NUMBER : TSNT01175221

Original Picture

Intertek Testing Services (Tianjin) Ltd.
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NUMBER : TSNT01175221

Applicant : Qingdao Everpro Safety Product Co., Ltd
Danshan Industrial Park, Chengyang District, Qingdao, Shandong, China

Date : Mar 07, 2019

Attn : Katrina Li

Sample Description:

Several Pairs Of Submitted 15 Gauge Nylon+Spandex Liner Nitrile Micro-Foam Coated Gloves In (A) Black/White With Grey Coating, (B) Black/White With Black Coating,
Eco Test Components:

(1) Black/White HPPE Back Fabric For Sample (A) Use
(2) Grey PU+HPPE Plam Fabric With Nitrile Micro Foam For Sample (A) Use
(3) Black/White HPPE+Elastic Cuff Fabric For Sample (A) Use
(4) Black/White HPPE Back Fabric For Sample (B) Use
(5) Black PU+HPPE Plam Fabric With Nitrile Micro Foam For Sample (B) Use
(6) Black/White HPPE+Elastic Cuff Fabric For Sample (B) Use
(7) Black 100% Polyester Cuff Binding For Sample (A)&(B) Use

Standard	:	BS EN 420: 2003+A1: 2009 BS EN 388: 2016
Colour	:	(A) Black/White-Grey, (B) Black/White-Black
Size Range	:	7-11
Palm Material	:	PU+HPPE
Back Material	:	HPPE
Cuff Material	:	HPPE+Elastic
Cuff Binding Material	:	Polyester
Lining Material	:	-
Order No.	:	-
Style No.	:	-
Manufacturer's Name	:	Qingdao Everpro Safety Product Co., Ltd.

Date Received/Date Test Started : Feb 26, 2019

Authorized By :
For Intertek Testing Services
(Tianjin) Ltd.

Patrick Gong
General Manager

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Tests Conducted:

1. pH Value

As Per BS EN 420:2003+A1:2009,4.3.2, With Reference To BS EN ISO 3071:2006 For Textile, KCl Solution/Deionized Water Was Used For Extraction, pH Value Was Measured By pH Meter.

Tested Component	Result	Requirement
(1)	6.6	*
(2)	7.2	*
(3)	7.2	*
(4)	7.3	*
(5)	6.9	*
(6)	6.8	*
(7)	6.9	*

Temperature Of The Extracting Solution: 20.4 ℃
pH Of The Extracting Solution: 5.9

Remark: * = The pH Value Shall Be Greater Than 3.5 And Less Than 9.5. And For Method EN ISO 4045:2008 The Difference Figure Do Not Need To Test.

Tested Components:

Conclusion:

Tested Components	Test Item/Standard	Result
(1)(2)(3)(4)(5)(6)&(7)	BS EN 420:2003+A1:2009 For pH Value	Pass

2. Design And Construction (BS EN 420: 2003+A1: 2009, 4.1):

(A)	Requirement	Pass/Fail
Comply With Requirement	*	Pass

Remark: * = 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. If Required, The Glove Shall Be Designed To Minimize The Time Needed For Putting On And Taking Off.
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.

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Tests Conducted :

3. Sizing (BS EN 420: 2003+A1: 2009, 6.1):

	(A)	Requirement	Pass/Fail
Size	7		
Glove Length:	230 mm	*	Pass
Corresponding Size (By Extrapolation):	7 (#)		

		Requirement	Pass/Fail
Size	8		
Glove Length:	242 mm	*	Pass
Corresponding Size (By Extrapolation):	8 (#)		

		Requirement	Pass/Fail
Size	9		
Glove Length:	253 mm	*	Pass
Corresponding Size (By Extrapolation):	9 (#)		

		Requirement	Pass/Fail
Size	10		
Glove Length:	260 mm	*	Pass
Corresponding Size (By Extrapolation):	10 (#)		

