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TEST REPORT



中国认可
国际互认
检测
TESTING
CNAS L0220

Number: [Redacted]

Date: Jul 29, 2023

Applicant: U GROUP SRL
VIA BORGOMANERO,
50-28040 PARUZZARO(NO) - ITALY
Attn: SINDY

Sample Description:

Eleven (11) groups of submitted samples said to be:

- (A) One (1) piece of WARM EY040BC BLACK CARBON Fleece Jacket with full zipper
- (B) One (1) piece of WARM EY040DB DEEP BLUE Fleece Jacket with full zipper
- (C) One (1) piece of WARM EY040GM GREY METEORITE Fleece Jacket with full zipper
- (D) One (1) piece of WARM EY040DG DARK GREEN Fleece Jacket with full zipper
- (E) One (1) piece of BERING EY143BC BLACK CARBON Fleece Jacket with half zipper
- (F) One (1) piece of BERING EY143DB DEEP BLUE Fleece Jacket with half zipper
- (G) One (1) piece of BERING EY143GM GREY METEORITE Fleece Jacket with half zipper
- (H) One (1) piece of BERING EY143DG DARK GREEN Fleece Jacket with half zipper
- (I) One (1) piece of BLACK CARBON fleece 100% POLYESTER 280G
- (J) One (1) piece of GREY METEORITE fleece 100% POLYESTER 280G
- (K) One (1) piece of DEEP BLUE fleece 100% POLYESTER 280G.

Standard : ISO 13688:2013/Amd.1:2021
 Colour : WARM EY040 BLACK CARBON / EY040 DEEP BLUE / EY040 GREY METEORITE / EY040 DARK GREEN
 BERING EY143 BLACK CARBON / EY143 DEEP BLUE / EY143 GREY METEORITE / EY143 DARK GREEN
 Style No./Name : WARM / BERING
 Background Fabric : 100% POLYESTER 280G
 Country Of Origin : MADE IN CHINA
 Date Received/Date Test Started: July 07, 2023
 Date Final Information Confirmed: July 28, 2023

Test Result Please Refer To Attached Page(S).

Should you have any query on this report, you may contact at gzfootwear@intertek.com

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检验检测专用章

SHENZHEN BRANCH (6)



Number: XXXXXXXXXX

1 Design And Ergonomic (ISO 13688:2013/Amd.1:2021, 4.3 & Annex C)

Design (ISO 13688:2013/Amd.1:2021, 4.3)

Sample Size	A S	Pass	Fail	Not know	N/A
Position On User Remain During Full Range Of Movements		√			
Adequate Range Of Size Adjustment		√			√
Does Design Of Protective Clothing Ensure That No Parts Of Body Get Uncovered By Expected Movements Of The Wearer If This Is Defined In The Specific Standard?		√			
Can The Garment Be Put On And Taken Off Easily, Are Arm And Knee Bending Movements Possible And Unprotected Body Areas Do Not Appear During Movements?		√			
Is There An Adequate Overlap Of Jacket And Trousers?					√
Is Manufacturer's Information Adequate To Explain The Correct Usage Of The Protective Clothing?		√			
Does Protective Clothing Design Take Into Account Other Items Of Protective Clothing Or Equipment Which Must Be Worn To Form An Overall Protective Ensemble?					√
Strength As Per Specific Standard?				√	

Sample Size	E S	Pass	Fail	Not know	N/A
Position On User Remain During Full Range Of Movements		√			
Adequate Range Of Size Adjustment		√			√
Does Design Of Protective Clothing Ensure That No Parts Of Body Get Uncovered By Expected Movements Of The Wearer If This Is Defined In The Specific Standard?		√			
Can The Garment Be Put On And Taken Off Easily, Are Arm And Knee Bending Movements Possible And Unprotected Body Areas Do Not Appear During Movements?		√			
Is There An Adequate Overlap Of Jacket And Trousers?					√
Is Manufacturer's Information Adequate To Explain The Correct Usage Of The Protective Clothing?		√			
Does Protective Clothing Design Take Into Account Other Items Of Protective Clothing Or Equipment Which Must Be Worn To Form An Overall Protective Ensemble?					√
Strength As Per Specific Standard?				√	





