

中国认可
国际互认
检测
TESTING
CNAS L8342

Test Report

No 0681-21A-04

Suzhou GTT Service Co.,Ltd
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Wuzhong District, Suzhou, China
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Report No.	0681-21A-04
Date of issue	2021-08-31
Total number of pages	4 pages
Sample description	
Product name	Air filter
Trade Mark	N/A
Model / Type	HEPA_AM 3 & 4
Ratings	--
Number of samples tested	Sample1: 21-0681-16; Sample2: 21-0681-17; Sample3: 21-0681-18 Sample4: 21-0681-19; Sample5: 21-0681-20
Specifications	Maximum air-filter flow rate: 340 m ³ /h Dimensions (L x W x H): 363*350*50 mm Pleat number (windward side): -- Filter medium area (claimed): -- m ²
Applicant's name	Fellowes Business Machine (Suzhou) Co., Ltd.
Address	1# Shilin Road, Suzhou New & Hi-tech District, 215151 Suzhou, Jiangsu, People's Republic of China
Possible test case verdicts:	
Does not apply to the test object	N/A (Not applicable)
Does not test the requirement	N/T (Not test)
Does meet the requirement	P (Pass)
Does not meet the requirement	F (Fail)
Test specification:	
Test Items	High efficiency air filter performance testing
Method	EN 1822-1: 2019, EN ISO 29463-5: 2018
Date of receipt of test item	2021-08-30
Date (s) of performance of tests	2021-08-31 to 2021-08-31
Testing Laboratory	Suzhou GTT Service Co., Ltd.
Address	No. 70, Zhongshan East Road, Mudu Town, Wuzhong District 215101, Suzhou, China
Tested by (name+signature)	Lili Zhao
Test Engineer	
Approved by (name+signature)	Kaisheng Xiong
Manager	

The test results refer to the tested samples only. Authorisation for the copying of details of this report must be obtained from Suzhou GTT.

EN 1822-1: 2019 & EN ISO 29463-5: 2018

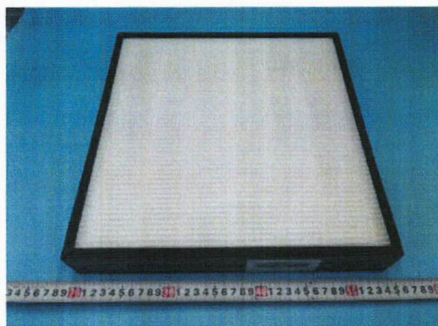
Clause	Requirement + Test result - Remark	Verdict
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Results summary:

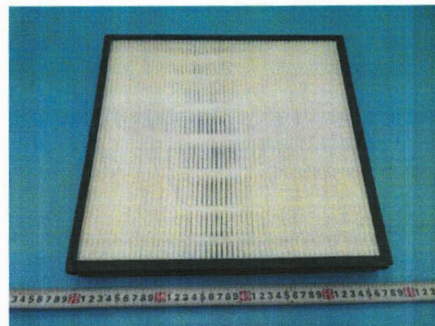
Test statuses: The tests were carried out on the new sample; Five samples were tested.

Table 1	Initial Filtration performance; EN ISO 29463-5: 2018						--
Normal air volume flow rate cm/s (m ³ /h)				340			
Test aerosol substances				NaCl (2%)			
Particle size range(μm)		0.10-0.15	0.15-0.20	0.20-0.25	0.25-0.30	0.10-0.25	
Sample No.	Δ Pa	Fractional efficiency (%)				Efficiency (%)	
21-0681-16	53	99.98	99.98	99.99	99.99	99.98	
21-0681-17	52	99.98	99.99	99.99	99.98	99.98	
21-0681-18	49	99.96	99.97	99.97	99.97	99.96	
21-0681-19	50	99.95	99.96	99.96	99.95	99.95	
21-0681-20	53	99.98	99.98	99.99	99.99	99.98	
AV.						99.97	
Note: Test result accord with EN 1822-1: 2019, H13							

Product photo:



Overview of the sample



Back view of the sample

Summary of testing:

1. From the result of our inspection and tests on the submitted sample(s).We conclude they comply with EN 1822-1: 2019 High efficiency air filters (EPA, HEPA and ULPA) - Part 1: Classification, performance testing, marking
2. From the result of our inspection and tests on the submitted sample(s).We conclude they comply with EN ISO 29463-5:2018 High-efficiency filters and filter media for removing particles in air-Part 5: Test method for filter elements

Copy of marking plate:

(The artwork below may be only a draft.)

