

Prüfbericht - Produkte Test Report - Products

 Prüfbericht-Nr.:
 60425394 001
 Auftrags-Nr.:
 244277294
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 Test report no.:
 Order no.:
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Kunden-Referenz-Nr.: 2303014 Auftragsdatum: 05.11.2020

Client reference no.: Order date:

InSpe

Auftraggeber: Client: Savanoriu ave.178F, Vilnius, Lithuania

Prüfgegenstand: Medical Face Mask

Test item:

Bezeichnung / Typ-Nr.: BM-920

Identification / Type no.:

Auftrags-Inhalt: Type tes

Auftrags-Inhalt: Type test Order content:

Prüfgrundlage: EN 14683:2019+AC:2019

Warene ingangsdatum: 10.11.2020 Date of sample receipt:

Prüfmuster-Nr.: A002946370-001 *Test sample no:*

Prüfzeitraum: 11.11.2020 to 26.11.2020 *Testing period:*

Ort der Prüfung: TÜV Rheinland (Shanghai)
Place of testing: Co., Ltd.

Prüflaboratorium: TÜV Rheinland (Shanghai)
Testing laboratory: Co., Ltd.

Ranibow Pan

27.11.2020

Prüfergebnis*:
Test result*:
Pass

geprüft von:

tested by:

Datum:

Date:

genehmigt von:

authorized by: Xiaojun Ding

Xias m Ding

Datum:

Stellung / Position: PE Stellung / Position: Reviewer

Sonstiges / Other: The test report consists of EN 14683 test report including this cover page (13 pages).

Zustand des Prüfgegenstandes bei Anlieferung: Prüfmuster vollständig und unbeschädigt Condition of the test item at delivery: Test item complete and undamaged

* Legende: P(ass) = entspricht o.g. Prütgrundlage(n) F(ail) = entspricht nicht o.g. Prütgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet * Legend: P(ass) = passed a.m test specification(s) P(ail) = failed a.m test specification(s) P(ail) = failed a.m test specification(s) P(ass) = passed a.m test specification(s)

Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.

This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.



EN 14683:2019+AC: 2019
Medical face masks —
Requirements and test methods

 Report Reference No.
 :
 See cover page

 Date of issue
 :
 See cover page

 Total number of pages
 :
 See cover page

Testing Laboratory.....: TÜV Rheinland (Shanghai) Co., Ltd.

Address.....: No.177, 178, Lane 777 West Guangzhong Road, Jing'an District,

Shanghai, China

Applicant's name: InSpe

Address.....: Savanoriu ave.178F, Vilnius, Lithuania

Test specification:

Standard....: EN 14683:2019+AC:2019

Test procedure....: Type test

Non-standard test method.....: N/A

Test Report Form No.....: EN 14683:2019+AC:2019_B

Test Report Form Originator: TÜV Rh (SZ)

Master TRF 2020-09

Test item description....: Medical Face Mask

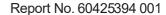
Trade Mark.....:

Manufacturer: Changzhou Shuangma Medical Devices Co., Ltd.

Sanhekou Development Zone, Zhenglu Town, Tianning District,

Changzhou, Jiangsu, China. 213115

Model/Type reference : BM-920 Classification : Type IIR





List of Attachments (including a total number of pages in each attachment):

N/A

Summary of testing:

Tests performed (name of test and test clause):

Clause 5.2.2 Bacterial filtration efficiency;

Clause 5.2.3 Breathability;

Clause 5.2.4 Splash resistance;

Clause 5.2.5 Microbial cleanliness

Testing location:

TÜV Rheinland (Shanghai) Co., Ltd.

No.177, 178, Lane 777 West Guangzhong Road, Jing'an District, Shanghai, China

Copy of marking plate

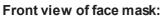
The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

Box:



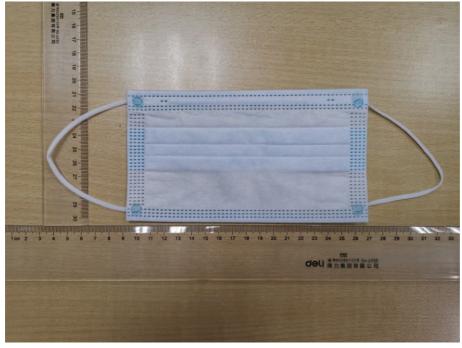


Remark: According to information from applicant, there are 50pcs medical face masks including in final small package during mass production.

