











### Certificate

No. Q5 062837 0012 Rev. 02

**Holder of Certificate:** Blue Sail Medical Co., Ltd

**Certification Mark:** 



Design, Development, Production and Distribution **Scope of Certificate:** 

of Disposable Vinyl Examination Gloves, Disposable Nitrile Examination Gloves.

The Certification Body of TÜV SÜD Product Service GmbH certifies that the company mentioned above has established and is maintaining a quality management system, which meets the requirements of the listed standard(s). See also notes overleaf.

BJ19924043 Report No.:

Valid from: 2019-11-12 Valid until: 2022-07-31

2019-11-12 Date,

**Christoph Dicks** 

Head of Certification/Notified Body

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**Note:** This report is issued subject to the Testing and Certification Regulations of the TÜV SÜD Group and the General Terms and Conditions of Business of TÜV SÜD PSB Pte Ltd. In addition, this report is governed by the terms set out within this report.

#### **SUBJECT:**

Testing of Powder Free Nitrile Examination Gloves submitted by Blue Sail Medical Co., Ltd. on 05 Mar 2020.

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#### **TESTED FOR:**

Blue Sail Medical Co., Ltd. Qilu Chemical Industrial Park, No. 21 Qingtian Rd., 255414, Zibo, Shandong, China.

#### **TEST DATE:**

09 Mar 2020 to 09 Apr 2020

#### **DESCRIPTION OF SAMPLES:**

S/N	Product Description	Brand/ Model	Colour	Lot No.	Size	Sample received (pieces)	Manufacturer
				01254511	XS	60	
	Disposable Nitrile	BS 020-	The same	01254512	S	60	Blue Sail
1	Powder-Free	N01	Blue	01264711	М	60	Medical Co.,
	Examination Gloves	INUT		01264712	L	60	Ltd.
		- No. 11	COLUM	01264921	XL	400	

Lot size as specified by client: 35,001 to 150,000 pieces

#### **METHOD OF TEST:**

- EN 455-1:2000 Medical gloves for single use Part 1: Requirements and testing for freedom from holes
- EN 455-2:2015 Medical gloves for single use Part 2: Requirements and testing for physical properties
- 3. EN 455-3:2015 Medical glove for single use Part 3: Requirements and testing for biological evaluation



Laboratory: TÜV SÜD PSB Pte. Ltd. No.1 Science Park Drive Singapore 118221 Phone: +65-6885 1333 Fax: +65-6776 8670 E-mail: enquiries@tuv-sud-psb.sg www.tuv-sud-psb.sg Co. Reg: 199002667R

Regional Head Office: TÜV SÜD Asia Pacific Pte. Ltd. 1 Science Park Drive, #02-01 Singapore 118221

TÜV



#### **RESULTS:**

Sample: Disposable Nitrile Powder-Free Examination Gloves, BS 020-N01, Blue

Table 1: Results for EN 455-1:2000

Clause	Tests	Size	Requirements	No. of non-compliers allowed (pieces)	Number tested (pieces)	Actual no. of non-compliers found (pieces)	Inferred results	
		XS		10	315	0	Passed	
		S	S		10	315	1	Passed
4 5	Freedom from holes	М	Shall not leak	10	315	1	Passed	
3		L	L		10	315	1	Passed
		XL		10	315	1	Passed	

Table 2: Results for EN 455-2:2015 Clauses 4-5

Clause	Tests	Size	Requirements (Median)	Number tested (pieces)	Results (Median)	Inferred results
	- 20	XS	11	13	243	Passed
	B	S	11	13	246	Passed
	Dimensions a) Length (mm)	М	≥ 240	13	242	Passed
	a) Longin (min)	L	Internal III	13	242	Passed
4		XL		13	250	Passed
4		XS	≤ 80	13	80	Passed
		S	80 ± 10	13	84	Passed
	b) Width (mm)	М	95 ± 10	13	95	Passed
		L,	110 ± 10	13	105	Passed
		XL	≥ 110	13	115	Passed
		XS	100	13	10.8	Passed
	Strength	S	For nitrile	13	8.7	Passed
	a) Force at break	М	examination gloves:	13	8.0	Passed
	(N)	L	gioves. ≥ 6.0	13	10.9	Passed
5		XL	1	13	10.8	Passed
ວ	b) Force at break	XS		13	9.6	Passed
	after challenge	S	For nitrile	13	8.7	Passed
	testing (N)	М	examination gloves:	13	8.0	Passed
	7 days at	L	gioves. ≥ 6.0	13	10.3	Passed
	(70±2)°C	XL		13	10.8	Passed