Number: XXXXXXXXXX

Ergonomic (ISO 13688:2013/Amd.1:2021, Annex C)

Sample	A				
Size	S				
Ergonomic Features Of Protective Clothing (Practical Performance Tests)		Pass	Fail	Not know	N/A
C.3.1 Clothing Free From Harmful Features					
Is The Protective Clothing Free From Any Sharp Or Hard Edges, Protruding Wire Ends, Rough Surfaces Or Other Items On The Inner Or Outer Surface Of The Clothing That Are Likely To Cause Harm To The User Or Others?		√			
C.3.2 Protective Clothing, Putting On, Taking Off And Fit					
Is It Possible To Put On And Take Off The Protective Clothing Without Difficulty? (Consider The Ease Of Putting On And Removing The Clothing With Or Without Assistance As Is Appropriate For The Type Of Clothing)		√			
C.3.3 Operation Of Closure, Adjustment And Restraint Systems					
Is The Clothing Too Tight For Comfort? Deep Breathing Is Not Restricted And There Is No Blood Flow Restriction Anywhere?		√			
Is The Clothing Designed At Armholes & Crutch Etc? So They Are Not Proportioned And Positioned?		√			
Can The Closures, Adjuster And Restraint Systems Be Operated Without Difficulty?		√			
Does The Protective Clothing Cover The Body Areas Intended To Be Protected And Is Coverage Maintained During Movements?		√			
C.3.4 Coverage Of The Area Intended To Be Protected, Coverage Maintained During Movements					
Is The Coverage Of Any Specified Protection Zones By Protective Materials Or Special Constructions Adequate?					√
Is Coverage Maintained During Movements As Extreme As It Is Anticipated A User Would Make?		√			
C.3.5 Freedom Of Movement					
Can The Following Movements Be Carried Out Without Difficulty:					
Standing, Sitting, Walking And Stair Climbing?		√			
Raising Both Hands Above The Head?		√			
Bending Over & Picking Up A Small Object Such As A Pencil?		√			
Is The Clothing Designed So That The Arms & Legs Are Not Too Long To Interfere With Hand And Foot Movements?		√			
Is The Clothing Designed So There Are No Points At Which Unexpected And Unintended Gaps Open Up Between Or Within The Components Of The Clothing?					√
Is The Clothing Designed So There Are No Unreasonable Restrictions Of Movement At Any Joint?		√			
C.3.6 Compatibility With Other PPE From The Same Manufacturer					
Is The Protective Clothing Compatible With Other Items Of PPE?					√
Is The Protective Clothing That Is Normally Worn As Part Of An Ensemble Compatible With Representative Examples Of The Rest Of The Ensemble?					√
Can Other Items Of PPE Such As Gloves And Boots Be Put On & Removed Without Difficulty?		√			





Number: XXXXXXXXXX

Ergonomic (ISO 13688:2013/Amd.1:2021, Annex C) (Cont)