No marking was provided.

The tests were carried out on a new air filter which is installed and used in accordance with the manufacturer's instructions.

----Test report end----

Attachments are test record.

EN 1822-1:2019 High efficiency air filters(EPA,HEPA and ULPA)-
 Part 1:Classification ,perormance testing,marking
 EN ISO 29463-5: 2018 High-efficiency filters and filter media for
 removing particles in air-
 Part 5 Test method for filter elements



Test Identification

Particle Counter	SOLAIR 1100	Case no.	0681-21A
	Cal due 12,11,2021	Testing period	2021/8/31 13:36
Dilution up/down	DIL554 + TDA-D10 1000/1	Ambient pressure (kPa)	100.9
	Cal due 09,11,2021	Ambient temp. (°C)	25.3
Flowmeter	DY80	Relative humidity (%RH)	48.7
	Cal due 17,11,2022	Operator : Lili Zhao	<i>Lili Zhao</i>
DP Transmitter	CP112		
	Cal due 17,11,2021	Reviewed By: Qinghui Zheng	<i>Qinghui Zheng</i>
Contaminant	NaCl (2%)		
Comment			

Sample

Type	HEPA_AM3&4	Sample no.	21-0681-16
Manufacture	Fellowes	Sample size ,mm	363*350*50
Date of receipt	2021/8/30	Declared air flow rates,m ³ /h	340
State			

Result

Test air flow rates, m³/h			339.8		Pressure loss av., Pa		53			
No.	Pressure loss , Pa	Port	Particles / 0.5 ft³ at: (in microns)							
			0.1-0.15	0.15-0.20	0.20-0.25	0.25-0.30				
1	52	Upstream	18192510	15475960	1976037	55888				
2	53	Downstream	2821	1823	208	5				
3	51	Upstream	18002890	15742430	2066855	51896				
4	52	Downstream	2920	1908	183	6				
5	52	Upstream	17180540	14955010	1965059	59880				
6	54	Downstream	3683	2744	298	9				
7	53	Upstream	17137630	14919080	1893203	75848				
8	54	Downstream	4231	3110	376	8				
9	54	Upstream	19199490	16878150	2189608	90818				
10	54	Downstream	3298	2300	223	11				
Total upstream			89713060	77970630	10090762	334330				
Total downstream			16953	11885	1288	39				
Fractional efficiency,%			99.98	99.98	99.99	99.99				
Efficiency (0.10-0.25 µm) ,%			99.98							

EN 1822-1:2019 High efficiency air filters(EPA,HEPA and ULPA)-
 Part 1:Classification ,performance testing,marking
 EN ISO 29463-5: 2018 High-efficiency filters and filter media for
 removing particles in air-
 Part 5 Test method for filter elements



Test Identification

Particle Counter	SOLAIR 1100	Case no.	0681-21A
	Cal due 12,11,2021	Testing period	2021/8/31 14:03
Dilution up/down	DIL554 + TDA-D10 1000/1	Ambient pressure (kPa)	100.9
	Cal due 09,11,2021	Ambient temp. (°C)	25.1
Flowmeter	DY80	Relative humidity (%RH)	48.2
	Cal due 17,11,2022	Operator : Lili Zhao	<i>Lili Zhao</i>
DP Transmitter	CP112		
	Cal due 17,11,2021	Reviewed By: Qinghui Zheng	<i>Qinghui Zheng</i>
Contaminant	NaCl (2%)		
Comment			

