

English Version

Guidance for selection, use, care and maintenance of protective clothing against heat and flame

Guide pour la sélection, l'utilisation, l'entretien et la
maintenance des vêtements de protection contre la
chaleur et la flamme

Leitfaden für Auswahl, Gebrauch, Pflege und
Instandhaltung von Schutzkleidung gegen Hitze und
Flammen

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European foreword

This document (CEN/TR 14560:2018) has been prepared by Technical Committee CEN/TC 162 “Protective clothing including hand and arm protection and lifejackets”, the secretariat of which is held by DIN.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document will supersede CEN/TR 14560:2003.

Introduction

For manufacturers and users of personal protective equipment the following European Regulation and Directive are important:

- Regulation (EU) 2016/425 of the European Council of 9th March 2016 on personal protective equipment (replacing the Directive 89/686 EEC);
- Directive 89/656/EEC on use of personal protective equipment.

Regulation (EU) 2016/425 indicates that in order to place PPE on the market it shall meet essential health and safety requirements, and not necessarily the various relevant EN or EN ISO standards. Nevertheless nearly all PPE meet the essential requirements through standards, as harmonised standards give presumption of conformity with the requirements of the directive. This is the reason we will spend sometimes explaining certain standard and what information they provide on the heat and flame protective clothing. Requirements and test methods should be, as far as possible, representative of the risks against those that it is necessary to protect the user under the foreseeable conditions of use.

The reader will want to be aware that where PPE is intended for use in a place of work, national and Union legislation intended to ensure the safety of employees will usually apply. When one mentions PPE, it is essential that it meets the requirements of Regulation (EU) 2016/425. Directive 89/656/EEC (Use Directive) provides that the employer who fails to provide suitable PPE commits a criminal offence and an employee who suffers foreseeable injury can trigger liability. Conversely, if the employee, after proper training and instructions, fails to wear the suitable PPE; the employee can also be prosecuted and/or dismissed and if injured or suffers disease in consequence will probably lose right to all or certain part of the damages.

The information in this technical report has been produced to assist users, employers and purchasers (or the person who advises the employer) in making the necessary decisions regarding the selection, use, care and maintenance of protective clothing, for employees exposed to risks related to heat and flame (e.g. industrial welding, fire-fighting, first response).

The purpose of this technical report is to establish a guidance document for protective clothing against heat and flames with the goal to evaluate and reduce the safety risks and potential health risks associated with poorly maintained, contaminated, deterioration, or damaged protective clothing. This selection use, care and maintenance guidance provides basic answers, criteria, and options for the persons that are selecting or using protective clothing through its life cycle with respect to protection it provides guidance related to heat and flame or damaged protective clothing.

The main topics that an employer needs to consider are highlighted in this technical report. Many paragraphs of the document contain bullet-lists as thought provokers and options that may need to be considered. A number of flowcharts have been created to help understand the flow of this document and can be used as a process in the life cycle of heat and flame protective clothing from selection to disposal. These flowchart(s) may need to be reiterated a number of times to come to the optimum solution or to ensure continued adequate protection. The annexes are additional detail that would make the main body too complicated to read, but are necessary to describe hazards and risks, the value of the test methods for the end user, etc.

Normative references are not provided in this report. All references are of an informative nature only.

Annex A gives details of the current European Standards relating to clothing designed to provide protection from heat and flame.

Please be aware and consider compatibility with other items of PPE, that both protect against heat and flame, but there should also be considering other risks.

Selection of protective clothing for heat flames should be based on your own risk assessment and should not be copied from other procurement documents.

For European legislation on PPE see Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal protective equipment and European Directive 89/656/EEC on use of personal protective equipment.

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1 Scope

This document provides guidance to the employers, users and purchasers with respect to selection, use, care, and maintenance requirements for protective clothing against heat and flame and is compliant with the European legislation.

This document is not exhaustive in addressing all the safety concerns associated with the use of compliant protective equipment for protection against heat and flames and other related risks.

It is essential not to construe this document as addressing all the safety concerns, if any, associated with the use of this document by testing or repair facilities. It is the responsibility of the persons and organizations that use this document and any other standards related technical report to PPE:

- to conduct a risk assessment,
- to select the protective clothing and other PPE,
- as well as to ensure that these provide a holistic protection, only when the compatibility has been assessed including understanding the work place and the work environment to determine the properties of protective clothing against heat and flames to establish safety and health practices
- and to determine the applicability of regulatory limitations prior to using this technical report for any designing, manufacturing, and testing.

This guidance is meant for all end users that may be confronted with heat and flame risks although it will focus on the first four in the list below:

- petrochemical and chemical industry;
- welders and foundries;
- utilities (electrical, gas, water);
- fire fighters and emergency response;
- sports (motor sports, boating, etc.);
- security forces (military, police and private).

It is essential that nothing herein restricts any jurisdiction from exceeding the minimum requirements as provided in the relevant standards.

2 Total process

2.1 Introduction flow charts

The flowchart diagram below shows the complete SUCAM process. The process will be described in detail in the following clauses. All clauses correspond with the coloured blocks in the below diagram. Clause 3 describes the used terms and definitions. Clause 4 describes the selection process of the flame retardant (FR) clothing. Clause 5 describes the use of the FR clothing. Clause 6 describes the care process of FR clothing. Finally Clause 7 describes maintenance of FR clothing.