

3F, Building Block 2, No. 3400 Gonghexin Road,
Jing'an District - Shanghai 200436, P.R. CHINA
上海市静安区共和新路3400号2幢3层
Tél. : +86 21 68 55 50 32
Fax : +86 21 68 55 50 33
E-mail : ctcshanghai@ctcgroupe.com

Report No.: S200808193_1

19 August 2020

APPLICANT: RAXWELL INDUSTRIAL TECHNOLOGY
(SHANGHAI) CO. LTD 瑞氮维尔工业科技 (上海) 有限公司 (C41441)

3501, 5F SUNPLUS BUILDING, NO. 1077
ZUCHONGZHI DD PUDONG NEW DISTRICT
上海市浦东新区祖冲之路1077号凌阳大厦5楼3501
SHANGHAI
CHINA

Date of receipt : 13 Aug. 2020

Testing period : 13 Aug. 2020

: 19 Aug. 2020

Franky YANG / franky_yang@raxwell.cn

Buyer: ---

Sample description: RW2452Raxwell 碳纤维织PU工作手套, 指浸/RW2452Raxwell Carbon Fiber Knit Glove with Finger-Dipped Polyurethane Coating

Style / Article no. : RW2452

Test(s) requested : ---

Service : REGULAR

Brand / Section : ---

Season : ---

End use : ---

Factory name : ---

Factory code : ---

For CE Marking : Yes

Previous report : ---

Product category : ---

Product type : ---

Test stage : FIRST TEST

Supplier name : ---

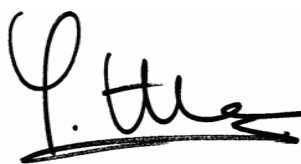
Exported to : ---

1. Conclusion:

	Tests description	Conformity
	EN ISO 21420/EN 388	
1	Abrasion resistance : 2016	Level 1
2	Tear strength resistance: 2016	Level 3
3	Puncture resistance: 2016	Level 1
4	pH - Textile (KCl solution)	Pass
5	Aromatic amines derived from azo colorants	Pass
6	Dimethylformamide (DMF/DMFo/DMFa)	Pass
7	Polycyclic Aromatic Hydrocarbons (8)	Pass
8	Dexterity	Level 5

Pass: requirements met Fail: requirements not met None: no requirement for this test N/A: not applicable

Approved by



Henry YAN
Laboratory Manager



Yvonne MAO
Senior Analytical Chemical Engineer

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To declare the conformity to the requirement, the uncertainty of measurement, associated to the test results, has not been taken into account.



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2. Sample(s) description assigned by laboratory:

<u>Size</u>	<u>Analyzed product</u>	<u>Description</u>	<u>Sample information</u>
	GLOVE	Whole glove white PU fingertips grey carbon fiber palm grey/brown carbon fiber/elastic cuff	



200808193

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3. GLOVE/

Whole glove

	Method	Client Requirement	Unit	Result	Conformity
▲ 4.2. Dimethylformamide (DMF/DMFo/DMFa)	EN 16778: 2016				Pass
Dimethylformamide			mg/kg	322.5	
Dimethylformamide (2)			mg/kg	336.1	
Dimethylformamide - average		<1000	mg/kg	329.3	
5.2. Dexterity	EN ISO 21420: 2020				
Smallest diameter of pin fulfilling test condition			mm	5.0	
Smallest diameter of pin fulfilling test condition (2)			mm	5.0	
Smallest diameter of pin fulfilling test condition (3)			mm	5.0	
Smallest diameter of pin fulfilling test condition (4)			mm	5.0	
Performance level				5	

white PU fingertips

	Method	Client Requirement	Unit	Result	Conformity
(+) 4.2. pH - Textile (KCl solution)	ISO 3071:2020				Pass
pH value		3.5< - <9.5		6.8	
▲ 4.2. Polycyclic Aromatic Hydrocarbons (8)	ISO/TS 16190: 2013				Pass
Benzo(a)anthracene		<1	mg/kg	<0.1	
Chrysene		<1	mg/kg	<0.1	
Benzo(b)fluoranthene		<1	mg/kg	<0.1	
Benzo(k)fluoranthene		<1	mg/kg	<0.1	
Benzo(a)pyrene		<1	mg/kg	<0.1	
Dibenzo(a,h)anthracene		<1	mg/kg	<0.1	
Benzo(e)pyrene		<1	mg/kg	<0.1	
Benzo(j)fluoranthene		<1	mg/kg	<0.1	

grey carbon fiber palm

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	Method	Client Requirement	Unit	Result	Conformity
(+) 4.1. Abrasion resistance : 2016 Deviation from the test method used consumables - abrasive used consumables - adhesive Number of cycles at the hole detection Number of cycles at the hole detection (2) Number of cycles at the hole detection (3) Number of cycles at the hole detection (4) Performance level	EN 388:2016 + A1:2018			No Klingspor PL31B Grit 180 3M Scotch 280 300 270 240 1	
(+) 4.1. Tear strength resistance: 2016 Tear strength Tear strength (2) Tear strength (3) Tear strength (4) Performance level	EN 388:2016 + A1:2018		N N N N	63 64 69 65 3	
(+) 4.1. Puncture resistance: 2016 Puncture resistance Puncture resistance (2) Puncture resistance (3) Puncture resistance (4) Performance level	EN 388:2016 + A1:2018		N N N N	34 36 34 30 1	
(+) 4.2. pH - Textile (KCl solution) pH value	ISO 3071:2020	3.5< - <9.5		6.6	Pass
4.2. Aromatic amines derived from azo colorants Accessible without fibre extraction	ISO 14362-1:2017 (w/o extraction)	<30	mg/kg	<5	Pass

grey/brown carbon fiber/elastic cuff

	Method	Client Requirement	Unit	Result	Conformity
(+) 4.2. pH - Textile (KCl solution)	ISO 3071:2020				Pass

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	Method	Client Requirement	Unit	Result	Conformity
pH value		3.5< - <9.5		6.8	
4.2. Aromatic amines derived from azo colorants Accessible without fibre extraction	ISO 14362-1:2017 (w/o extraction)	<30	mg/kg	<5	Pass

END OF TEST REPORT

(+)CNAS accreditation

▲: The test was carried out by external accredited laboratory under their accreditation scope.

Table of Performance Level for Glove

Test Item	Performance Level					
	0##	1	2	3	4	5
Abrasion Resistance (EN 388) Number of cycles (minimum)	<100	100	500	2000	8000	---
Tear Resistance (EN 388) Force (N) (minimum)	<10	10	25	50	75	---
Puncture Resistance (EN 388) Force (N) (minimum)	<20	20	60	100	150	---
Finger dexterity (EN ISO 21420) Smallest diameter of pin fulfilling test conditions (mm)	---	11.0	9.5	8.0	6.5	5.0

Performance level 0 means the glove falls below the minimum performance level for the given individual hazard

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