



## Test Report

No.: SHHL2011552048OT

Date: NOV. 24, 2020

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TONGLU SIGNAL IMPORT&EXPORT CO., LTD

DONGXI INDUSTRIAL ZONE, FENSHUI TOWN, TONGLU COUNTRY, HANGZHOU ZHEJIANG, CHINA

Sample Description : ANTIBACTERIAL SIGNAL PEN  
Style No : ANTIBACTERIAL SIGNAL PEN B02311/  
B02311-I/B09028/B20323/B20367/B14637  
Manufacturer : TONGLU SIGNAL IMPORT&EXPORT CO., LTD  
Supplier : TONGLU SIGNAL IMPORT&EXPORT CO., LTD  
\*\*\*\*\*  
Sample Receiving Date : NOV. 04, 2020  
Testing Period : NOV. 04, 2020 TO NOV. 17, 2020  
Test Performed : SELECTED TEST(S) AS REQUESTED BY APPLICANT  
Test Requested : SELECTED TEST(S) AS REQUESTED BY APPLICANT  
Test Result(s) : FOR FURTHER DETAILS, PLEASE REFER TO THE  
FOLLOWING PAGE(S)  
Conclusion : THE TEST DATA WERE PROVIDED TO CLIENT FOR  
THEIR OWN ANALYSIS.

Signed for and on behalf of  
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.



Melody Zhang  
Authorized Signatory



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## Test Conducted:

### Sample Description :

Specimen No.	SGS Sample ID	Description
1	ASH20-068330.001	sample in bag

## Test Result(s) :

Test Requested : Test of antimicrobial activity

Test Method : ISO 22196:2011 Measurement of antibacterial activity on plastics and other non-porous surfaces

### ASH20-068330.001

Test organism(s)	Escherichia coli ATCC 8739	Staphylococcus aureus ATCC 6538P
Concentration of bacteria (cells/mL)	8.5x10 <sup>5</sup>	8.8x10 <sup>5</sup>
Volume of test inoculum (mL)	0.4	0.4
U <sub>0</sub>	4.33	4.33
U <sub>t</sub>	6.42	5.66
A <sub>t</sub>	1.37	1.61
B (cells/cm <sup>2</sup> )	2.6x10 <sup>6</sup>	4.6x10 <sup>5</sup>
C (cells/cm <sup>2</sup> )	24	41
R	5.1	4.1
*The antibacterial activity rate (%)	>99.9	>99.9



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### Notes :

- 1.The control sample is plastic film without antimicrobial activity, provided by SGS laboratory.
- 2.U<sub>0</sub>: the average of the common logarithm of the number of viable bacteria(cells/cm<sup>2</sup>) recovered from the untreated test specimens immediately after inoculation.
- 3.U<sub>t</sub>: the average of the common logarithm of the number of viable bacteria(cells/cm<sup>2</sup>) recovered from the untreated test specimens after 24 h.
- 4.A<sub>t</sub>: the average of the common logarithm of the number of viable bacteria(cells/cm<sup>2</sup>) recovered from the treated test specimens after 24 h.
- 5.R: the value of antimicrobial activity,R=U<sub>t</sub>-A<sub>t</sub>.
- 6.\* The calculation formula of the antibacterial activity rate is **【(B-C)/B】 \*100%**;  
B: arithmetic average of the numbers of bacteria obtained from control samples after 24 h incubation(cells/cm<sup>2</sup>);  
C: arithmetic average of the numbers of bacteria obtained from samples after 24 h incubation(cells/cm<sup>2</sup>).
- 7.Pre-treatment: The surface of test specimen was wiped with 70% ethanol, rinsed with sterile water and let it air-dry.
- 8.Test the any surface.



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### Remark:

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2. The declaration of conformity is based on non-binary acceptance decision rules with guard band, and the guard band length parameter is 0. When the measured value falls in the guard band limit, the declaration of conformity is "Conditional PASS" or "Conditional FAIL".



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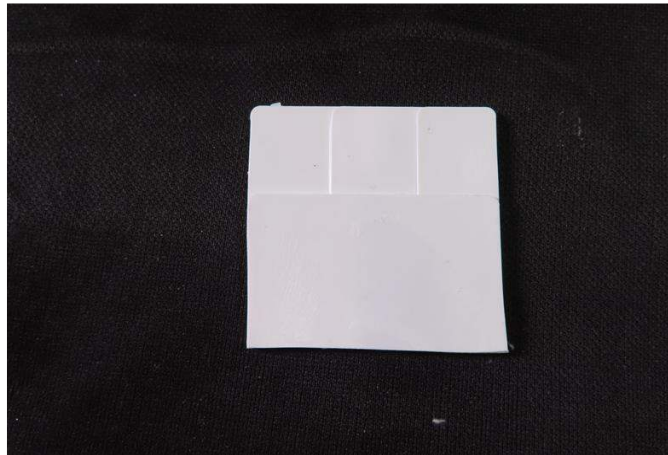
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Sample photo:



ASH20-068330.001



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\*\*\*End of Report\*\*\*



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