

# TEST REPORT

Report No: SH2007A0005EN

Report Date: 2020/8/18

Applicant	Formosa Energy-Carbon Company Limited				
Address	No. 151, Yanzhou 2nd St., Yongkang District, Tainan City 710, Taiwan (ROC)				
Sample Information	Sample Name	TWEC FFP2 MASK			
	Style No.	CMK-1619			
Test Category	Entrusted Test	Received Date	2020/7/27	Testing Date	2020/7/27-2020/8/18
Test Standard(s)	EN 149:2001+A1: 2009 Respiratory protective devices — Filtering half masks to protect against particles — Requirements, testing, marking				
Note(s)	All the tests are conducted in the environment condition specified in relevant test standards (Remark will be given if any deviation).				

Approved by:

*Obba Ma*

Obba Ma  
Lab Manager

Shanghai IMPAQ Testing Technology Co., Ltd.



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Summary of test results						
Sorter	Test Item(s) (Unit)	Test Method	SampleNo.	Item Conclusion	Requirement(s)	Test Result(s)
1	Cleaning and disinfecting	EN 149:2001+A1:2009	001	Pass	Cleaning and disinfecting. If the particle filtering half mask is designed to be re-usable, the materials used shall withstand the cleaning and disinfecting agents and procedures to be specified by the manufacturer. Cleaning method: At the requirements of the client, gently scrub the toothbrush with soap for 20 times, then rinse with water on both sides, and press flat to dry.	Comply
					The total inward leakage consists of three components: face seal leakage, exhalation valve leakage (if exhalation valve fitted) and filter penetration. For particle filtering half masks fitted in accordance with the manufacturer's information, at least 46 out of the 50 individual exercise results(i.e. 10 subjects x 5 exercises) for total inward leakage shall be not greater than 11% for FFP2. and, in addition, at least 8 out of the 10 individual wearer arithmetic means for the total inward leakage shall be not greater than 8% for FFP2.	Meet FFP2, Test results are shown in Annex A Table 7.9.1-A&B
					Practical performance. The particle filtering half mask shall undergo practical performance tests under realistic conditions. These general tests serve the purpose of checking the equipment for imperfections that cannot be determined by the tests described elsewhere in this standard.	No imperfections
					Sodium chloride test. 95 l/min(FFP2) (After cleaning and disinfecting) $\leq 6\%$	Meet FFP2, Test results are shown in Annex A Table 7.9.2
					Paraffin oil test. 95 l/min(FFP2) (After cleaning and disinfecting) $\leq 6\%$	Meet FFP2, Test results are shown in Annex A Table 7.9.2

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## Tested Sample/Part Description

Sample No	Tested Material Description
001	White mask

Photo(s) of the sample(s)



## Annex A: Summarization of Test Data

Table 7.9.1-A: Inward Leakage Test Data

Test specification: EN 149:2001+A1:2009 Clause 8.5

Subject	Sample No.	Condition	Walk (%)	Head Side/side (%)	Head up/down (%)	Talk (%)	Walk (%)
Lv	1	A. R.	2.5	2.1	2.4	2.3	3.0
Li	2	A. R.	4.4	2.8	2.4	3.8	2.3
Zhong	3	A. R.	2.5	2.7	3.2	3.7	4.6
Xu	4	A. R.	2.6	2.1	2.2	2.4	2.5
Ma	5	A. R.	2.6	2.2	2.1	2.3	2.2
Chen	6	T. C.	2.8	2.9	2.3	2.8	2.5
Chen	7	T. C.	3.1	2.8	2.9	2.5	3.2
Zhuo	8	T. C.	3.1	2.9	2.1	2.7	3.4
Chen	9	T. C.	3.7	3.4	3.5	2.9	3.3
Zhang	10	T. C.	3.1	2.8	3.4	2.8	2.4

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## Annex A: Summarization of Test Data

Table 7.9.1-B: Facial dimension

Subject	Face Length	Face Width	Face Depth	Mouth Width
Lv	113	139	104	53
Li	120	135	112	55
Zhong	108	135	106	56
Xu	120	150	120	70
Ma	130	170	130	80
Chen	110	160	90	40
Chen	115	145	110	50
Zhuo	103	146	100	50
Chen	110	145	95	40
Zhang	144	141	101	54

## Annex A: Summarization of Test Data

Table 7.9.2: Penetration of filter material

Aerosol	Condition	Sample No.	Penetration (%)
Sodium chloride test	M. S. +T. C. +C. D.	11	Exposure:1.3 Storage:0.1
		12	Exposure:1.4 Storage:0.1
		13	Exposure:0.9 Storage:0.1
Paraffin oil test	M. S. +T. C. +C. D.	14	Exposure:4.5 Storage:0.1
		15	Exposure:2.1 Storage:0.1
		16	Exposure:5.1 Storage:0.1

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

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