
Transmittance of welding filters	4850	4	+	—	—	—	—	—	—	4854	6
Transmittance of UV filters	4851	4	—	+	—	—	—	—	—	4854	6
Transmittance of IR filters	4852	4	—	—	+	—	—	—	—	4854	6
Transmittance of daylight filters	4853	4	—	—	—	+	—	—	—	4853	4
Identification	4849	9	+	+	+	+	+	+	+	Visual inspection	

Symbols : + = required
 — = not required

1) In the case where the ocular is worn in areas of mechanical hazards this requirement shall be applied.

Infra-red filters and welding filters made of toughened glass are forbidden in some countries and allowed in some others on condition that an appropriate complementary protection is provided.