		Requirement	Pass/Fail
Size	11		
Glove Length:	271 mm	*	Pass
Corresponding Size (By Extrapolation):	11 (#)		

Remark:
= The Size Is Derived By Extrapolation Of The Data In Below Table In Accordance With BS EN 420:2003, 5.1

*= Sizes Of Gloves

Glove Size	Fit	
6	Hands Size 6	Min. 220 mm
7	Hands Size 7	Min. 230 mm
8	Hands Size 8	Min. 240 mm
9	Hands Size 9	Min. 250 mm
10	Hands Size 10	Min. 260 mm
11	Hands Size 11	Min. 270 mm

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Tests Conducted :

4. Finger Dexterity Test (BS EN 420:2003+A1: 2009, 6.2):

Sample(A)	The Smallest Diameter Of Pin Picked Up
Specimen 1(Left Hand):	5 mm
Specimen 2(Right Hand):	5 mm
Specimen 3(Left Hand):	5 mm
Specimen 4(Right Hand):	5 mm
Performance Level:	5(*)

Remark: * = The Classification Is Determined By The Smallest Diameter Of Pin Picked Up Of The Four Test Specimens.

Remark:

Performance Level	The Smallest Diameter Of Pin Shall Be Picked Up
Level 1	11 mm
Level 2	9.5 mm
Level 3	8 mm
Level 4	6.5 mm
Level 5	5 mm

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Tests Conducted :

5. Abrasion Resistance (BS EN 388: 2016, 6.1, 9 kPa):

Adhesion Contact Time Of Test Specimen With The Double-Sided Adhesive Tape Under A Weight Of A Approximatley 10 Kg	At Least 5 Min
Surface Treatment Of Test Specimen In Order To Improve Adhesion	No Surface Treatment
Abradant	The Klingspor PL 31 B-Grit 180 Grain Aluminium Oxide
Double-Sided Adhesive Tape	3M™ Double-Sided Adhesive Tape

Sample(A)

Observation	Specimen 1	Specimen 2	Specimen 3	Specimen 4
After 100 Cycles:	O	O	O	O
After 500 Cycles:	O	O	O	O
After 2 000 Cycles:	O	O	O	O
After 8 000 Cycles:	O	O	O	O

Performance Level : 4

Remark:
The Minimum Requirements For Each Level:
Level 1: 100 Cycles
Level 2: 500 Cycles
Level 3: 2 000 Cycles
Level 4: 8 000 Cycles
Level 5: -

O = No Breakthrough
X = Breakthrough

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Tests Conducted :

6. Resistance To Cutting By Sharp Objects (BS EN 388:2016, 6.3 & EN ISO 13997:1999):

Test Condition:	Temperature (20±2) °C; Relative Humidity (65±4)%
Test Area:	Glove Palm
Blade Sharpness Correction Factor:	0.91
Normalized Cutting Stroke Length:	21.9 mm

Result:

Cutting Force (*):	14 N
Performance Level (#) :	Level C

Remark: * = Calculated Force That Would Be Required To Be Applied To A Blade Of Standard Sharpness To Just Cut Through A Material In A Blade Stroke Of Length 20 mm.
= Levels Of Performance For Materials Tested With EN ISO 13997

	Level A	Level B	Level C	Level D	Level E	Level F
6.3 TDM: Cut Resistance (N)	2	5	10	15	22	30

The Test Was Conducted By Intertek Testing Services Guangzhou Ltd.

