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

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Police ballistic resistance of body armor

警用防弹衣

(English Translation)

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1 Scope

This standard specifies the terms and definitions, classification and naming, technical requirements, test methods, inspection rules, quality assurance rules, packaging, transportation and storage of police ballistic resistance of body armor products (hereinafter referred to as ballistic resistance of body armor).

This standard applies to police ballistic resistance of body armor.

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document;

for the undated documents, only the latest version (including all the amendments) is applicable to this standard.

GJB 3196-1998 Bullet test method

FZ/T 01004-2008 Coated fabrics - Determination of resistance to perforation by water

3 Terms and definitions

The following terms and definitions apply to this document.

3.1

Police ballistic resistance of body armor

A garment, that absorbs and dissipates the energy of a warhead, prevents perforation, mitigates blunt trauma, effectively protects the body's protected parts, including ballistic resistance body armor vests, trunk armor panel, accessory of ballistic resistance of body armor.

3.2

Armor panel

A general term for protective structures, that effectively prevent warheads from penetrating and prevent or reduce blunt trauma to the human body, including

Figure 3 -- Schematic diagram of body armor structure

5.1.2 The ballistic resistance of body armor's material shall be non-toxic and have no natural harm to the human body.

5.1.3 The ballistic resistance of body armor shall be flexible and easy to put on and take off. After wearing, the free movement of the two arms and the movements of the human body, such as kneeling, jumping, squatting, pitching, turning, shall not be restricted.

5.1.4 The jacket of the ballistic resistance of body armor is compatible with the specifications of the armor panels AND shall be separable.

5.1.5 The armor panel of the trunk shall be marked with the strike face or wear face.

5.2 Appearance requirements

5.2.1

The jacket of the body armor shall be free from defects such as damage, floating lines, missing stitches.

5.2.2

There are no holes, deep pits, scratches, cracks, corner burrs and other defects on the surface of the ballistic panel material. Metal materials shall be subject to anti-rust treatment. The non-metal materials shall be even and smooth.

5.2.3

The ballistic material of the same layer shall be uniform and consistent, without defects such as splicing, local bulges, wrinkles.

5.2.4 For the ballistic panel composed of multiple layers of ballistic materials, the

specifications and dimensions of each layer shall be consistent. For the soft ballistic materials, the raw materials shall not be chemically treated and thermally bonded.

5.2.5 The ballistic panel structure and material of accessory of ballistic resistance of

body armor shall be consistent with the trunk armor panels.

5.2.6 There shall be clear and permanent product marks on the body armor and the ballistic insert plate. The position of the body armor sign shall be 10 cm below the neckline on the inside of the back AND at the center of the strike face on the protective cover of ballistic panel. The sign of ballistic insert plate shall be on the lower right corner of the strike face.

The information on the body armor sign shall include:

- a) Manufacturer's name or trademark;
- b) Product name and code;
- c) Product number;
- d) Product specifications;
- e) Implemented standard number;
- f) Degree of protection;
- g) Date of manufacture;
- h) Production batches;
- i) Validity period;
- j) Instructions for use and precautions.

The information on the signs of ballistic insert plates and protective cover of ballistic panel shall include:

- a) Manufacturer's name or trademark;
- b) Product name and code;
- c) Implemented standard number;
- d) Degree of protection;
- e) Date of manufacture;
- f) Production batches;
- g) Validity period.

5.3 Color

The color of the ballistic resistance of body armor vest shall be police uniform blue.

5.4 Material properties of protective cover of ballistic panel

5.4.1

The protective cover of the ballistic panel is black, which shall be light-proof and waterproof; the edge sealing shall be uniform.

5.4.2

The material of the protective cover of the ballistic panel shall have anti-seepage performance. The hydrostatic pressure resistance shall be greater than or equal to 18 kPa.

5.5 Protected area

The actual projected protective area of the ballistic resistance of body armor shall be greater than or equal to 0.25 m², as shown in Figure 4a). For body armors, which have a protection level above level 4, if a ballistic insert plate is used, it shall be placed outside the ballistic panel; the effective ballistic size of the ballistic insert plate is 250 mm x 300 mm; the chamfering of the four corners is less than or equal to 25 mm, as

Record the test data. Determine whether the results meet the requirements of 5.6.

6.8 Environmental adaptability test

6.8.1

Put the ballistic resistance of body armor into the incubator at $-20\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$ for 4 hours. Then carry out the shooting test. The ballistic performance test shall be completed within 15 minutes. Record the test data. Judge whether the result meets the requirements of 5.6.

6.8.2

Put the ballistic resistance of body armor into the incubator, at a temperature of

$55\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$ for 4 hours. Then carry out the shooting test. It shall complete the ballistic performance test, within 15 minutes. Record the test data. Judge whether the result meets the requirements of 5.6.

6.8.3

Put the ballistic resistance of body armor into a damp heat chamber. Keep it for

240 h, at a temperature of $70\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$ and a relative humidity of 80%. Then place it at room temperature for 24 h, before performing a ballistic performance test, to determine whether the result meets the requirements of 5.6.