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**NATIONAL STANDARD OF THE  
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**Emblem of the Young Pioneers of China**

中国少年先锋队队徽

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### 1 Scope

This document specifies the technical requirements, the inspection rules and the marking, packaging, transport and storage of the emblem of the Young Pioneers of China (hereinafter referred to as the emblem), and describes the test methods.

This document applies to the design, production and inspection of hanging emblems and of wearable emblems. The design of flat emblem artwork produced by printing and similar processes may refer to this document.

### 2 Normative references

The contents of the following documents constitute indispensable provisions of this document through normative reference in the text. For dated references, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies to this document.

GB/T 1733-1993 Test method for water resistance of paint films; GB/T 1740-2007 Test method for humid-heat resistance of paint films; GB/T 1766-2008 Paints and varnishes - Rating methods for ageing of coatings; GB/T 1865-2009 Paints and varnishes - Artificial weathering and exposure to artificial radiation - Exposure to filtered xenon-arc radiation; GB/T 3854 Test method for Barcol hardness of reinforced plastics; GB/T 3977-2008 Method of specifying colour; GB/T 3978-2008 Standard illuminants and geometric conditions; GB/T 5698 Terms of colour; GB/T 6739 Paints and varnishes - Determination of film hardness by pencil test; GB/T 7921-2008 Uniform colour spaces and colour-difference formulae; GB/T 9286-2021 Paints and varnishes - Cross-cut test; GB/T 9754 Paints and varnishes - Determination of specular gloss of non-metallic paint films at 20 degrees, 60 degrees and

85 degrees; GB/T 10125-2021 Corrosion tests in artificial atmospheres - Salt spray tests; GB 15093 National emblem; GB 28480 Adornment - Provisions for limits of harmful elements; GB/T 40057 Emblem of the Communist Youth League of China.

### 3 Terms and definitions

The terms and definitions given in GB/T 5698, GB 15093 and GB/T 40057 apply to this document.

### 4 Technical requirements

Appearance - shape and colouring. The shape and colouring of the emblem are shown schematically in Figure 1. The red used in the emblem shall be the national emblem red and the yellow used in the emblem shall be the national emblem yellow.

Other appearance requirements. The appearance of the emblem shall also meet the requirements of Table 1. For a hanging emblem, the characters of the words meaning "Chinese Young Pioneers" shall be in bold-face type with clear edges; the torch handle shall be a smooth curved surface; there shall be no shrinkage cavities, hot cracks, cold cracks, distortion, chipped edges or broken edges; there shall be no defects such as sand grains, inclusions or perforations that visibly affect the appearance; there shall be no missed printing or misprinting; the colour of the emblem face shall be uniform and bright, without obvious stains, colour transfer or colour marks. For a wearable emblem, the lines shall be complete and the surface smooth, the characters shall be in bold-face type with clear edges, and there shall be no obvious defects such as scratches or inclusions; there shall be no missed printing or misprinting; the colour of the emblem face shall be uniform and bright, without obvious stains, colour transfer or colour marks; the emblem shall be made with a snap fastener or a magnetic fastener, with all parts present and functioning.

Dimensions and permissible deviations - hanging emblem, emblem face. The height-to-width ratio of the emblem shall be 2.2 to 1.8. For a hanging emblem with a nominal size of 1100 mm (height), the key dimensions shall conform to Table A.1 of Annex A, and the other dimensions shall be designed and produced in accordance with Table A.2. Where hanging emblems of other sizes are to be produced, the dimensions of Annex A shall be scaled up or down in proportion, and the permissible deviations shall be adjusted correspondingly by reference to the permissible deviations given in Table A.1 and Table A.2.

Dimensions and permissible deviations - hanging emblem, mounting holes. For a hanging emblem with a nominal size of 1100 mm (height), the spacing of the mounting holes on the back shall be designed and produced in accordance with Figure 2. The hole spacing of emblems of other sizes may be scaled up or down in proportion, or may be determined by agreement between the manufacturer and the user.

Dimensions and permissible deviations - wearable emblem. The dimensions of a wearable

emblem are 22 mm in height and 18 mm in width, with a deviation not greater than 1 mm; the other plan dimensions shall be reduced in proportion, and the thickness shall not be less than 2 mm.