7. Tear Resistance (BS EN 388: 2016, 6.4):

Sample(A)	
Specimen 1:	405 N
Specimen 2:	395 N
Specimen 3:	474 N
Specimen 4:	393 N
Performance Level:	4(*)

Remark:
The Minimum Requirements For Each Level:
Level 1: 10 N
Level 2: 25 N
Level 3: 50 N
Level 4: 75 N
Level 5: -
* = The Classification Is Determined By Taking The Lowest Of The Four Values

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Tests Conducted :

8. Puncture Resistance (BS EN 388: 2016, 6.5):

	(A)
Specimen 1:	117 N
Specimen 2:	106 N
Specimen 3:	110 N
Specimen 4:	109 N
Performance Level :	3 (*)

Remark:
Level 1: 20 N
Level 2: 60 N
Level 3: 100 N
Level 4: 150 N
Level 5: -

Remark: * = The Classification Is Determined By The Lowest Value Of The Four Test Specimens.

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Tests Conducted :

9. Detection Of Amines Derived From Azocolourants and Azodyes:

With Reference To Test Method: Textile Method (EN 14362-1: 2012);

Amines Content Was Determined By Gas Chromatography-Mass Spectrometry (GC-MS) And High Performance Liquid Chromatography (HPLC)

	Forbidden Amine	CAS No.	Result (mg/kg)						
			Textile						
1.	4-Aminodiphenyl	92-67-1	1	2	3	4	5	6	7
2.	Benzidine	92-87-5	ND	ND	ND	ND	ND	ND	ND
3.	4-Chloro-o-toluidine	95-69-2	ND	ND	ND	ND	ND	ND	ND
4.	2-Naphthylamine	91-59-8	ND	ND	ND	ND	ND	ND	ND
5.	o-Aminoazotoluene	97-56-3	ND	ND	ND	ND	ND	ND	ND
6.	2-Amino-4-nitrotoluene	99-55-8	ND	ND	ND	ND	ND	ND	ND
7.	p-Chloroaniline	106-47-8	ND	ND	ND	ND	ND	ND	ND
8.	2,4-Diaminoanisole	615-05-4	ND	ND	ND	ND	ND	ND	ND
9.	4,4'-Diaminodiphenylmethane	101-77-9	ND	ND	ND	ND	ND	ND	ND
10.	3,3'-Dichlorobenzidine	91-94-1	ND	ND	ND	ND	ND	ND	ND
11.	3,3'-Dimethoxybenzidine	119-90-4	ND	ND	ND	ND	ND	ND	ND
12.	3,3'-Dimethylbenzidine	119-93-7	ND	ND	ND	ND	ND	ND	ND
13.	3,3'-Dimethyl-4,4'diaminodiphenylmethane	838-88-0	ND	ND	ND	ND	ND	ND	ND
14.	p-Cresidine	120-71-8	ND	ND	ND	ND	ND	ND	ND
15.	4,4'-Methylene-bis(2-chloroaniline)	101-14-4	ND	ND	ND	ND	ND	ND	ND
16.	4,4'-Oxydianiline	101-80-4	ND	ND	ND	ND	ND	ND	ND
17.	4,4'-Thiodianiline	139-65-1	ND	ND	ND	ND	ND	ND	ND
18.	o-Toluidine	95-53-4	ND	ND	ND	ND	ND	ND	ND
19.	2,4-Toluylenediamine	95-80-7	ND	ND	ND	ND	ND	ND	ND
20.	2,4,5-Trimethylaniline	137-17-7	ND	ND	ND	ND	ND	ND	ND
21.	o-Anisidine	90-04-0	ND	ND	ND	ND	ND	ND	ND
22.	4-Aminoazobenzene	60-09-3	ND	ND	ND	ND	ND	ND	ND

Remark: ND = Not detected
Detection limit = 5 mg/kg
Limit = 30 mg/kg

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Tests Conducted :

Detection Of Amines Derived From Azocolourants and Azodyes(Cont'd):

Conclusion:

Tested Components	Test Item/Standard	Result
(1)(2)(3)(4)(5)(6)&(7)	Azocolourants Content Requirement In Annex XVII Item 43 Of The REACH Regulation (EC) NO. 1907/2006 & Amendment No. 552/2009 and 126/2013 (Formerly Known As Directive 2002/61/EC)	Pass

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