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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 8965.4-2022

Protective clothing-Arc flash protective clothing

防护服装 防电弧服

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Foreword

This document is developed in accordance with the rules given in GB/T 1.1-2020 Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents.

This document is Part 4 of GB 8965 Protective clothing. The following parts of GB 8965 have been issued:

- GB 8965.1-2020 Protective clothing - Flame retardant protective clothing;
- GB 8965.2-2022 Protective clothing - Protective clothing for welders;
- GB 8965.3-2022 Protective clothing - Clothing to protect against molten metal splash;
- GB 8965.4-2022 Protective clothing - Arc flash protective clothing.

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

This standard was proposed by and is under the jurisdiction of the Ministry of Emergency Management of the People's Republic of China.

Introduction

In the working environment, the typical forms of flame and thermal damages include direct contact with flame, contact with flame and high-temperature solid during the welding, contact with all kinds of splashed molten metal, and thermal damage caused by electric arc discharge. Different flame and thermal damages have different action forms and characteristics, so different demands are put forward for body protection, and the protective clothing is divided into different types. On the basis of considering the application requirements and technical status of different types of flame and thermal damage protection products at home and abroad, this document specifies the technical

requirements for the main types of protective clothing. The prepared GB 8965 series product standards will be composed of four parts.

--Part 1: Flame retardant protective clothing, Aiming to specify the technical requirements of protective clothing used in place with open fire, send-out spark, flammable material or exposed to flashover risk.

--Part 2: Protective clothing for welders, Aiming to specify the technical requirements of protective clothing used in welding and related working places.

--Part 3: Clothing to protect against molten metal splash, aiming to specify the technical requirements of protective clothing used in metal smelting and casting places and other places exposed to molten metal splash risk, so as to avoid or reduce the damage caused by molten metal to operators.

--Part 4: Arc flash protective clothing, aiming to specify the technical requirements of protective clothing that may suffer from transient arc energy and thermal damage in protective electrical and related working places.

Protective clothing - Arc flash protective clothing

This document specifies the requirements, marking and packaging and describes the test methods of arc flash protective clothing used in electrical and related working places.

This document is applicable to the protective clothing that may suffer from transient arc energy and thermal damage in protective electrical and related working places.

This document is not applicable to insulating protective clothing, electromagnetic protective clothing and shielding clothing for live working used in electrical and related working places.

This document is not include personal arc protective equipment such as arc protective face shield, arc protective hood, arc protective gloves and arc protective shoes cover.

The following documents contain requirements which, through reference in this text, constitute provisions 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.

GB/T 2912.1?Textiles - Determination of formaldehyde - Part 1: Free and hydrolyzed formaldehyde (water extraction method)

GB/T 3291.1?Textiles - Terms of textile material properties and test - Part 1: Fibre and yarn

GB/T 3291.2?Textiles - Terms of textile material properties and test - Part 2: Fabric

GB/T 3291.3?Textiles - Terms of textile material properties and test - Part 3: General

GB/T 3916-2013?Textiles - Yarns from packages - Determination of single-end breaking force and elongation at break using constant rate of extension (CRE) tester

GB/T 3917.3?Textiles - Tear properties of fabrics - Part 3: Determination of tear force of trapezoid-shaped test specimens

GB/T 3920?Textiles - Tests for colour fastness - Colour fastness to rubbing

GB/T 3921?Textiles - Tests for colour fastness - Colour fastness to washing with soap or soap and soda

GB/T 3922?Textiles - Tests for colour fastness - Colour fastness to perspiration

GB/T 3923.1?Textiles - Tensile properties of fabrics - Part 1: Determination of maximum force and elongation at maximum force using the strip method

GB/T 4669-2008?Textiles - Woven fabrics - Determination of mass per unit length and mass per unit area

GB/T 4802.1?Textiles - Determination of fabric propensity to surface fuzzing and to pilling - Part 1: Circular locus method

GB/T 4802.3?Textiles - Determination of fabric propensity to surface fuzzing and to pilling - Part 3: Pilling box method

GB/T 5296.4-2012?Instructions for use of products of consumer interest - Part 4: Textiles and apparel

GB/T 5455-2014?Textiles - Burning behaviour - Determination of damaged length, afterglow time and afterflame time of vertically oriented specimens

GB/T 7573?Textiles - Determination of pH of aqueous extract

GB/T 7742.1?Textiles - Bursting properties of fabrics - Part 1: Hydraulic method for determination of bursting strength and bursting distension

GB/T 8628?Textiles - Preparation, marking and measuring of fabric specimens and garments in tests for determination of dimensional change

GB/T 8629-2017?Textiles - Domestic washing and drying procedures for textile testing

GB/T 8630?Textiles - Determination of dimensional change in washing and drying

GB 8965.1-2020?Protective clothing - Flame retardant protective clothing

GB/T 12704.1?Textiles - Test method for water-vapour transmission of fabrics - Part 1: Desiccant method

GB/T 12903?Personal protective equipment terminology

GB/T 13640?Size designation of protective clothing

GB/T 17592?Textiles - Determination of the banned azo colourants

GB 18401-2010?National general safety technical code for textile products

GB/T 18885-2020?Technical specifications of ecological textiles

GB/T 20097?Protective clothing - General requirements

GB 20653?Protective clothing - High visibility warning clothing for professional use

1 Scope

GB 8965.4-2022 is the Chinese national standard covering protective clothing, Arc flash protective clothing. It was issued on 29 December 2022 and has been in force since 1 January 2024, as a first edition. The document is under the responsibility of the Ministry of Emergency Management. This page is published from the official record of the 2022 edition. The figures, limits and tables the standard contains are those of the document itself, delivered in full with the English translation.

About this edition

GB 8965.4-2022 is the first edition of this standard. It was issued on 29 December 2022 and has been in force since 1 January 2024.

There is no earlier edition to compare it with, so a specification that has to refer to this subject can only cite GB 8965.4-2022 itself.

The interval between issue and effect is the transition period. It exists so that producers, laboratories and buyers can requalify products, revise procedures and use up documentation before the new text becomes the one that applies. The date on this page is the official one from the record of the Standardization Administration.

Classification and status

GB 8965.4-2022 is classified under ICS 13.340.10, in the field of environment and health protection, safety. ICS is the International Classification for Standards, the same scheme used by ISO and by the national bodies of most countries, which is what allows a Chinese standard to be placed beside its foreign counterparts on subject rather than on number.

Its Chinese Standard Classification code is CCS C 73. CCS is the domestic scheme, a letter for the sector and two digits for the subject within it, and it is the code by which the standard is filed and searched in China.

The GB prefix without a suffix marks a mandatory national standard: compliance is required by law for the products or activities within its scope, and a product that does not meet it may not lawfully be placed on the Chinese market.

The document is under the responsibility of the Ministry of Emergency Management, which is the body that maintains it and that will answer a formal question about its interpretation.