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Ball point pens and refills

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(English Translation)

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Foreword

This Standard modified and adopted ISO 12757-1.1998, Ball point pens and refills - Part 1.General use and ISO 12757-2.1998, Ball point pens and refills - Part 2.Documentary use (DOC) (English version).

This Standard was redrafted based on the International standards. Compared with ISO 12757-1.1998, ISO 12757-2.1998, the main differences in this Standard are as follows.

- deleted Clause 3 "Definitions" of ISO 12757-1.1998 and ISO 12757-2.1998; see QB/T 2992.2-2008 Terminology of writing instruments Part 2.Ball pens for relevant terms and definitions;
- added "Classification" and "Inspection rules" (Clause 3, Clause 7 of this Standard);
- modified "Test equipment and accessories" to "General test equipment, materials and conditions" (Clause 5 of this Standard; Clause 5 of ISO 12757-1.1998, ISO 12757-2.1998);
- modified "Testing" to "Test methods" (Clause 6 of this Standard; Clause

6 of ISO 12757-1.1998, ISO 12757-2.1998);

- modified "Marks and labels" to "Marks, packaging, storage" (Clause 8 of this Standard; Clause 7 of ISO 12757-1.1998, ISO 12757-2.1998);
- deleted "Test report" (Clause 8 of ISO 12757-1.1998, ISO 12757-2.1998).

The technical differences as well as reasons between this Standard and ISO 12757-1.1998, ISO 12757-2.1998 are shown in Annex A.

This Standard was formulated on the basis of the original light industry standard QB/T 2776-2006 Ball point pen.

Compared with QB/T 2776-2006, the main modifications in this Standard are as follows.

- modified the standard name;
- modified the scope (Clause 1 of this Standard; Clause 1 of QB/T 2776-2006);
- deleted the terms and definitions (Clause 3 of QB/T 2776-2006);

Ball point pens and refills

1 Scope

This Standard specifies the classification, requirements, test methods, inspection rules, marks, packaging, transport and storage of ball point pens and refills.

This Standard is applicable to ball point pens (including refill replaceable and refill irreplaceable) and refills for general use and document writing use (hereinafter referred to as ball point pens and refills).

2 Normative references

The following standards contain the provisions which, through reference in this Standard, constitute the provisions of this Standard. For dated references, subsequent amendments (excluding corrections) or revisions do not apply to

this Standard. However, the parties who enter into agreement based on this Standard are encouraged to investigate whether the latest versions of these documents are applicable. For undated reference documents, the latest versions apply to this Standard.

GB/T 191, Packaging and storage marks (GB/T 191-2008, ISO 780.1997, MOD)

GB/T 2828.1, Sampling procedures for inspection by attributea-Part1.

Sampling schemes indexed by acceptance quality limit(AQL) for lot-by-lot inspection (ISO 2859-1.1999, IDT)

GB/T 6388, Transport package shipping mark

GB/T 12654-2008, Writing paper

GB 21027-2007, Request in common use of security for students articles

3.1 Pen point classification

The pen point is classified by ball diameter (see Table 1).

4.3 For ball point pens used by underage students, the contents of

transportable elements in the ink and the coating on the pen holder (including the pen cap) in the pens or refills shall comply with the provisions of 3.1 in GB 21027-2007. The pen cap safety shall be in accordance with the provisions of

5.1 Rounded drawing writing machine

When using a rounded writing machine, the setting shall meet the following conditions.

a) writing load.

ball diameter $D < 0.5 \text{ mm}$, 0.98 N ,

ball diameter $D \geq 0.5 \text{ mm}$, $(1.5 \pm 0.1) \text{ N}$;

b) writing angle. $(75 \pm 5)^\circ$;

c) scribing speed. $(4.5 \pm 0.5) \text{ m/min}$;

d) writing format. continuous helix (perimeter of 100 mm) with spacing of 1

mm ~ 5 mm;

e) liner plate. polished stainless steel plate.

5.2 Writing paper

The one which complies with GB/T 12654-2008, of which the quantitative specification is 80 g/m².

5.3 Sample

In addition to the preservation test, take the unused ball point pen and refill within six months since the date of production as testing sample.

5.4 Environmental conditions

In the absence of special provisions, the test shall be carried out under the following environmental conditions.

a) ambient temperature. 15°C ~ 25°C;

b) relative humidity. 50% ~ 80%.

b) 500 g special balance weight of which the bottom diameter is 50 mm.

6.4.2 Method and steps

When 6.2 c) scribing ends, start the stopwatch timing till 20 s. Cover the same type of writing paper on the end trace. Use the special balance weight to press on the cover paper surface. Re-timing. After 10 min, separate two papers. Check the cover paper and there should be no ink.

6.5.1 Instruments and materials

a) copying equipment (copier or fax machine)'

b) copy paper.

6.5.2 Method and steps

a) put the sample paper into the copying equipment;

b) start the copying equipment; the trace on the copy paper shall meet requirements specified in Table 4.