HUACETONG

TEST REPORT

EN 420

Protective gloves - General requirements and test methods

Report Number.....:	**WUX202004030993S**
Test by (name+signature).....:	File administrators Judy Chan
Compiled by (+signature).....:	Technique principal Andy Liu
Approved by (+signature).....:	Manager Tony Bi
Date of issue.....:	April 8, 2020
Total number of pages.....:	12 pages
Testing laboratory .....:	Shenzhen Huacetong Testing and Certification Co., Ltd.
Address .....:	Building B, Xinbaosheng, No.233, Xixiang Street, Bao'an District, Shenzhen, China
Testing location .....:	As above
Applicant's name.....:	Jiangsu Dingjie Medical Equipment CO.,LTD
Address.....:	No.219 Yanjiang Road, Changjiang Town, Rugao Ctiy, Nantong City
Test specification:	
Standard.....:	**EN 420:2003+A1:2009**
Test procedure.....:	N/A
Non-standard test method…….:	N/A
Test Report Form No.....:	EN 420
Test Report Form(s) Originator.....:	N/A
Master TRF.....:	N/A
Test item description.....:	Disposable vinyl gloves
Trade Mark.....:	/
Manufacturer.....:	Jiangsu Dingjie Medical Equipment CO.,LTD
Address .....:	No.219 Yanjiang Road, Changjiang Town, Rugao Ctiy, Nantong City
Model/Type reference.....:	02/0010

Judy Chan

Andy Liu

Huacetong Testing Lab Report Approved

Summary of testing:	
Tests performed (name of test and test clause): - **EN 420:2003+A1:2009** The submitted samples were found to comply with the requirements of above specification.	Testing location: Building B, Xinbaosheng, No.233, Xixiang Street, Bao'an District, Shenzhen, China

Summary of testing: **Tests performed (name of test and test clause):**				**Testing location:**
4	General requirements	Applicable	Pass	1)
5	Comfort and efficiency	Applicable	Pass	1)
7	Marking and information	Applicable	Pass	1)

Test item particulars.....:	
Temperature.....:	23°C±2°C
Relative humidity.....:	50％R. H.
Atmospheric pressure.....:	(9.0±0.2)kPa
Mass of the equipment (kg).....:	<20g
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 does not meet the requirement.....:	F (Fail)
Testing.....:	
Date of receipt of test item.....:	April 2, 2020
Date (s) of performance of tests.....:	April 3, 2020 –April 8, 2020

General remarks:

The test 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 Issuing testing laboratory.
"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.

Throughout this report a ☒ comma / ☐ point is used as the decimal separator.

Clause numbers between brackets refer to clauses in EN 420-

Attachment No. 1: 1 page of photo.

General product information:

Disposable vinyl gloves

Clause(s)	Test(s)	Test Remarks	Result
4	General requirements		
4.1	Glove design and construction — General		P
	The protective glove shall be designed and manufactured so that in the foreseeable conditions of use for which it is intended, the user can perform the hazard related activity normally whilst enjoying appropriate protection at the highest possible level.		P
	the glove shall be designed to minimize the time needed for putting on and taking off.		P
	When the glove construction includes seams, the material and strength of the seams shall be such that the overall performance of the glove is not significantly decreased. Where relevant, test methods and requirements are specified in the specific standards listed in the Bibliography.	No Seams	N/A
4.2	Resistance of glove materials to water penetration		P
	For glove materials where resistance to water penetration is required (according to the intended use of the glove), the appropriate test methods shall be used:	EN344-1	P
	Levels of performance	Level 4, >180min, No water enter the inside.	P
4.3	Innocuousness of protective gloves		P
4.3.1	Protective gloves shall be designed and manufactured to provide protection when used according to the manufacturer's instructions, without harm to the user. Glove materials, degradation products, incorporated substances, seams and edges and particularly those parts of the glove in close contact with the user shall not adversely affect the user's health and hygiene.		P
4.3.2	Determination of pH Value	6.1	P
4.3.3	Determination of chromium VI content	ND(No VI content)	P
4.3.4	Natural rubber gloves shall be submitted to requirements stated in EN 455-3 on extractable protein content.	<1mg	P
4.4	Cleaning		N/A
4.5	Electrostatic properties	>500m Ω 1200V	P
5	Comfort and efficiency		
5.1	Sizing		P
5.1.1	Sizes and measurement of hands		N/A

			N/A

Hand size[a]	Hand circumference mm	Hand length mm
6	152	160
7	178	171
8	203	182
9	229	192
10	254	204
11	279	215

[a] This code is a conventional designation of hand size corresponding to the hand circumference expressed in inches.

