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Hong Kong Toys Council

**Test Report**

Number: HKGH0211938702

Applicant: SMARTCOAT HK LIMITED  
FLAT G 14/F HIGH WIN FACTORY BLDG  
47 HOI YUEN RD  
KWUN TONG KLN  
HK

Date: May 24, 2017

Attn: LESLIE LI

Submitted sample said to be : **Smartcoat**  
Manufacturer : **Smartcoat**

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**Conclusion:**

The submitted sample was tested under the following requirements requested by the applicant, subject to the information stated in the remark and attached page(s) for details :

<u>Requirement</u>	<u>Result</u>
(1) Antibacterial Activity of Chemical Disinfectants and Antiseptics (BS EN 1040:2005 with modification)	See details enclosed
- <i>Escherichia coli</i> (ATCC 10536)	
- <i>Staphylococcus aureus</i> (ATCC 6538)	
- <i>Salmonella typhimurium</i> (ATCC 14028)	
- <i>Listeria monocytogenes</i> (ATCC 15313)	
- <i>Klebsiella pneumoniae</i> (ATCC 4352)	

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For and on behalf of :  
Intertek Testing Services HK Ltd.

Angel Y.F. Cheung  
Vice President



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(1) Quantitative suspension test for evaluation of bactericidal activity of chemical disinfectants and antiseptics

Test Standard: BS EN 1040:2005 (with modification).

Product test concentration: 80% w/w disinfectant liquid of original sample

Active ingredient in product: TIO<sub>2</sub>

Appearance: Colorless liquid

Contact time: 5 minutes

Test temperature: 20°C

Inhibition method: Dilution-neutralization

Neutralizing solution: D/E neutralizing broth - double strength (sodium thioglycollate 2.0 g/L, sodium thiosulfate 12.0 g/L, sodium bisulfite 5.0 g/L, Polysorbate 80 10.0 g/L, lecithin 14.0 g/L)

Incubation: 37°C, 48 hours

Agar medium: Trypticase Soy Agar

Test culture: *Escherichia coli* (ATCC 10536)  
*Staphylococcus aureus* (ATCC 6538)  
*Salmonella typhimurium* (ATCC 14028)  
*Listeria monocytogenes* (ATCC 15313)  
*Klebsiella pneumoniae* (ATCC 4352)

**Controls & validation**

<u>Test microorganism</u>	<u>Validation suspension (N<sub>v</sub>)</u> (CFU/mL) <b>Criteria: 300 ≤ N<sub>v</sub> ≤ 1600</b>	<u>Method validation</u> <b>Criteria: ≥ 0.05 N<sub>v</sub></b>	<u>Validity</u>
<i>Escherichia coli</i> (ATCC 10536)	770	75	Valid
<i>Staphylococcus aureus</i> (ATCC 6538)	1,000	80	Valid
<i>Salmonella typhimurium</i> (ATCC 14028)	950	85	Valid
<i>Listeria monocytogenes</i> (ATCC 15313)	800	60	Valid
<i>Klebsiella pneumoniae</i> (ATCC 4352)	1,100	100	Valid

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**Result**

<u>Test microorganism</u>	<u>Initial suspension (N)</u> (CFU/mL)  <b>Criteria: 1.5x10<sup>8</sup> ≤ N ≤ 5x10<sup>8</sup></b>	<u>Final count</u> (CFU/mL)	<u>R</u> (% Reduction)  <b>Criteria: R ≥ 99.999</b>	<u>Assessment</u>
<i>Escherichia coli</i> (ATCC 10536)	3.2 x 10 <sup>8</sup>	<140	99.9999	Satisfactory
<i>Staphylococcus aureus</i> (ATCC 6538)	3.8 x 10 <sup>8</sup>	<140	99.9999	Satisfactory
<i>Salmonella typhimurium</i> (ATCC 14028)	3.4 x 10 <sup>8</sup>	<140	99.9999	Satisfactory
<i>Listeria monocytogenes</i> (ATCC 15313)	3.2 x 10 <sup>8</sup>	<140	99.9999	Satisfactory
<i>Klebsiella pneumoniae</i> (ATCC 4352)	4.6 x 10 <sup>8</sup>	<140	99.9999	Satisfactory

Criteria: According to EN 1040, in order to satisfy the requirement of bactericidal efficacy of chemical disinfectants and antiseptics, the product shall demonstrate at least 5.0 log<sub>10</sub> reduction of the specified test organisms under the obligatory sample contact time and test temperature according to its practical applications when the product is tested at its intended use dilution.

Sample received condition: Sample in closed plastic bottle.

Date sample received: Apr 24, 2017

Testing period: Apr 28, 2017 to May 08, 2017

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End of report

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