Table 3: Results for EN 455-2:2015 Clause 7

Clause	Tests	Requirements	Results	Inferred results
7	Labelling	Manufacturers shall label the glove and/or the packaging with the date of manufacture in accordance with EN ISO 15223-1:2012 and EN 1041:2008+A1:2013. Date of manufacture is defined as the packaging date.	Observed	Passed



#### RESULTS (cont'd):

Sample: Disposable Nitrile Powder-Free Examination Gloves, BS 020-N01, Blue

Table 4: Results for EN 455-3:2015 Clauses 4.2-4.5

Clause	Tests	Requirements	Results / Remarks	Inferred results
4.2	Chamiaala	Gloves shall not be dressed with talcum powder (magnesium silicate).	Glove is powder-free glove, based on client's declaration letter version 2019001	NA
4.2 Chemicals		Other chemicals	Manufacturer shall disclose upon request a list of chemical ingredients	NA
4.3 5.1	Endotoxins	< 20 EU/pair for gloves labelled with 'low endotoxin content'.		
4.4 5.2	Powder- free gloves	For powder-free gloves: The total quantity of powder residues shall not exceed 2 mg per glove.	XS 0.04 mg per glove S 0.17 mg per glove M 0.51 mg per glove L 0.14 mg per glove XL 0.18 mg per glove	Passed Passed Passed Passed Passed
4.5 5.3	Proteins, leachable	The manufacturer shall strive to minimize the leachable protein level for gloves containing natural rubber latex.	Non-natural rubber latex glove	NA

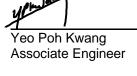
#### Table 5: Results for EN 455-3:2015 Clause 4.6

Clause	Tests	Requirements	Results
		In addition to the labelling specified in EN 1041:2008+A1:2013 and the relevant symbols given in EN ISO 15223-1:2012, the following requirements apply:	
		<ul> <li>a) medical gloves containing natural rubber latex shall be labelled on the packaging of at least the smallest packaging unit with the EN ISO 15223-1:2012 symbol for latex;</li> </ul>	NA
		The labelling shall include the following or equivalent warning statement together with the symbol: '(Product) contains natural rubber latex which may cause allergic reactions, including anaphylactic responses';	NA
4.6	Labelling	<ul> <li>b) the labelling shall include a prominent indication of whether the glove is powdered or powder-free;</li> </ul>	Comply
	J	<ul> <li>c) sterile powdered gloves shall be labelled with the following or equivalent: 'CAUTION: Surface powder shall be removed aseptically prior to undertaking operative procedures in order to minimize the risk of adverse tissue reactions';</li> </ul>	NA
		<ul> <li>d) for any medical glove containing natural rubber latex the product labelling shall not include:         <ul> <li>any term suggesting relative safety, such as low allergenicity, hypoallergenicity or low protein;</li> <li>any unjustified indication of the presence of allergens;</li> </ul> </li> </ul>	NA
		e) if the manufacturer labels the gloves with the protein content, the process limit, measured as specified in 5.3 shall be given.	NA
		Inferred results	Passed



#### **REMARKS:**

- 1. Freedom from holes test for XS, S, M and L sizes were tested in manufacturer's site, witnessed by TÜV SÜD Certification and Testing (China) Co., Ltd. Beijing Branch on 04 Apr 2020.
- 2. Labelling requirements are assessed based on submitted packaging artwork together with client's declaration letter version number 2019001.
- 3. NA: Not applicable for the submitted sample.



Wong Bee Hui Product Manager Medical Health Services (NAM)

#### **APPENDIX:**



Photo : Disposable Nitrile Powder-Free Examination Gloves, BS 020-N01, Blue



Please note that this Report is issued under the following terms :

- 1. This report applies to the sample of the specific product/equipment given at the time of its testing/calibration. The results are not used to indicate or imply that they are applicable to other similar items. In addition, such results must not be used to indicate or imply that TÜV SÜD PSB approves, recommends or endorses the manufacturer, supplier or user of such product/equipment, or that TÜV SÜD PSB in any way "guarantees" the later performance of the product/equipment. Unless otherwise stated in this report, no tests were conducted to determine long term effects of using the specific product/equipment.
- The sample/s mentioned in this report is/are submitted/supplied/manufactured by the Client. TÜV SÜD PSB therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture, consignment or any information supplied.
- 3. Nothing in this report shall be interpreted to mean that TÜV SÜD PSB has verified or ascertained any endorsement or marks from any other testing authority or bodies that may be found on that sample.
- 4. This report shall not be reproduced wholly or in parts and no reference shall be made by the Client to TÜV SÜD PSB or to the report or results furnished by TÜV SÜD PSB in any advertisements or sales promotion.
- 5. Unless otherwise stated, the tests were carried out in TÜV SÜD PSB Pte Ltd, No.1 Science Park Drive Singapore 118221.



