



**STC**  
Test Report

Date : 2021-01-14  
No. : HC21010398

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**Applicant(Code:01325900) :** Savewo Limited  
1/F 266-270 Texaco Road  
Tsuen Wan NT Hong Kong

**Description of Sample(s) :** One submitted sample said to be PM3PC.  
Country of Origin : Hong Kong

Sample(s) Received Condition(s): In plastic bag under  
ambient temperature

**Date Sample(s) Received :** 2020-11-09, 2020-12-22

**Date Tested :** 2020-11-11 to 2020-11-18 and 2020-12-30 to 2021-01-13

**Investigation Requested :** Performance Test as per ASTM F2100-19  
1. Bacterial Filtration Efficiency (BFE) %  
– *Staphylococcus aureus* (ATCC 6538)  
2. Particulate Filtration Efficiency (PFE) %  
3. Differential Pressure  
4. Synthetic Blood Penetration  
5. Flammability to Class 1  
Other test  
6. Viral Filtration Efficiency (VFE)%



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

The Hong Kong Standards and Testing Centre Ltd.



The Hong Kong Standards and Testing Centre Limited

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**Requirement:**

Performance Test as per ASTM F2100-19	Level 1	Level 2	Level 3
Bacterial Filtration Efficiency(BFE) % – <i>Staphylococcus aureus</i> (ATCC 6538)	≥95%	≥98%	
Particulate Filtration Efficiency (PFE) %	≥95%	≥98%	
Differential Pressure (ΔP)	<5.0 mmH <sub>2</sub> O/cm <sup>2</sup>	<6.0 mmH <sub>2</sub> O/cm <sup>2</sup>	
Resistance to Penetration by Synthetic Blood Penetration	80 mmHg	120 mmHg	160 mmHg
Flame Speed (Flammability to Class 1)	Class 1 (The time of flame spread is 3.5 seconds or more)		

**Summary:**

Performance Test as per ASTM F2100-19	PM3PC
	Level 3
Bacterial Filtration Efficiency(BFE) % – <i>Staphylococcus aureus</i> (ATCC 6538)	Pass
Particulate Filtration Efficiency (PFE) %	Pass
Differential Pressure (ΔP)	Pass
Resistance to Penetration by Synthetic Blood Penetration	Pass
Flame Speed (Flammability to Class 1)	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 Annex C
4. ASTM F2100-2019 9.4 & ASTM F1862-2017
5. 16 CFR 1610
6. ASTM F2101-2019 modified method

**Test Result(s):**

1. Bacterial Filtration Efficiency (BFE) %  
– *Staphylococcus aureus* (ATCC 6538)

Specimen(s)	PM3PC
1	99.9%
2	>99.9%
3	>99.9%
4	>99.9%
5	>99.9%

Notes : - Control average : 1820 CFU  
- Mean particle size : 3.2µm  
- Testing side : Outside of specimen  
- Testing area : 49cm<sup>2</sup>

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

Specimen(s)	PM3PC
1	>99.9%
2	>99.9%
3	>99.9%
4	>99.9%
5	>99.9%



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### 3. Differential Pressure

Specimen(s)	PM3PC
1	3.2 mmH <sub>2</sub> O/cm <sup>2</sup>
2	3.1 mmH <sub>2</sub> O/cm <sup>2</sup>
3	3.0 mmH <sub>2</sub> O/cm <sup>2</sup>
4	3.1 mmH <sub>2</sub> O/cm <sup>2</sup>
5	3.1 mmH <sub>2</sub> O/cm <sup>2</sup>

Notes : - 1mmH<sub>2</sub>O = 9.8Pa

### 4. Synthetic Blood Penetration (Pressure : 160mmHg)

Specimen(s)	PM3PC	Specimen(s)	PM3PC
1	None Seen	17	None Seen
2	None Seen	18	None Seen
3	<b>Penetrated</b>	19	None Seen
4	None Seen	20	None Seen
5	None Seen	21	None Seen
6	None Seen	22	None Seen
7	None Seen	23	None Seen
8	None Seen	24	None Seen
9	None Seen	25	None Seen
10	<b>Penetrated</b>	26	None Seen
11	None Seen	27	None Seen
12	None Seen	28	None Seen
13	None Seen	29	None Seen
14	None Seen	30	None Seen
15	None Seen	31	None Seen
16	None Seen	32	None Seen

**Requirement:**

An acceptable quality limit of 4.0% is met for a normal single sampling plan when  $\geq 29$  of 32 test specimens show passing result (none seen)



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5. Flammability to Class 1

Specimen(s)	PM3PC	Class
	Time of spread of flame (Original state)	
1	Did not ignite	1
2	Did not ignite	
3	Did not ignite	
4	Did not ignite	
5	Did not ignite	

6. Viral Filtration Efficiency (VFE)%

Specimen(s)	PM3PC
1	>99.9%
2	>99.9%
3	>99.9%
4	99.9%
5	>99.9%

Notes : - Control average : 2383 PFU  
- Mean particle size : 2.8µm  
- Testing area : 49 cm<sup>2</sup>

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**Photo(s):**



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

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