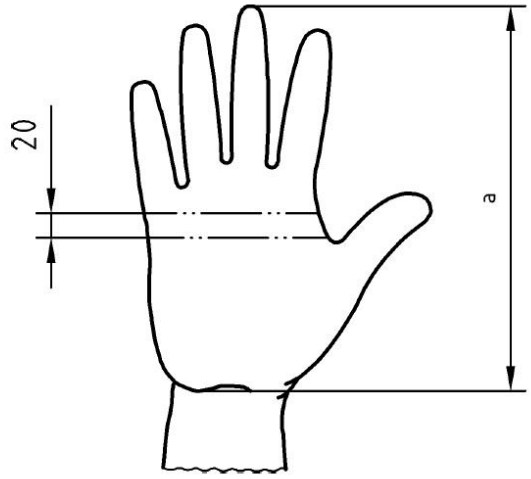
5.1.2	Sizes and measurements of glove		N/A
			N/A

Glove size	Fit	Minimum length of glove (in accordance with 6.1.3) mm
6	hands size 6	220
7	hands size 7	230
8	hands size 8	240
9	hands size 9	250
10	hands size 10	260
11	hands size 11	270

5.1.3	Gloves for special applications		P
	It is possible that the length of gloves designed for special applications may not conform to the values of Table 3. For such gloves, the manufacturer shall demonstrate that they are "fit for special purpose" by clearly stating in the instructions for use (7.3) the intended application(s) and the reason why the gloves do not conform to Table 3.		P
	Disregard leakages within 40 mm of the cuff		P
5.2	Dexterity		P
		Level 5	P

Level of performance	Smallest diameter of pin fulfilling test conditions mm
1	11
2	9,5
3	8
4	6,5
5	5

5.3	Water vapour transmission and absorption		P
	Where practicable, protective gloves shall allow water vapour transmission. If required, gloves shall have a water vapour transmission of at least 5 mg/(cm² h) when tested according to 6.3.	>5mg/(cm² h)	P
	the protection characteristics of the glove inhibits or excludes water vapour transmission, then the glove shall be designed to reduce the effect of perspiration as much as possible.		N/A
	If required, gloves shall have a water vapour absorption of at least 8 mg/cm² for 8 h when tested according to 6.4.		N/A

6	Test procedures		P
6.1	Hand and glove measurement and dimensions		P
6.1.1	The circumference of the hand is measured with a tape, 20 mm from the crotch between thumb and index finger		P
6.1.2	Length of hand is as shown on Figure 2.		P
			P
6.1.3	Measure the length by freely suspending the glove with the middle finger on a vertical graduated rule having a rounded tip so as to fit the shape of the finger tip of the glove. Remove wrinkles and folds without stretching the glove. Record the minimum measured length to the nearest millimeter.		P
6.1.4	the gloves are stretchable, the dimensions shall be measured with the sample in the unstretched state or by placing it on the hand of a person with appropriate size.		P
6.2	Test method for determining gloved finger dexterity		P
6.2.1	Number and condition of specimens		P
6.2.2	Apparatus required		P
	Five solid, centerless ground stainless steel test pins are required, each 40 mm long and of diameter respectively of 5 mm, 6,5 mm, 8 mm, 9,5 mm, 11 mm.		P
6.2.3	Test procedure		

	The pins shall be placed on a flat surface, e. g. a table top, and a trained operator wearing gloves according to 5.1 shall pick up the appropriate pin by its circumference between his gloved forefinger and thumb without any other means of assistance. The operator shall pick up each pin three times consecutively, without undue fumbling, within 30 s.	<30s	P
6.3	Test method for determination of water vapour transmission		P
6.3.1	Introduction		P
	This method is based on method IUP l5 of the International Union of Leather Chemists' Societies1)		P
6.3.2	This method is applicable to all gloves.		P
6.3.3	Principle		P
	The sample is clamped across the mouth of a bottle which contains a solid desiccant, and is kept in a rapid current of air in a conditioned room. The air within the bottle is circulated by keeping the desiccant in motion. The bottle is weighed periodically to determine the mass of vapour transmitted through the material and absorbed by the desiccant.		P
6.3.4	Apparatus		P
	Bottles of the approximate shape shown in Figure 3 with screw caps cut away to leave a circular opening. The neck of each bottle is ground to give a flat end surface which is perpendicular to the interior wall of the neck, and the circular opening in the cap has the same diameter as the interior wall (each approximately 30 mm).		P
	A bottle holder in the shape of a wheel which is rotated at (75 ± 5) rev/min by an electric motor. The bottles are mounted on the wheel with their axes parallel to the axle which is horizontal (Figure 4) and 67 mm distant from it.		P
	A fan mounted above the bottle holder and consisting of three flat blades in planes that are inclined at 120° to one another. The planes of the blades pass through the prolongation of the axle of the wheel. The blades are of dimensions approximately 90 mm by 75 mm, and the 90 mm long side of each blade nearest the mouths of the bottles passes them at a distance of not more than 15 mm. The fan is driven by a motor at (1400 ± 100) rev/min. The apparatus is used in a conditioned room at a temperature of (20 ± 2) °C and relative humidity (65 ± 2) %.		P