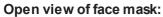


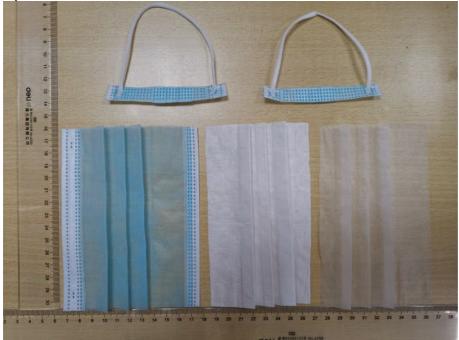


Back view of face mask:









Open view of face mask:



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Testing
Date of receipt of test item(s) See cover page
Dates of tests performed See cover page
Possible test case verdicts:
- test case does not apply to the test object: N/A
- test object does meet the requirement P (Pass)
- test object was not evaluated for the requirement : N/E (collateral standards only)
- test object does not meet the requirement : F (Fail)
General remarks:
"(See Attachment #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. The tests results presented in this report relate only to the object tested. This report shall not be reproduced except in full without the written approval of the testing laboratory. List of test equipment must be kept on file and available for review. Additional test data and/or information provided in the attachments to this report. Throughout this report a comma / point is used as the decimal separator.
Name and address of factory (ies): Changzhou Shuangma Medical Devices Co., Ltd. Sanhekou Development Zone, Zhenglu Town, Tianning District, Changzhou, Jiangsu, China. 213115
General product information:
The submitted samples are type IIR, non-sterile medical face mask which are intended for covering the mouth and nose providing a barrier to minimize the direct transmission of infective agents between staff and patient. This intended purpose is normally to limit the transmission of infective agents from staff to patients in the hospital and other medical settings with similar requirements. A medical face mask with an appropriate microbial barrier should also be effective in reducing the emission of infective agents from nose and mouth of an asymptomatic carrier or a patient with clinical symptoms.
The test results are for reference only. Relevant certification may be needed if the mask is intended to be sold in Europe.



	EN 14683:2019+AC:20	19	
Clause	Requirement + Test	Result - Remark	Verdict
4	Classification		Р
	Medical face masks specified in this European Standard are classified into two types (Type I and Type II) according to bacterial filtration efficiency whereby Type II is further divided according to whether or not the mask is splash resistant. The 'R' signifies splash resistance.	Type IIR	P
5	Requirements		Р
5.1	General		Р
5.1.1	Materials and construction		Р
	The medical face mask is a medical device, generally composed of a filter layer that is placed, bonded or moulded between layers of fabric.	Composed of a filter layer between layers of fabric	P
	The medical face mask shall not disintegrate, split or tear during intended use.	Complied	Р
	In the selection of the filter and layer materials, attention shall be paid to cleanliness.	Considered	Р
5.1.2	Design		Р
	The medical face mask shall have a means by which it can be fitted closely over the nose, mouth and chin of the wearer and which ensures that the mask fits closely at the sides.	Fitted closely over nose	Р
	Medical face masks may have different shapes and constructions as well as additional features such as a face shield (to protect the wearer against splashes and droplets) with or without anti-fog function, or a nose bridge (to enhance fit by conforming to the nose contours).	With a nose bridge	P
5.2	Performance requirements		Р
5.2.1	General		Р
	All tests shall be carried out on finished products or samples cut from finished products.	Complied	Р
5.2.2	Bacterial filtration efficiency (BFE)		Р
	When tested in accordance with Annex B, the BFE of the medical face mask shall conform to the minimum value given for the relevant type in Table 1.	See appended table 5.2.2	Р
	For thick and rigid masks such as rigid duckbill or cup masks the test method may not be suitable as a proper seal cannot be maintained in the cascade impactor. In these cases, another valid equivalent method shall be used to determine the BFE.	Not thick and rigid mask	N/A



