

Test Report

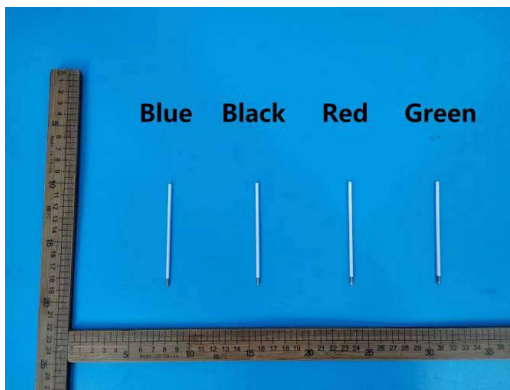
Number: GZHH00478408

Applicant: FLASHBAY ELECTRONICS
BUILDING2 ,JIXUN INDUSTRIAL PARK, XINJIAO,
DONG'AO VILLAGE ,SHATIAN TOWN, HUIYANG
DISTRICT, HUIZHOU CITY, GUANGDONG PROVINCE,
P.R.CHINA

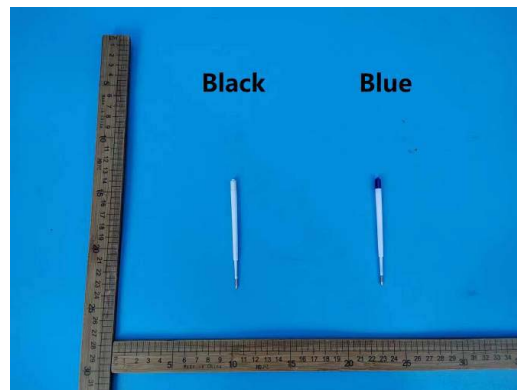
Date: Dec 29, 2022

Sample Description:

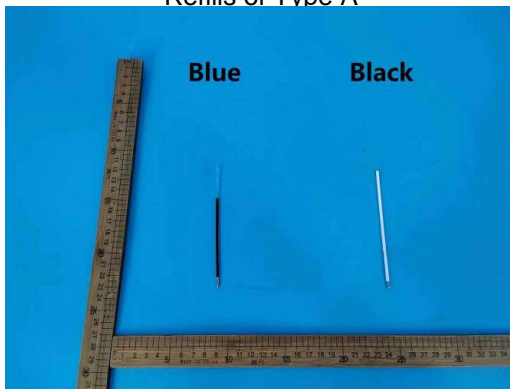
Forty (40) pieces of submitted sample said to be :
Item Name : **Pen Series**
Item No. : **Refills**
Additional Material and Wet : Yes
Paint Provided
Country of Origin : China
Date Sample Received : Dec 16, 2022
Testing Period : Dec 16, 2022 ~ Dec 21, 2022



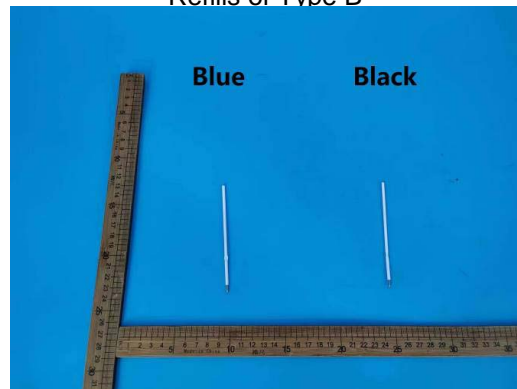
Refills of Type A



Refills of Type B



Refills of Type C



Refills of Type D

To be continued



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Tests conducted:

As requested by the applicant, refer to attached page(s) for details.

Conclusion:

<u>Tested sample</u> Submitted sample(s)	<u>Standard</u>	<u>Result</u>
	ISO 12757-1:2017 Ball point pens and refills - Part 1: General use. (Excluding: - Clause 4.3.7 Shelf life - Clause 7 Designation and marking)	Pass
	ISO 12757-2:1998 ball point pens and refills - part 2: documentary use (doc) (Excluding: - Clause 4.1.7 Shelf life - Clause 7 Designation and marking)	Pass

Remark:

1. As per the client's request, only the refills of Type A was subjected to full tests, the refills of Type B, C & D were subjected to the shapes and dimensions of refills & the writing performance tests in this report, please refer to the refills of Type A to other test results.

