

Date : 2020-12-22
No. : HC20120578

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Applicant(Code:01325270) : CareHK Limited
Unit 2A Precision Manufacturing Centre
3 Dai Hei Street
Tai Po Industrial Estate NT HK


Description of Sample(s) : One submitted sample said to be CareHK Black Face Mask.
Item No.: CHK001-AH / CHK001-KH
Batch / Lot No.: A273024
Country of Origin : Hong Kong

Sample(s) Received Condition(s): In intact original package under ambient temperature

Date Sample(s) Received : 2020-12-17

Date Tested : 2020-12-21

Investigation Requested : Synthetic Blood Penetration



LAU Yuk Kuen, Joey
Authorized Signatory



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Test Result(s):

Synthetic Blood Penetration

Test method: ASTM F2100-19 9.4 & ASTM F1862-17

Summary: This procedure was performed to evaluate surgical facemasks and other types of protective clothing materials designed to protect against fluid penetration. The purpose of this procedure is to simulate an arterial spray and evaluate the effectiveness of the test article in protecting the user from possible exposure to blood and other body fluids. The distance from the target area surface to the tip of the cannula is 30.5cm. A test volume of 2 mL of synthetic blood was employed using the targeting plate method.

This test method was designed to comply with ASTM F1862-17.

Test Pressure: 160mmHg

Specimen Number	CareHK Black Face Mask Batch / Lot No.: A273024
1-32	None Seen
Requirement: An acceptable quality limit of 4.0% is met for a normal single sampling plan when ≥ 29 of 32 test specimens show passing result (none seen)	

Notes : - Test Side: Outside
- Precondition : Minimum of 4 hours at $(21 \pm 5)^\circ\text{C}$ and $(85 \pm 5)\%$ relative humidity (RH)
- Testing condition: $18 - 24^\circ\text{C}$, 25 -55 % Relative humidity

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Photo(s):



******* End of Test Report *******

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Applicant(Code:01325270) : CareHK Limited
Unit 2A Precision Manufacturing Centre
3 Dai Hei Street
Tai Po Industrial Estate NT HK

Description of Sample(s) : One submitted sample said to be CareHK Face Mask.
Item No.: CHK001-AH / CHK001-KH
Batch / Lot No.: A273024
Country of Origin & Destination : Hong Kong

Sample(s) Received Condition(s): In intact original package under ambient temperature

Date Sample(s) Received : 2020-09-29

Date Tested : 2020-09-30 to 2020-10-16

Investigation Requested : Performance Test as per ASTM F2100-19
1. Bacterial Filtration Efficiency 細菌過濾效率 (BFE) %
– *Staphylococcus aureus* 金黃色葡萄球菌 (ATCC 6538)
2. Particulate Filtration Efficiency 微粒過濾效率 (PFE) %
3. Differential Pressure 空氣交換壓力差
4. Synthetic Blood Penetration 合成血液穿透性
5. Flammability to Class 1 可燃性

LAU Yuk Kuen, Joey
Authorized Signatory
Chemical and Food Department
For and on behalf of

The Hong Kong Standards and Testing Centre Ltd.



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10 Dai Wang Street, Tai Po Industrial Estate, Tai Po, N.T., Hong Kong 香港新界大埔工業邨大宏街10號
Tel: +852 2666 1888 Fax: +852 2664 4353 Email: hkstc@stc.group Website: www.stc.group

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Requirement:

Performance Test as per ASTM F2100-19	Level 1	Level 2	Level 3
Bacterial Filtration Efficiency(BFE) % 細菌過濾效率 – <i>Staphylococcus aureus</i> (ATCC 6538) 金黃色葡萄球菌	≥95%	≥98%	
Particulate Filtration Efficiency (PFE) % 微粒過濾效率	≥95%	≥98%	
Differential Pressure (ΔP) 空氣交換壓力差	<5.0 mmH ₂ O/cm ²	<6.0 mmH ₂ O/cm ²	
Resistance to Penetration by Synthetic Blood Penetration 合成血液穿透性	80 mmHg	120 mmHg	160 mmHg
Flame Speed (Flammability to Class 1) 可燃性	Class 1 (The time of flame spread is 3.5 seconds or more)		

Summary:

Performance Test as per ASTM F2100-19	CareHK Face Mask Batch / Lot No.: A273024
	Level 2
Bacterial Filtration Efficiency(BFE) % 細菌過濾效率 – <i>Staphylococcus aureus</i> (ATCC 6538) 金黃色葡萄球菌	Pass
Particulate Filtration Efficiency (PFE) % 微粒過濾效率	Pass
Differential Pressure (ΔP) 空氣交換壓力差	Pass
Resistance to Penetration by Synthetic Blood Penetration 合成血液穿透性	Pass
Flame Speed (Flammability to Class 1) 可燃性	Pass