	EN 14683:2019+AC:2019						
Clause	Requirement + Test	Result - Remark	Verdict				
	When a mask consists of two or more areas with different characteristics or different layer-composition, each panel or area shall be tested individually.	No such condition	N/A				
	The lowest performing panel or area shall determine the BFE value of the complete mask		N/A				
5.2.3	Breathability		Р				
	When tested in accordance with Annex C, the differential pressure of the medical face mask shall conform to the value given for the relevant type in Table 1.	See appended table 5.2.3	Р				
	If the use of a respiratory protective device as face mask is required in an operating theatre and/or other medical settings, it might not fulfil the performance requirements with regard to differential pressure as defined in this European Standard. In such case, the device should fulfil the requirement as specified in the relevant Personal Protective Equipment (PPE) standard(s).	No such respiratory protective device	N/A				
5.2.4	Splash resistance		Р				
	When tested in accordance with ISO 22609:2004 the resistance of the medical face mask to penetration of splashes of liquid shall conform to the minimum value given for Type IIR in Table 1.	See appended table 5.2.4	Р				
5.2.5	Microbial cleanliness (Bioburden)		Р				
	When tested according to EN ISO 11737-1:2018 the bioburden of the medical mask shall be \leq 30 CFU/g tested (see Table 1).	See appended table 5.2.5	Р				
5.2.6	Biocompatibility		Р				
	According to the definition and classification in EN ISO 10993-1:2009, a medical face mask is a surface device with limited contact.	In Vitro Cytotoxicity Test, test report No.: SSMT-R-2020- 00509-01, Skin Sensitization Test, test report No.: SSMT-R-2020- 00509-03, Skin Irritation Test, test report No.: SSMT-R-2020- 00509-02, issued by Jiangsu Science Standard Medical Testing Co., Ltd.	Р				
	The manufacturer shall complete the evaluation of the medical face mask according to EN ISO 10993-1:2009 and determine the applicable toxicology testing regime.		Р				
	The results of testing should be documented according to the applicable parts of the EN ISO 10993 series.		Р				
	The test results shall be available upon request.		Р				
6	Marking, labelling and packaging		Р				



	EN 14683:2019+AC:2019					
Clause	Requirement + Test	Result - Remark	Verdict			
	Annex I, §13, of the Medical Devices Directive (93/42/EEC) or Annex I, §23, of the Medical Device					
	Regulation (EU) 2017/745 specifies the information that should be specified on the packaging in which the medical face mask is supplied.					
	The following information shall be supplied:		Р			
	a) number of this European Standard;	Marked on the label	Р			
	b) type of mask (as indicated in Table 1). Marked on the label					
	EN ISO 15223-1:2016 and EN 1041:2008+A1:2013 should be considered.	Considered	Р			





EN 14683:2019+AC:2019				
Clause	Requirement + Test	_	Result - Remark	Verdict

5.2.2		TABLE: E	Bacterial fil	tration effic	iency (BFE)			Р
Batch/ lot no.:	Test Speci -men no.:	Dimension of the test specimen L x W (mm x mm)	test area (cm²)	Flow rate (I/min)	Mean of the total plate counts of the two positive controls	Mean plate count of the negative controls	BFE for each test specimen (%)	Remarks
A00294	1	100×100	50	28.3	1855	<1	99.7	Р
6370- 001	2	100×100	50	28.3	1855	<1	99.7	Р
	3	100×100	50	28.3	1855	<1	99.9	Р
	4	100×100	50	28.3	1855	<1	99.9	Р
	5	100×100	50	28.3	1855	<1	99.9	Р

Supplementary information:

Remark:

Limit value: Type I ≥95%; Type II≥98%; Type IIR ≥98%.

5.2.3	T.	ABLE: Breathability (Different	tial pressure)			Р
Batch/ lot no.:	Test Specimen number- Test area number	Differential pressure for each test area (Pa/cm²)	The averaged differential pressure for each test specimen (Pa/cm²)	Flow rate (I/min)	Ren	narks
A0029	1-1	28.8	31.3	8.0		Р
46370- 001	1-2	34.2		8.0		Р
	1-3	32.7		8.0		Р
	1-4	27.6		8.0		Р
	1-5	33.1		8.0		Р
	2-1	31.5	32.8	8.0		Р
	2-2	31.0		8.0		Р
	2-3	36.0		8.0		Р
	2-4	32.3		8.0		Р
	2-5	33.0		8.0		Р
	3-1	27.0	31.5	8.0		P

^{1,} Each specimen was conditioned at $\underline{21.0}$ °C and $\underline{85.0}$ % relative humidity for $\underline{4}$ h to bring them into equilibrium with atmosphere prior to testing.