Authorized by:

For Intertek Testing Services Shenzhen Ltd.
Guangzhou Branch, Hardlines

Victor T.J. Wang
Assistant General Manager



Test Report

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Tests Conducted

1 Ball point pens and refills

As per the client's requirement, with reference to ISO 12757-1:2017 Ball point pens and refills - Part 1: General use, the submitted sample was subjected to the following tests.

Number of refills tested: ten (10) pieces per style, total four (4) styles of point pens.

Refills of type & color point pens:
 Refills of Type A: blue, black, red & green;
 Refills of Type B: black & blue;
 Refills of Type C: blue & black;
 Refills of Type D: blue & black;

Initial inspection: no any damage was found.

Executive Summary:

Clause	Testing items	Verdict
4	Requirements	-
4.1	Tip classification	R: Tip code: EF; Tip classification: Estra fine (See remark 1)
4.2	Shapes and dimensions of refills	R (All refills of styles point pens): Refills type: Type H
4.3	Performance	-
4.3.1	Writing Performance	P (All refills of styles & colors point pens)
4.3.2	Strike through	P (See remark 1)
4.3.3	Drying time	P (See remark 1)
4.3.4	Reproducibility	P (See remark 1)
4.3.5	Water resistance	P (See remark 1)
4.3.6	Light resistance	P (See remark 1)
4.3.7	Shelf life	NR
7	Designation and marking	NR

Abbreviation: P = Pass; NR = Not Requested; R = Recorded



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Tests Conducted

2 Ball point pens and refills

As per the client's requirement, with reference to ISO 12757-2:1998 Ball point pens and refills -Part 2: Documentary use (DOC), the submitted sample was subjected to the following test.

Function: documentary use

Test atmosphere: temperature: 23°C / relative humidity: 50%

Number of refills tested: ten (10) pieces per style, total four (4) styles of point pens.

Refills of type & color point pens:

Refills of Type A: blue, black, red & green;

Refills of Type B: black & blue;

Refills of Type C: blue & black;

Refills of Type D: blue & black;

Result summary:

Clause	Testing items	Verdict
4	Requirements	-
4.1	General requirements	-
4.1.1	Tip classification	R: Tip code: EF; Tip classification: Estra fine (See remark 1)
4.1.2	Shape and dimension of refills	R (All refills of styles point pens): Refills type: Type H
4.1.3	Writing performance	P (All refills of styles & colors point pens)
4.1.4	Strike through	P (See remark 1)
4.1.5	Drying time	P (See remark 1)
4.1.6	Reproducibility	P (See remark 1)
4.1.7	Shelf life	NR
4.2	Erasure resistance	P (See remark 1)
4.3	Ethanol resistance	P (See remark 1)
4.4	Hydrochloric acid resistance	P (See remark 1)



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Tests Conducted

Clause	Testing items	Verdict
4.5	Ammonium hydroxide resistance	P (See remark 1)
4.6	Bleaching resistance	P (See remark 1)
4.7	Water resistance	P (See remark 1)
4.8	Light resistance	P (See remark 1)
7	Designation and marking	NR

Abbreviation: P = Pass; NR = Not Requested; R = Recorded

End of report

The statements of conformity reported have considered the decision rule agreed, namely that Intertek have taken account of measurement uncertainty as calculated by Intertek, and applied according to ILAC-G8/09:2019 (Non-binary acceptance based on guard band $w = U$) except designation from the customer, regulation or test specification. This decision rule only applies to the numeric test results.

The sample(s) and sample information hereto are provided by the client who shall be solely responsible for the authenticity and integrity thereof. The results shown in this report relate only to the sample(s) tested. It is not intended to be a recommendation for any particular course of action. Intertek does not accept a duty of care or any other responsibility to any person other than the Client in respect of this report and only accepts liability to the Client insofar as is expressly contained in the terms and conditions governing Intertek's provision of services to you. Intertek makes no warranties or representations either express or implied with respect to this report save as provided for in those terms and conditions. We have aimed to conduct the Review on a diligent and careful basis and we do not accept any liability to you for any loss arising out of or in connection with this report, in contract, tort, by statute or otherwise, except in the event of our gross negligence or wilful misconduct. This report shall not be reproduced unless with prior written approval from Intertek Testing Services Shenzhen Limited, Guangzhou Branch. The testing data and result issued by this report are just for scientific research, teaching, internal quality control, product research and development etc. on reference only in the territory of the People's Republic of China.