Sample

Type	HEPA_AM3&4	Sample no.	21-0681-17
Manufacture	Fellowes	Sample size ,mm	363*350*50
Date of receipt	2021/8/30	Declared air flow rates,m³/h	340
State			

Result

Test air flow rates, m³/h			340.3		Pressure loss av., Pa		52			
No.	Pressure loss , Pa	Port	Particles / 0.5 ft³ at: (in microns)							
			0.1-0.15	0.15-0.20	0.20-0.25	0.25-0.30				
1	51	Upstream	18420060	15795320	2019949	77844				
2	53	Downstream	3149	2407	267	10				
3	50	Upstream	19879130	17340220	2225536	67864				
4	51	Downstream	3085	2283	270	17				
5	52	Upstream	17431040	15234440	1968053	56886				
6	52	Downstream	3119	2218	244	7				
7	52	Upstream	15752410	13735450	1730529	54890				
8	52	Downstream	3094	2260	248	6				
9	52	Upstream	18227440	15874160	1999989	56886				
10	53	Downstream	3355	2361	300	11				
Total upstream			89710080	77979590	9944056	314370				
Total downstream			15802	11529	1329	51				
Fractional efficiency,%			99.98	99.99	99.99	99.98				
Efficiency (0.10-0.25 µm) , %			99.98							

EN 1822-1:2019 High efficiency air filters(EPA,HEPA and ULPA)-
 Part 1:Classification ,performance testing,marking
 EN ISO 29463-5: 2018 High-efficiency filters and filter media for
 removing particles in air-
 Part 5 Test method for filter elements



Test Identification

Particle Counter	SOLAIR 1100	Case no.	0681-21A
	Cal due 12,11,2021	Testing period	2021/8/31 14:25
Dilution up/down	DIL554 + TDA-D10 1000/1	Ambient pressure (kPa)	100.9
	Cal due 09,11,2021	Ambient temp. (°C)	25.1
Flowmeter	DY80	Relative humidity (%RH)	49.4
	Cal due 17,11,2022	Operator : Lili Zhao	<i>Lili Zhao</i>
DP Transmitter	CP112		
	Cal due 17,11,2021	Reviewed By: Qinghui Zheng	<i>Qinghui Zheng</i>
Contaminant	NaCl (2%)		
Comment			

Sample

Type	HEPA_AM3&4	Sample no.	21-0681-18
Manufacture	Fellowes	Sample size ,mm	363*350*50
Date of receipt	2021/8/30	Declared air flow rates,m ³ /h	340
State			

Result

Test air flow rates, m³/h			340.4		Pressure loss av., Pa		49			
No.	Pressure loss , Pa	Port	Particles / 0.5 ft³ at: (in microns)							
			0.1-0.15	0.15-0.20	0.20-0.25	0.25-0.30				
1	47	Upstream	20412060	17928040	2293400	84830				
2	48	Downstream	7214	5464	631	20				
3	50	Upstream	17754390	15529850	1982025	63872				
4	48	Downstream	6688	5002	606	19				
5	48	Upstream	16814280	14524870	1898193	83832				
6	50	Downstream	7112	5404	622	23				
7	49	Upstream	16395120	14471970	1869251	52894				
8	49	Downstream	7042	5426	665	29				
9	50	Upstream	18657580	16317270	2206575	62874				
10	49	Downstream	6817	5188	648	23				
Total upstream			90033430	78772000	10249444	348302				
Total downstream			34873	26484	3172	114				
Fractional efficiency,%			99.96	99.97	99.97	99.97				
Efficiency (0.10-0.25 µm) , %			99.96							

EN 1822-1:2019 High efficiency air filters(EPA,HEPA and ULPA)-
 Part 1:Classification ,performance testing,marking
 EN ISO 29463-5: 2018 High-efficiency filters and filter media for
 removing particles in air-
 Part 5 Test method for filter elements