Colour. The chromaticity values of the emblem face shall take the national emblem red and the national emblem yellow of GB 15093 as the reference, and the CIELAB colour difference  $\Delta E^*_{ab}$  from the standard chromaticity values shall not be greater than 2.0.

Paint film performance. The paint film on the emblem face shall meet the requirements of Table 2: specular gloss at 60 degrees greater than 90 gloss units; adhesion of rating 2 or better (rating not greater than 2); pencil hardness of H or harder; weathering resistance, assessed as colour change after 3 d, of rating 2 or better; humid-heat resistance after 7 d of a rating lower than 2; water resistance after 24 h with no blistering and no detachment; and salt spray resistance after 7 d with no blistering and no rusting. The salt spray requirement is assessed only for emblems made of metal.

Harmful substances in wearable emblems. The harmful substances in a wearable emblem shall meet the requirements of GB 28480.

Body strength of hanging emblems. The Barcol surface hardness shall not be lower than 30. For falling-ball impact strength, after the test the surface of the specimen shall show no cracking, deformation or delamination.

## 5 Test methods

Appearance. When the appearance of a hanging emblem is assessed, bright natural light or a lighting environment with an illuminance of not less than 750 lx is used, and the inspector examines the specimen visually from a distance of 1000 mm. When the appearance of a wearable emblem is assessed, in a lighting environment with an illuminance of not less than 750 lx, the inspector examines the specimen visually and by touch with the eyes 300 mm from the specimen.

Dimensions and permissible deviations. The dimensions of the various parts of the emblem are measured with vernier calipers, height gauges, depth gauges, steel rules or other measuring instruments of appropriate accuracy, and the corresponding calculations are made.

Colour. The red part and the yellow part of the emblem are tested separately under the CIE standard illuminant D65 and the  $d_s:8^\circ$  degree geometric condition specified in GB/T 3978-2008, the chromaticity values being measured at at least two locations for each colour. Colour is expressed in the CIE 1964 standard colorimetric system specified in GB/T 3977-2008, the CIELAB colour difference  $\Delta E^*_{ab}$  is calculated in accordance with GB/T 7921-2008, and the mean colour difference is taken as the result. Where the sample cannot meet the test requirements, sheet material of the same material and the same

process may be supplied for testing.

Determination of paint film performance - gloss. Carried out in accordance with GB/T 9754, testing the red part and the yellow part of the specimen separately. Where the sample cannot meet the test requirements, sheet material of the same material and the same process may be supplied for testing.

Determination of paint film performance - adhesion. Carried out in accordance with GB/T 9286-2021, using a rigid blade cutter with a V-shaped cutting edge, testing the red part and the yellow part of the specimen separately. Where the sample cannot meet the test requirements, sheet material of the same material and the same process may be supplied for testing.

Determination of paint film performance - hardness. Carried out in accordance with GB/T 6739, testing the red part and the yellow part of the specimen separately. Where the sample cannot meet the test requirements, sheet material of the same material and the same process may be supplied for testing.

Determination of paint film performance - weathering resistance. Carried out in accordance with method 1, cycle A, of GB/T 1865-2009, testing the whole item. The exposed specimen is compared for colour with an unexposed specimen, and the degree of colour change is assessed by the visual colour comparison method of GB/T 1766-2008.

Determination of paint film performance - humid-heat resistance. Carried out in accordance with GB/T 1740-2007, testing the whole item. The tested specimen is compared with an untested specimen following the relevant provisions of GB/T 1766, and the overall degree of deterioration is assessed by the method of Table 1 of GB/T 1740-2007.

Determination of paint film performance - water resistance. Carried out in accordance with method A of GB/T 1733-1993, testing the whole item.

Determination of paint film performance - salt spray resistance. Carried out in accordance with GB/T 10125-2021, using the neutral salt spray test, testing the whole item.

Determination of harmful substances in wearable emblems. Carried out in accordance with GB 28480.

Determination of the body strength of hanging emblems. Surface hardness is determined by the method of GB/T 3854. For falling-ball impact strength, the emblem specimen is laid horizontally, face upwards, on a concrete floor; the falling ball is a solid steel ball of (112 plus or minus 2) g and the drop height is (1000 plus or minus 20) mm, so that the ball falls freely onto the same flat area of the emblem face; the drop is repeated three times, and the surface of the specimen is then examined for cracking, deformation and delamination by the method described in 5.1.1.