^{2,} The side of the test specimen was facing towards the challenge aerosol: face

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Ρ

Р



EN 14683:2019+AC:2019 Requirement + Test Result - Remark Clause Verdict 3-2 8.0 34.9 Ρ 3-3 29.7 8.0 Ρ 3-4 29.1 8.0 Р Ρ 3-5 36.6 8.0 4-1 28.5 32.6 8.0 Ρ 4-2 Р 8.0 34.1 4-3 35.3 8.0 Р Ρ 4-4 30.8 8.0 4-5 34.1 8.0 Р 5-1 30.5 32.4 8.0 Ρ 5-2 33.7 8.0 Р 5-3 Р 34.0 8.0

Supplementary information:

5-4

5-5

Each specimen was conditioned at $21.0\,^{\circ}$ C and $85.0\,^{\circ}$ relative humidity for $4\,^{\circ}$ h to bring them into equilibrium with atmosphere prior to testing.

8.0

8.0

Remark:

Limit value: Type I <40; Type II <40; Type IIR <60.

30.2

33.8

5.2.4	TABLE: Splash resistance			Р		
Batch/ lot no.:		Test mask no.:	The material of tested mask	Test result (Pass/fail)	Re	marks
A002946370-001		1	Polypropylene fused jet filter layer	Pass		-
		2	Polypropylene fused jet filter layer	Pass		-
			Polypropylene fused jet filter layer	Pass		
		4	Polypropylene fused jet filter layer	Pass		
			Polypropylene fused jet filter layer	Pass		-
		6	Polypropylene fused jet filter layer	Pass		-
		7	Polypropylene fused jet	Pass		



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EN 14683:2019+AC:2019				
Clause	Requirement + Test		Result - Remark	Verdict

Clause	Requirement + 1	esi		Result - Remark	verdict
			filter layer		
		8	Polypropylene fused je filter layer	et Pass	
		9	Polypropylene fused je filter layer	et Pass	-
		10	Polypropylene fused je filter layer	et Pass	-
		11	Polypropylene fused je filter layer	et Pass	-
		12	Polypropylene fused je filter layer	et Pass	-
		13	Polypropylene fused je filter layer	et Pass	-
		14	Polypropylene fused je filter layer	et Pass	<u>-</u>
		15	Polypropylene fused je filter layer	et Pass	
		16	Polypropylene fused je filter layer	et Pass	-
		17	Polypropylene fused je filter layer	et Pass	
		18	Polypropylene fused je filter layer	et Pass	
		19	Polypropylene fused je filter layer	et Pass	
		20	Polypropylene fused je filter layer	et Pass	
		21	Polypropylene fused je filter layer	et Pass	
		22	Polypropylene fused je filter layer	et Pass	
		23	Polypropylene fused je filter layer	et Pass	
		24	Polypropylene fused je filter layer	et Pass	
		25	Polypropylene fused je filter layer	et Pass	
		26	Polypropylene fused je filter layer	et Pass	
		27	Polypropylene fused je filter layer	et Pass	

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EN 14683:2019+AC:2019					
Clause	Requirement + Test		Result - Remark	Verdict	

28	3	Polypropylene fused jet filter layer	Pass	-
29	9	Polypropylene fused jet filter layer	Pass	-
30	0	Polypropylene fused jet filter layer	Pass	
31	1	Polypropylene fused jet filter layer	Pass	
32	2	Polypropylene fused jet filter layer	Pass	

Supplementary information:

- 1, Each specimen was conditioned at $21.0\,^{\circ}$ C and $85.0\,^{\circ}$ relative humidity for $4\,^{\circ}$ h to bring them into equilibrium with atmosphere prior to testing.
- 2, The description of target area tested: the center of outside
- 3, Any technique used to enhance visual detection of synthetic blood: none
- 4, The temperature and relative humidity for testing: 21.0 °C and 85.0 %
- 5, Description of any pre-treatment techniques used: <u>constant temperature and humidity machine was used</u>

Remark:

Limit value: not required for Type I and Type II; Type IIR ≥16,0.

5.2.5	TABLE: Microbial cleanliness (Bioburden)				Р
Batch/ lo	Mask(under test) no.:	Weight of each mask (g)	Total bioburden per individual mask (CFU)	Total bioburden per gram (CFU/g)	Remarks
A00294637 0-001	7 1	3.18	<1	<1	Р
	2	3.22	<1	<1	Р
	3	3.18	<1	<1	Р
	4	3.16	<1	<1	Р
	5	3.20	<1	<1	Р

Supplementary information:

Remark:

Limit value: Type I ≤30; Type II ≤30; Type IIR ≤30.

End of test report