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#### **DESCRIPTION OF SAMPLES:**

S	/N P	Product Description	Brand/ Model	Colour	Lot No.	Size	Sample received (pieces)	Manufacturer
		Disposable Nitrile			02153711	XS	60	Blue Sail
		Powder-Free	BS 020-	Blue	02163811	S	60	Medical Co.,
	'∣₌	xamination Gloves	N03	Purple	02153922	М	60	Ltd.
	-	xamination Gloves	4.		02164612	L	60	Liu.

Lot size as specified by client: 35,001 to 150,000 pieces

#### **METHOD OF TEST:**

- EN 455-1:2000 Medical gloves for single use Part 1: Requirements and testing for freedom from holes
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Regional Head Office: TÜV SÜD Asia Pacific Pte. Ltd. 1 Science Park Drive, #02-01 Singapore 118221

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#### **RESULTS:**

Sample: Disposable Nitrile Powder-Free Examination Gloves, BS 020-N03, Blue Purple

Table 1: Results for EN 455-1:2000

Clause	Tests	Size	Requirements	No. of non-compliers allowed (pieces)	Number tested (pieces)	Actual no. of non-compliers found (pieces)	Inferred results	
		XS		10	315	0	Passed	
4	4 Freedom S M L	Freedom S	S	Shall not look	10	315	1	Passed
5		М	Shall not leak	10	315	0	Passed	
		L	-	10	315	1	Passed	

Table 2: Results for EN 455-2:2015 Clauses 4-5

Clause	Tests	Size	Requirements (Median)	Number tested (pieces)	Results (Median)	Inferred results
		XS		13	240	Passed
	Dimensions	S	> 040	13	242	Passed
4	a) Length (mm)	М	≥ 240	13	248	Passed
		L	/	13	248	Passed
4		XS	≤ 80	13	80	Passed
	b) Width (mm)	S	80 ± 10	13	85	Passed
		М	95 ± 10	13	96	Passed
		لــ	110 ± 10	13	104	Passed
		XS	For nitrile	13	7.2	Passed
	Strength a) Force at break	S	examination	13	6.6	Passed
	(N)	М	gloves:	13	6.4	Passed
5			≥ 6.0	13	6.3	Passed
5	b) Force at break	XS	For nitrile	13	6.8	Passed
	after challenge	S	examination	13	6.9	Passed
	7 days at	7 /13//6 31	gloves:	13	6.3	Passed
	(70±2)°C	L	≥ 6.0	13	6.9	Passed

#### Table 3: Results for EN 455-2:2015 Clause 7

Clause	Tests	Requirements	Results	Inferred results
7	Labelling	Manufacturers shall label the glove and/or the packaging with the date of manufacture in accordance with EN ISO 15223-1:2012 and EN 1041:2008+A1:2013. Date of manufacture is defined as the packaging date.	Observed	Passed



#### RESULTS (cont'd):

Sample: Disposable Nitrile Powder-Free Examination Gloves, BS 020-N03, Blue Purple

Table 4: Results for EN 455-3:2015 Clauses 4.2-4.5

Clause	Tests	Requirements	Results / Remarks	Inferred results
4.2	Chamicala	Gloves shall not be dressed with talcum powder (magnesium silicate).	Glove is powder-free glove, based on client's declaration letter version 2019001	NA
4.2 Chemicals		Other chemicals	Manufacturer shall disclose upon request a list of chemical ingredients	NA
4.3 5.1	Endotoxins	< 20 EU/pair for gloves labelled with 'low endotoxin content'.	Not labelled with 'low endotoxin content'	NA
4.4 5.2	Powder- free gloves	For powder-free gloves: The total quantity of powder residues shall not exceed 2 mg per glove.	XS 0.02 mg per glove S 0.06 mg per glove M 0.27 mg per glove L 0.24 mg per glove	Passed Passed Passed Passed
4.5 5.3	Proteins, leachable	The manufacturer shall strive to minimize the leachable protein level for gloves containing natural rubber latex.	Non-natural rubber latex glove	NA

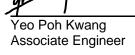
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		e) if the manufacturer labels the gloves with the protein content, the process limit, measured as specified in 5.3 shall be given.	NA
		Inferred results	Passed



#### **REMARKS:**

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Wong Bee Hui Product Manager Medical Health Services (NAM)

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Photo: Disposable Nitrile Powder-Free Examination Gloves, BS 020-N03, Blue Purple



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