

Test Report

Applicant: Jiangsu Liyu Razor Company Limited
Address: No. 19th, Dongtinghu Road, Siyang, Suqian City, Jiangsu Province, China

The following sample(s) was/were submitted and identified on behalf of the client as:

Product name: FILTERING BUTTERFLY MASK
Model: Max-06F
Trade mark: **BARBEADOR®**
Manufacturer: Jiangsu Liyu Razor Company Limited
Address: No. 19th, Dongtinghu Road, Siyang, Suqian City, Jiangsu Province, China
Classification: FFP2 NR
Sample quantity: 150 Pcs

Sample Received Date: Feb. 26, 2021
Testing Period: Feb. 26, 2021~ Mar. 03, 2021

Test Requirement:

According to the requirement of the client, the test item(s) of the sample is according to the standard EN 149:2001+A1:2009.

Test Result(s): Please refer to the following page(s)

Test Method: Please refer to the following page(s)

Compiled by: Maney Reviewed by: May

Approved by: Mark Liaw Date: 2021-03-03

Summary of assessment*

Clause	Assessment
7.9.2 Penetration of filter material	Pass
7.12 Carbon dioxide content of the inhalation air	Pass
7.16 Breathing resistance	Pass

Key

Pass	Requirement satisfied.
NRq	The clauses were not required.
Fail	Requirement not satisfied. Refer to the "Result details" section for more information.
N.A.	Requirement not applicable.

Test	Uncertainty
Penetration of filter material (NaCl)	1.60 %
Penetration of filter material (Paraffin Oil)	1.78 %
Carbon dioxide content of the inhalation air	5.34 %
Breathing resistance (30 L/min)	3.60 %
Breathing resistance (95 L/min)	2.20 %
Breathing resistance (160 L/min)	2.00 %

* Assessment relates only to those specimens which were tested and subjects in this report.

Test Result

Clause 7.9.2 Penetration of Filter Material
(EN 149:2001+A1:2009, Clause 8.11)

Test Requirement			Results	Comment
The penetration of the filter of the particle filtering half mask shall meet the requirements of the following table.			Detail refer to Appendix 1	Pass
Classification	Maximum penetration of test aerosol(%)			
	Sodium chloride test 95 L/min	Paraffin oil test 95 L/min		
FFP1	20	20		
FFP2	6	6		
FFP3	1	1		

Appendix 1: Summarization of Test Data

Penetration of filter material

Aerosol	Condition	Sample No.	Penetration (%)		Assessment
			Average in 30s after 3 min	Max. during exposure	
Sodium chloride test	A.R.	1#	0.74	/	Pass
		2#	0.74	/	
		3#	0.72	/	
	S.W.	7#	0.73	/	
		8#	0.74	/	
		9#	0.73	/	
	M.S. + T.C.	13#	/	0.75	
		14#	/	0.75	
		15#	/	0.82	
Paraffin oil test	A.R.	4#	0.63	/	
		5#	0.64	/	
		6#	0.49	/	
	S.W.	10#	0.62	/	
		11#	0.75	/	
		12#	0.65	/	
	M.S. + T.C.	16#	/	1.58	
		17#	/	1.24	
		18#	/	1.54	
Flow rate of test aerosol: 95.0 L/min					

Clause 7.12 Carbon Dioxide Content of The Inhalation Air

(EN 149:2001+A1:2009, Clause 8.7)

Test Requirement	Results	Comment
The carbon dioxide content of the inhalation air (dead space) shall not exceed an average of 1.0 % (by volume).	Detail refer to Appendix 2	Pass

Appendix 2: Summarization of Test Data

Carbon Dioxide Content of The Inhalation Air

Condition	Sample No.	Result		Assessment
A.R.	19#	043%	Mean value: 0.44%	Pass
	20#	0.43%		
	21#	0.45%		

Clause 7.16 Breathing Resistance

EN 149:2001+A1:2009, Clause 8.9)

Test Requirement				Results	Comment
The breathing resistances apply to valved and valveless filtering half masks and shall meet the requirements as the following table.				Detail refer to Appendix 3	Pass
Classification	Maximum permitted resistance (mbar)				
	Inhalation		Exhalation		
	30 L/min	95 L/min	160 L/min		
FFP1	0.6	2.1	3.0		
FFP2	0.7	2.4	3.0		
FFP3	1.0	3.0	3.0		

Appendix 3: Summarization of Test Data

Specimen	Condition	Inhalation(mbar)		Exhalation resistance(mbar)				
		At 30 L/min	At 95 L/min	At 160 L/min				
				A	B	C	D	E
22#	A.R.	0.49	1.52	2.54	2.53	2.54	2.53	2.52
23#		0.48	1.51	2.54	2.54	2.53	2.52	2.52
24#		0.50	1.52	2.55	2.54	2.55	2.54	2.53
25#	S.W.	0.51	1.53	2.55	2.54	2.55	2.55	2.54
26#		0.50	1.53	2.56	2.55	2.56	2.55	2.54
27#		0.50	1.52	2.54	2.53	2.54	2.53	2.52
28#	T.C.	0.45	1.47	2.45	2.44	2.45	2.44	2.43
29#		0.44	1.46	2.45	2.45	2.44	2.43	2.42
30#		0.44	1.46	2.44	2.43	2.44	2.43	2.42
/	F.C.	/	/	/	/	/	/	/
/		/	/	/	/	/	/	/
/		/	/	/	/	/	/	/

A: facing directly ahead; B: facing vertically upwards; C: facing vertically downwards; D: lying on the left side; E: lying on the right side

Sample photo(s):



Fig.1



Fig.2

****End of Report****

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