Sample Size	E				
	S				
Ergonomic Features Of Protective Clothing (Practical Performance Tests)		Pass	Fail	Not know	N/A
C.3.1 Clothing Free From Harmful Features					
Is The Protective Clothing Free From Any Sharp Or Hard Edges, Protruding Wire Ends, Rough Surfaces Or Other Items On The Inner Or Outer Surface Of The Clothing That Are Likely To Cause Harm To The User Or Others?		√			
C.3.2 Protective Clothing, Putting On, Taking Off And Fit					
Is It Possible To Put On And Take Off The Protective Clothing Without Difficulty? (Consider The Ease Of Putting On And Removing The Clothing With Or Without Assistance As Is Appropriate For The Type Of Clothing)		√			
C.3.3 Operation Of Closure, Adjustment And Restraint Systems					
Is The Clothing Too Tight For Comfort? Deep Breathing Is Not Restricted And There Is No Blood Flow Restriction Anywhere?		√			
Is The Clothing Designed At Armholes & Crutch Etc? So They Are Not Proportioned And Positioned?		√			
Can The Closures, Adjuster And Restraint Systems Be Operated Without Difficulty?		√			
Does The Protective Clothing Cover The Body Areas Intended To Be Protected And Is Coverage Maintained During Movements?		√			
C.3.4 Coverage Of The Area Intended To Be Protected, Coverage Maintained During Movements					
Is The Coverage Of Any Specified Protection Zones By Protective Materials Or Special Constructions Adequate?					√
Is Coverage Maintained During Movements As Extreme As It Is Anticipated A User Would Make?		√			
C.3.5 Freedom Of Movement					
Can The Following Movements Be Carried Out Without Difficulty:					
Standing, Sitting, Walking And Stair Climbing?		√			
Raising Both Hands Above The Head?		√			
Bending Over & Picking Up A Small Object Such As A Pencil?		√			
Is The Clothing Designed So That The Arms & Legs Are Not Too Long To Interfere With Hand And Foot Movements?		√			
Is The Clothing Designed So There Are No Points At Which Unexpected And Unintended Gaps Open Up Between Or Within The Components Of The Clothing?					√
Is The Clothing Designed So There Are No Unreasonable Restrictions Of Movement At Any Joint?		√			
C.3.6 Compatibility With Other PPE From The Same Manufacturer					
Is The Protective Clothing Compatible With Other Items Of PPE?					√
Is The Protective Clothing That Is Normally Worn As Part Of An Ensemble Compatible With Representative Examples Of The Rest Of The Ensemble?					√
Can Other Items Of PPE Such As Gloves And Boots Be Put On & Removed Without Difficulty?		√			

Compliance: The Submitted Sample A And Sample E **MEETS** The Requirements Of ISO 13688:2013/Amd.1:2021 Clause 4.0 For Design & Ergonomic Features.





Number: XXXXXXXXXX

2 Comfort (ISO 13688:2013/Amd.1:2021, 4.4)

Sample A				
Requirement	Pass	Fail	N/A	Not Know
4.4.1 Protective Clothing Shall Provide Users With A Level Of Comfort Consistent With The Level Of Protection Required Against The Hazard Which Is Present, The Ambient Conditions, The Level Of The User's Activity, And The Anticipated Duration Of Use Of The Protective Clothing.	√			
Protective Clothing Shall Not				
- Have Rough, Sharp Or Hard Surfaces That Irritate Or Injure The User;	√			
- Be So Tight, Loose And/Or Heavy So That It Restricts Normal Movement.	√			
4.4.2 Protective Clothing That Imposes Significant Ergonomic Burdens Such As Heat Stress, Or Is Inherently Uncomfortable Because Of The Need To Provide Adequate Protection, Shall Be Accompanied In The Information Supplied By The Manufacturer By Specific Advice Or Warnings. Specific Advice On The Appropriate Duration For Continuous Use Of The Clothing In The Intended Application(s) Shall Be Given.				√

Sample E				
Requirement	Pass	Fail	N/A	Not Know
4.4.1 Protective Clothing Shall Provide Users With A Level Of Comfort Consistent With The Level Of Protection Required Against The Hazard Which Is Present, The Ambient Conditions, The Level Of The User's Activity, And The Anticipated Duration Of Use Of The Protective Clothing.	√			
Protective Clothing Shall Not				
- Have Rough, Sharp Or Hard Surfaces That Irritate Or Injure The User;	√			
- Be So Tight, Loose And/Or Heavy So That It Restricts Normal Movement.	√			
4.4.2 Protective Clothing That Imposes Significant Ergonomic Burdens Such As Heat Stress, Or Is Inherently Uncomfortable Because Of The Need To Provide Adequate Protection, Shall Be Accompanied In The Information Supplied By The Manufacturer By Specific Advice Or Warnings. Specific Advice On The Appropriate Duration For Continuous Use Of The Clothing In The Intended Application(s) Shall Be Given.				√

Compliance: The Submitted Sample A And Sample E **MEETS** The Requirements Of ISO 13688:2013/Amd.1:2021 Clause 4.4 For Comfort.