Test Identification

Particle Counter	SOLAIR 1100	Case no.	0681-21A
	Cal due 12,11,2021	Testing period	2021/8/31 14:47
Dilution up/down	DIL554 + TDA-D10 1000/1	Ambient pressure (kPa)	100.9
	Cal due 09,11,2021	Ambient temp. (°C)	25.1
Flowmeter	DY80	Relative humidity (%RH)	48.7
	Cal due 17,11,2022	Operator : Lili Zhao	<i>Lili Zhao</i>
DP Transmitter	CP112		
	Cal due 17,11,2021	Reviewed By: Qinghui Zheng	<i>Qinghui Zheng</i>
Contaminant	NaCl (2%)		
Comment			

Sample

Type	HEPA_AM3&4	Sample no.	21-0681-19
Manufacture	Fellowes	Sample size ,mm	363*350*50
Date of receipt	2021/8/30	Declared air flow rates,m ³ /h	340
State			

Result

Test air flow rates, m³/h			340.4		Pressure loss av., Pa		50			
No.	Pressure loss , Pa	Port	Particles / 0.5 ft³ at: (in microns)							
			0.1-0.15	0.15-0.20	0.20-0.25	0.25-0.30				
1	50	Upstream	21056770	19286320	2460066	82834				
2	50	Downstream	9146	7599	990	40				
3	49	Upstream	18270350	16376150	2075837	78842				
4	50	Downstream	9678	7945	995	38				
5	50	Upstream	18518860	16381140	2142703	77844				
6	50	Downstream	9571	8007	1044	40				
7	50	Upstream	18225440	16086730	2127733	71856				
8	50	Downstream	9516	7930	979	34				
9	50	Upstream	21506860	19073750	2567850	68862				
10	50	Downstream	9304	7555	1003	39				
Total upstream			97578280	87204090	11374189	380238				
Total downstream			47215	39036	5011	191				
Fractional efficiency,%			99.95	99.96	99.96	99.95				
Efficiency (0.10-0.25 μm) , %			99.95							

EN 1822-1:2019 High efficiency air filters(EPA,HEPA and ULPA)-
 Part 1:Classification ,perormance testing,marking
 EN ISO 29463-5: 2018 High-efficiency filters and filter media for
 removing particles in air-
 Part 5 Test method for filter elements



Test Identification

Particle Counter	SOLAIR 1100	Case no.	0681-21A
	Cal due 12,11,2021	Testing period	2021/8/31 15:11
Dilution up/down	DIL554 + TDA-D10 1000/1	Ambient pressure (kPa)	100.8
	Cal due 09,11,2021	Ambient temp. (°C)	25.3
Flowmeter	DY80	Relative humidity (%RH)	45.8
	Cal due 17,11,2022	Operator : Lili Zhao	<i>Lili Zhao</i>
DP Transmitter	CP112		
	Cal due 17,11,2021	Reviewed By: Qinghui Zheng	<i>Qinghui Zheng</i>
Contaminant	NaCl (2%)		
Comment			

Sample

Type	HEPA_AM3&4	Sample no.	21-0681-20
Manufacture	Fellowes	Sample size ,mm	363*350*50
Date of receipt	2021/8/30	Declared air flow rates,m ³ /h	340
State			

Result

Test air flow rates, m³/h			340.2		Pressure loss av., Pa		53			
No.	Pressure loss , Pa	Port	Particles / 0.5 ft³ at: (in microns)							
			0.1-0.15	0.15-0.20	0.20-0.25	0.25-0.30				
1	53	Upstream	21049780	18755380	2536912	86826				
2	54	Downstream	4495	3377	423	15				
3	52	Upstream	17604690	15501910	1962065	78842				
4	53	Downstream	2999	2131	243	11				
5	55	Upstream	20643590	18221450	2349288	74850				
6	53	Downstream	3947	2986	394	6				
7	53	Upstream	18444010	16242420	2139709	71856				
8	53	Downstream	3141	2298	283	9				
9	53	Upstream	16237430	14992930	1868253	76846				
10	54	Downstream	3089	2373	266	11				
Total upstream			93979500	83714090	10856227	389220				
Total downstream			17671	13165	1609	52				
Fractional efficiency,%			99.98	99.98	99.99	99.99				
Efficiency (0.10-0.25 µm) , %			99.98							