# **INTERNATIONAL STANDARD**

**ISO** 16073-7

> First edition 2019-11

## Wildland firefighting personal protective equipment — Requirements and test methods —

Part 7: Face and eye protection

Équipement de protection individuelle pour la lutte contre les feux cec .s — E.

.ction du vi. d'espaces naturels — Exigences et méthodes d'essai —

Partie 7: Protection du visage et des yeux





© ISO 2019

Vementation, no par hanical, including requested for All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office CP 401 • Ch. de Blandonnet 8 CH-1214 Vernier, Geneva Phone: +41 22 749 01 11 Fax: +41 22 749 09 47 Email: copyright@iso.org Website: www.iso.org

Published in Switzerland

CO	ntent	S	Page
Fore	eword		iv
Intr	oductio	n	<b>v</b>
1	Scon	e	1
2		native references	
3	Terms and definitions		
4	Eye protectors		
	4.1 4.2	General Design and manufacturing requirements	
	7.2	4.2.1 General construction	
		4.2.2 Materials	
		4.2.3 Headbands	
	4.3	Basic, particular and optional requirements for non-mesh eye protectors	
		4.3.1 Basic requirements	
		4.3.2 Particular requirements	
		4.3.3 Optional requirements	
	4.4	Mesh eye and face protectors	8
		4.4.1 Basic requirements	8
		4.4.2 Design and manufacture	
		4.4.3 Performance	
		4.4.4 Requirements for eye protectors with special characteristics	
	4.5	Allocation of requirements, test schedules and application	
		4.5.1 Requirements, test methods and schedules	
		4.5.2 Application of eye protector types	
5	Marking and labelling		15
	5.1	General marking requirements	
	5.2	Legibility	15
	5.3	Conformity marking requirements	15
	5.4	Additional marking requirements	
		5.4.1 Eye protectors	16
6	Man	ufacturer's information	19
	6.1	General	
Λ			
		ormative) Thermal stability of eyewear at elevated temperatures	
Bibl	liograph	ıy	23
			1
			, ,

#### **Foreword**

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see <a href="https://www.iso.org/directives">www.iso.org/directives</a>).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see <a href="https://www.iso.org/patents">www.iso.org/patents</a>).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see <a href="https://www.iso.org/iso/foreword.html">www.iso.org/iso/foreword.html</a>.

This document was prepared by Technical Committee ISO/TC 94, *Personal safety — Personal protective equipment*, Subcommittee SC 14, *Firefighters' personal equipment*.

This first edition of ISO 16073-7, together with ISO 16073-8 and ISO 16073-1 to ISO 16073-6 cancels and replaces ISO 16073:2011.

The main changes are as follows:

- the content has been reviewed and separated into several parts,
- the respiratory protection has been deleted from the document.

A list of all parts in the ISO 16073 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at <a href="https://www.iso.org/members.html">www.iso.org/members.html</a>.

5

#### Introduction

Wildland firefighting involves work carried out mostly in summer temperatures and for many hours, during which the firefighter can develop high levels of metabolic heat. As a consequence, the personal protective equipment (PPE) is required to be light, flexible and commensurate with the risks to which the firefighter can be exposed in order to be effective without introducing excessive heat stress to the wearer.

It is important to train firefighters in the selection, use, care and maintenance of the PPE covered by this document, including an understanding of its limitations.

It is intended that a risk assessment be undertaken to determine if the PPE covered by this document is suitable for its intended use and the expected exposure.

ain ¿) fac. This document provides minimum performance requirements for wildland firefighters' personal protective equipment (PPE) face and eye protection, designed for use for extended periods during wildland firefighting.

This document is a previous generated by tills

# Wildland firefighting personal protective equipment — Requirements and test methods —

#### Part 7:

### Face and eye protection

#### 1 Scope

This document specifies the minimum performance requirements and methods of test for personal protective equipment (PPE) face and eye protection, for wildland firefighting.

This document covers the general design of the PPE, the minimum levels of performance for the materials employed and the methods of test used. This PPE is not intended to provide protection during fire entrapment.

This document does not cover PPE for structural firefighting (see ISO 11999 series), for use against chemical, biological, radiological and nuclear hazards, or for use where a reflective outer surface is required (see ISO 15538).

Activities in support of wildland firefighting, such as the cutting of trees and the use of a chainsaw can require additional protection to that provided in this document. Users are directed to those relevant standards for the requirements associated with such protection.

#### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 18526-2:—1), Eye and face protection — Test methods — Part 2: Physical optical properties

ISO 18526-3<sup>2</sup>), Eye and face protection — Test methods — Part 3: Physical and mechanical properties

ISO 17493, Clothing and equipment for protection against heat — Test method for convective heat resistance using a hot air circulating oven

ISO/TR 19591, Personal protective equipment for firefighters — Standard terms and definitions

EN 167:2001, Personal eye-protection — Optical test methods

EN 170, Personal eye-protection — Ultraviolet filters — Transmittance requirements and recommended use

EN 172, Personal eye protection — Sunglare filters for industrial use

#### 3 Terms and definitions

For the purposes of this document, the terms and definitions in ISO/TR 19591 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <a href="https://www.iso.org/obp">https://www.iso.org/obp</a>
- 1) Under preparation. Stage at the moment of publication ISO/FDIS 18526-2:2019.
- 2) Under preparation. Stage at the moment of publication ISO/FDIS 18526-3:2019.