Number: XXXXXXXXXX

3 Color Fastness To Washing (ISO 105 C06 A2S-2010, Single Test, 30 Minutes Mechanical Wash At 40°C In 0.4% ECE Reference Detergent And 0.1% Sodium Perborate Solution *With 10 Steel Balls)

After 5 Cycles Washing (I)

Color Change	4-5
Color Staining	
-Acetate	3-4
-Cotton	4-5
-Nylon	3-4
-Polyester	3-4
-Acrylic	4-5
-Wool	4-5

After 5 Cycles Washing (J)

Color Change	4-5
Color Staining	
-Acetate	4-5
-Cotton	4-5
-Nylon	4-5
-Polyester	4-5
-Acrylic	4-5
-Wool	4-5

After 5 Cycles Washing (K)

Color Change	4-5
Color Staining	
-Acetate	4
-Cotton	4-5
-Nylon	4
-Polyester	4
-Acrylic	4-5
-Wool	4-5

After 5 Cycles Washing (D)

Color Change	4-5
Color Staining	
-Acetate	4
-Cotton	4-5
-Nylon	4-5
-Polyester	4-5
-Acrylic	4-5
-Wool	4-5



Number: XXXXXXXXXX

4 Dimensional Change Due To Cleaning (ISO 13688:2013/Amd.1:2021, 5.3 & ISO 6330:2012 & ISO 5077:2007)

Sample	Direction	Dimensional Change	Requirement	Pass/Fail
(I)	Length	+0.3%	*	Pass
	Width	+0.3%	*	Pass

Remark: (+) Means Extension And (-) Means Shrinkage

* = The Dimensional Change Of Knitted And Nonwovens Material Shall Not Exceed $\pm 5\%$ In Both Length And Width.

NOTE

Wash Condition:	
Washing Standard:	ISO 6330:2012
Machine:	Type A
Reagent:	Reference Detergent 3
Washing Procedure:	4N
Bleaching Procedure:	Do Not Bleach
Drying Procedure:	Do Not Tumble Dry
Natural Drying Procedure:	Line Drying
Ironing Procedure:	Iron At Maximum Sole-Plate Temperature Of 110°C Without Steam
Professional Textile Care Procedure:	Do Not Dry Clean
Number Of Cycles:	5

5 Azo Colourants Content

With Reference To Test Method: Textile Method (ISO 14362-1:2017)

Amines Content Was Determined By Gas Chromatography-Mass Spectrometry (GC-MS)

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

Remark: Requirement = 30 mg/kg

Reporting Limit = 5 mg/kg

Method D: Colourant Extraction With Xylene As Per ISO 14362-1:2017 Section 10.1

Tested Components: Please See Component List In The Last Section Of This Report

Conclusion:

Standard

ISO 13688:2013/Amd.1:2021 Protective Clothing -
General Requirements - Azo Colourants Content

Result

Pass



Number:



6 pH Value

As Per ISO 13688:2013/Amd.1:2021, 4.2, With Reference To ISO 3071:2020 For Textile, Potassium Chloride (KCl) Solution Extracted, pH Value Was Measured By pH Meter.

Tested Components	Results	Requirement
(1)	6.5	*
(2)	6.4	*
(3)	6.3	*
(4)	6.3	*

Temperature Of The Extracting Solution: 24.2°C

pH Of The Extracting Solution: 5.93

Remark: * = The pH Value Shall Be Greater Than 3.5 And Less Than 9.5

The Expanded Uncertainty Of The pH Value Of Specimen Is 15%, Which An Uncertainty With A Coverage Factor k=2, At Approximately 95% Confidence Level.

Tested Components: Please See Component List In The Last Section Of This Report

Conclusion:

Standard
ISO 13688:2013/Amd.1:2021 For pH Value

Result
Pass

Component List:

- (1) Black Carbon Fleece 100% Polyester 280G (Sample I)
- (2) Grey Meteorite Fleece 100% Polyester 280G (Sample J)
- (3) Deep Blue Fleece 100% Polyester 280G (Sample K)
- (4) Dark Green Fleece 100% Polyester 280G (Outer Fabric Of Sample D)

Number: [REDACTED]



Number: [REDACTED]



Number:



End Of Report

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Remark:

1. As Requested by the Applicant, For Details Refer to Attached Page (s).
2. All the tested item are tested under the standard condition.
3. The report is valid with commission test only for the test samples in the case of delivering samples by clients.