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Method(s) Used:

1. ASTM F2100-2019 9.1 & ASTM F2101-2019
2. ASTM F2100-2019 9.3 & ASTM F2299-2017
3. ASTM F2100-2019 9.2 & EN 14683:2019 + AC:2019 Annex C
4. ASTM F2100-2019 9.4 & ASTM F1862-2017
5. 16 CFR 1610

Test Result(s):

1. Bacterial Filtration Efficiency 細菌過濾效率 (BFE) %
– *Staphylococcus aureus* 金黃色葡萄球菌 (ATCC 6538)

Specimen(s)	CareHK Face Mask Batch / Lot No.: A273024
1	>99.9%
2	99.9%
3	99.9%
4	99.8%
5	>99.9%

Notes : - Control average 對照組的平均菌落數 : 1707 CFU
- Mean particle size 平均粒徑 : 2.7µm
- Testing side 測試面 : Outside of specimen 外側
- Testing area 測試面積 : 47 cm²

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2. Particulate Filtration Efficiency 微粒過濾效率 (PFE) %
(0.1µm PSL ; Flow rate : 28.3 Litre/min)

Specimen(s)	CareHK Face Mask Batch / Lot No.: A273024
1	>99.9%
2	>99.9%
3	>99.9%
4	>99.9%
5	99.9%

3. Differential Pressure 空氣交換壓力差

Specimen(s)	CareHK Face Mask Batch / Lot No.: A273024
1	5.3 mmH ₂ O/cm ²
2	5.4 mmH ₂ O/cm ²
3	5.4 mmH ₂ O/cm ²
4	5.4 mmH ₂ O/cm ²
5	5.2 mmH ₂ O/cm ²

Notes : - 1mmH₂O = 9.8Pa

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4. Synthetic Blood Penetration 合成血液穿透性 (Pressure : 120mmHg)

Specimen(s)	CareHK Face Mask Batch / Lot No.: A273024	Specimen(s)	CareHK Face Mask Batch / Lot No.: A273024
1	None Seen 無穿透	17	None Seen 無穿透
2	None Seen 無穿透	18	None Seen 無穿透
3	None Seen 無穿透	19	None Seen 無穿透
4	None Seen 無穿透	20	None Seen 無穿透
5	None Seen 無穿透	21	None Seen 無穿透
6	None Seen 無穿透	22	None Seen 無穿透
7	None Seen 無穿透	23	None Seen 無穿透
8	None Seen 無穿透	24	None Seen 無穿透
9	None Seen 無穿透	25	None Seen 無穿透
10	None Seen 無穿透	26	None Seen 無穿透
11	None Seen 無穿透	27	None Seen 無穿透
12	None Seen 無穿透	28	None Seen 無穿透
13	None Seen 無穿透	29	None Seen 無穿透
14	None Seen 無穿透	30	None Seen 無穿透
15	None Seen 無穿透	31	None Seen 無穿透
16	None Seen 無穿透	32	None Seen 無穿透
Requirement: An acceptable quality limit of 4.0% is met for a normal single sampling plan when ≥ 29 of 32 test specimens show passing result (none seen)			

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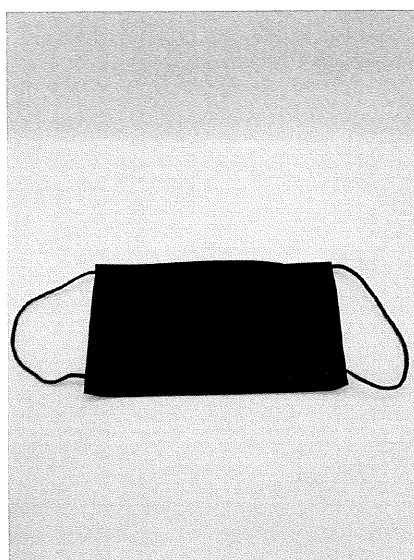
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5. Flammability 可燃性

Specimen(s)	CareHK Face Mask Batch / Lot No.: A273024	Class
	Time of spread of flame (Original state)	
1	Did not ignited 沒有燃點	1
2	Did not ignited 沒有燃點	
3	Did not ignited 沒有燃點	
4	Did not ignited 沒有燃點	
5	Did not ignited 沒有燃點	

Photo(s):



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