	Silica gel which has been freshly dried for at least 16 h in a ventilated oven at (125 ± 5) °C and cooled for at least 6 h in a closed bottle. The particle size of the gel is sufficiently large to prevent it passing a 2 mm mesh sieve.		P
	The silica gel shall be sieved before drying to remove small particles and dust. The drying temperature of 125 °C cannot be greatly exceeded without reducing the absorptive capacity of the gel. Ventilation of the oven by use of a fan is not necessary, but the oven shall not be sealed; it shall permit continuous exchange of the air within the oven with that outside. The gel shall not be used while it is much warmer than the specimens.		P
	Obtain one dumb-bell test piece from each of 13 gloves taken from a single lot (from seven pairs of gloves where applicable) using a cutter as specified in Figure 2 from the palm, back of the hand or cuff areas of each glove in the test sample, avoiding textured areas if possible and taking the test pieces in the direction of the longitudinal axis of the glove.		P
	A balance for weighing to the nearest milligram, means of measuring time, vernier calipers reading to 0,1 mm for measuring the internal diameter of the necks of the bottles.		P
6.3.5	Specimens		P
	The specimens are circles whose diameters are equal to the exterior diameters of the necks of the bottles (approximately 34 mm).		P
6.3.6	Preparation of specimens		P
	From each of three gloves to be tested, cut out a square piece of side 50 mm. The specimens shall be flat and without seams.		P
6.3.7	Procedure		P
6.3.8	Calculation of result		P
6.4	Test method for determination of water vapour absorption		N/A
6.4.1	A circular specimen of approximately 85 mm in diameter shall be taken from three gloves. The specimens shall be flat and without seams or material defects.		N/A
	The specimens shall be conditioned for 24 h at a temperature of (20 ± 2) °C and (65 ± 5) % relative humidity.		N/A
6.4.2	Test apparatus		N/A

6.4.3	Test procedure		N/A
	The test shall be carried out at (20 ± 2) °C and (65 ± 5) % relative humidity.		N/A
	After weighing the conditioned specimen, place it on the bottom flange of the test apparatus, which is already filled with 50 cm3 of water. The side corresponding to the glove inside shall be placed downwards. The seal shall be positioned on the specimen and the top flange tightly screwed to the bottom one.		N/A
	After 8 h the top flange shall be removed and the specimen shall be immediately weighted.		N/A
7	Marking and information		P
	All information shall be precise and comprehensive, and provided at least in the official language(s) of the country of destination.		P
7.2	Marking		P
7.2.1	Glove marking		N/A
7.2.1.1	Each protective glove shall be marked with the following information:		N/A
	Name, trade mark or other means of identification of manufacturer or his authorized representative;		N/A
	Glove designation (commercial name or code allowing the user to identify clearly the product within the manufacturer's/authorized representative's range);		N/A
	Size designation;		N/A
	If relevant, marking according to 7.2.3;		N/A
7.2.1.2	The marking shall be affixed so as to be visible, legible and indelible throughout the foreseeable useful life of the glove. Marks or inscriptions which could be confused with the above marks shall not be affixed to the glove.		N/A
7.2.1.3	marking on the glove is not possible in view of the characteristics of the product, the marking shall be affixed to the packaging.		N/A
7.2.1.4	A pictogram shall only be used when the glove meets at least the minimum requirement of the relevant specific standard. It shall be made clear that complementary information must also be read, by adding an i standing for information along with the series of pictograms (see information pictogram in !Annex B").		N/A
7.2.2	Marking of packaging		P

7.2.3	Date of obsolescence		P
7.3	Information supplied by the manufacturer		P
	The following minimum information shall be supplied when the protective glove is placed on the market, and shall be maintained available on request.		P
7.3.1	Name and full address of manufacturer or his authorized representative.		P
7.3.2	Glove designation as per 7.2.1.1 b).		P
7.3.3	Information on the available size range and where applicable, information required in 4.2, 5.1.3 and 5.2.		P
7.3.4	Reference to the relevant specific European standard(s) (see Bibliography).		P
7.3.5	Where applicable as per 7.2.2 e) pictogram(s) indicating categories of hazard followed as applicable by the performance levels.		N/A
7.3.6	When protection is limited to part of the hand only, this shall be mentioned.		N/A
7.3.7	If appropriate, warnings against problems likely to be encountered shall be mentioned. As an example, for high tear resistance gloves, a warning shall be given not to use the gloves next to moving machinery.		N/A
7.3.8	A list of the substances contained in the glove which are known to cause allergies. A list of substances contained in the gloves or a list of raw materials shall be available upon request.		N/A
7.3.9	Instructions for use, and where relevant combination with other forms of PPE.		P
7.3.10	If relevant, care instructions including:		P
	storage instructions;		P
	care symbols according to EN 23758 or explanations and an acceptable number of cleaning cycles.		N/A
7.3.11	If relevant, test results according to 4.5 along with reference of corresponding standard, atmosphere for testing, area of the glove tested and test method/electrode used and voltage applied as per the relevant standard. Moreover, a written warning shall be provided to advise that all clothing and shoes worn with this type of glove must also be designed taking the electrostatic risk into account.		N/A
7.3.12	Reference to accessories and spare parts, if relevant.		N/A

7.3.13	Type of packaging suitable for transport, if relevant.		P

Photos

Product view

*******End of Test Report*******