

ICS 13.220.10
CCS C 85

GA

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

GA 10-2014

**fireman protective clothing for firefighting
(English Translation)**

Issued on: January 20, 2014

Implemented on: March 1, 2014

Issued by: Ministry of Public Security of the People 's Republic of China

Table of Contents

Foreword...	3
1 Scope...	5
2 Normative references...	5
3 Terms and definitions...	6
4 Model, style, type, specifications...	7
5 Design requirements...	8
6 Performance requirements...	10
7 Test methods...	13
8 Inspection rules...	17
9 Marks, packaging, transport and storage...	20
Annex A (Normative) Overall thermal protection performance test...	23
Annex B (Normative) Thermal stability test...	25
Annex C (Normative) Lifesaving towing belt functional test...	27

Foreword

Clause 6, clause 8 and sub-clause 9.1 of this Standard are mandatory. The rest are recommendatory.

This Standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This Standard replaces GA 10-2002 Protective clothing for firefighters and GA 140-1996 Command clothing for firefighting. The revision of this Standard is mainly based on GA10-2002, and the whole contents of GA 140-1996 are integrated. Compared with GA 10-2002, in addition to the editorial modifications, the main technical modifications are as follows.

- added requirements for model preparation method (see 4.1);
- added design requirements for life-saving towing belt (see 5.5);
- added requirements for overall thermal protection performance test phenomenon (see 6.1);

- added requirements for flame retardant properties of thermal barrier and comfort layer after washing 25 times (see 6.2.1);
- added requirements for various materials flame retardant properties fixed in the protective clothing outer layer (see 6.2.2);
- added flame retardant requirements for life-saving towing material and sewing thread (see 6.2);
- improved requirements for thermal stability of thermal barrier and moisture barrier (see 6.3.1);
- added requirements for thermal stability of lifesaving traction materials (see 6.3.1);
- added requirements for comfort layer thermal stability (see 6.3.2);
- added requirements for material shrinkage per layer (see 6.4);
- added requirements for breaking strength of comfortable layer (see 6.6.2);
- added requirements for breaking strength of lifesaving towing material (see 6.6.3);
- added requirements for color fastness of outer layer (see 6.9);

Fireman's protective clothing for firefighting

1 Scope

This Standard specifies the terms and definitions, model, style, type, specification, design requirements, performance requirements, test methods, inspection rules, marking, packaging, transportation and storage of fireman's protective clothing for firefighting.

This Standard is applicable to fireman's protective clothing during firefighting.

This Standard also works for firefighting commanding clothing.

This Standard is not applicable to protective clothing for firefighting in special circumstances (e.g. nuclear facilities, offshore platforms, mine underground fires, etc.)

2 Normative references

The following referenced documents are indispensable for the application 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 191, Packaging and storage marks

GB/T 250, Gray scale for assessing change in colour

GB/T 1335.1, Standard sizing systems for garments - Men

GB/T 1335.2, Standard sizing systems for garments - Women

GB/T 3917.3-2009, Textiles - Tear properties of fabrics - Part 3.

Determination of tear force of trapezoid-shaped test specimens

GB/T 3920-2008, Textiles - Tests for colour fastness - Colour fastness to rubbing

GB/T 3921-2008, Textiles - Tests for colour fastness - Colour fastness to washing with soap or soap and soda

GB/T 3923.1-2013, Textiles - Tensile properties of fabrics - Part 1.

Determination of maximum force and elongation at maximum force using the strip method

GB/T 4744-2013, Textiles - Testing and evaluation for water resistance - Hydrostatic pressure method

GB/T 4745-2012, Textile fabrics - Determination of resistance to surface wetting - Spray test

GB/T 5455-1997, Textiles - Burning behaviour - Vertical method

GB/T 8427-2008, Textiles - Tests for color fastness - Color fastness to artificial light. Xenon arc fading lamp test

GB/T 8628-2001, Textiles - Preparation, marking and measuring of fabric specimens and garments in tests for determination of dimensional change

GB/T 8629-2001, Textiles - Domestic washing and drying procedures for

textile testing

GB/T 8630-2002, Textiles - Determination of dimensional change in washing and drying

GB/T 12704.1-2009, Textiles - Test method for water-vapour transmission of fabrics - Part 1. Desiccant method

GB/T 13773.1-2008, Textiles - Seam tensile properties of fabrics and made-up textile articles - Part 1. Determination of maximum force to seam rupture using the strip method

GB/T 19977-2005, Textile - Oil repellency - Hydrocarbon resistance test

GA 7, Protective gloves for firefighters

GA 124, Self-contained positive pressure air breathing apparatus for fire fighter

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 protective clothing for firefighting

a special garment used to protect the trunk, head and neck, arms and legs when the firefighters are engaged in fire fighting and rescue

3.2 moisture barrier

a protective garment portion for preventing water from penetrating into the insulating layer while discharging water vapor
moisture barrier, thermal barrier.

5.2.3 Placket

The structure of the placket shall include the outer layer, moisture barrier and thermal barrier.

5.2.4 Cuff

Each protective clothing top sleeves shall have protective wrist to prevent burning debris from entering the sleeves. It shall have waterproof design. The