

Number: GZHT91010620(S1)

Applicant: HEALTHCARE PRODUCTS LIMITED

Date: Mar 15, 2021
THIS IS TO SUPERSEDE
REPORT NO. GZHT91010620
DATED FEB 02, 2021

Sample Description:

Fifteen (15) pieces of submitted samples said to be Disposable protective Gowns in Blue.

Standard : ISO 13688:2013
EN 13034:2005+A1:2009(E)
Size : UNIVERSAL SIZE
Background Fabric : PP+PE
Ref. Weight: 40g/m²
Code: N303
Color: Blue
Country Of Original : China
Date Received/Date Test Started: Dec 11, 2020
Date Final Information Confirmed/ Feb 01, 2021/Dec 21, 2020
Date Payment Received:

Test Result Please Refer To Attached Page(S).

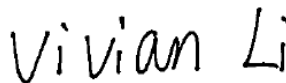
Should you have any query on this report, you may contact at gzfootwear@intertek.com

Authorized By:
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Guiliang Dong
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Senior Technical Specialist





1 Design And Ergonomic (ISO 13688:2013, 4.3 & Annex C)

1. Design (ISO 13688:2013, 4.3)

Size	Universal Size	Pass	Fail	Not know	N/A
		√			
		√			
					√
		√			
		√			
					√
		√			
					√
		√			



2. Ergonomic (ISO 13688:2013, Annex C)

Size	Universal Size			
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 **MEETS** The Requirements Of ISO 13688:2013 Clause 4.0 For Design & Ergonomic Features.





2 Comfort (ISO 13688:2013, 4.4)

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 **MEETS** The Requirements Of ISO 13688:2013 Clause 4.4 For Comfort.

3 General (A Whole Suit) (EN 13034:2005+A1:2009(E), 5.1)

Sample	Requirement	Pass	Fail	N/A
-	The Design Of The Clothing Shall Guarantee That There Are No Features Which May Collect Liquid Chemicals And Hold Them Onto The Fabric Surface, E.G. Unprotected Pockets Etc.	√		



- 4 Abrasion Resistance (EN 13034:2005+A1:2009(E), 4.1 & EN 530:2010, Method 2, Downward Pressure: 9 kPa, Abrasive Cloth 00)

Sample	Number Of Cycles (#)		Requirement	Pass/Fail
-	Specimen 1	25	≥ Level 1 (> 10 Cycles)	Pass
	Specimen 2	25		
	Specimen 3	35		
	Specimen 4	30		
	Performance Level (*)	1		

Remark: * = The Lowest Individual Value Is Used To Describe The Performance Level.
= Visual Examination Is Used For Determination Of The End Point.

Performance Level	1	2	3	4	5	6
Number Of Cycles	> 10	> 100	> 500	> 1000	> 1500	> 2000

- 5 Tear Resistance (EN 13034:2005+A1:2009(E), 4.1 & EN ISO 9073-4:1997)

Sample	Specimen	Machine Direction	Requirement	Pass/Fail
-	1	18.4 N	> 10 N	Pass
	2	26.4 N		
	3	24.1 N		
	4	16.6 N		
	5	24.0 N		
	Arithmetic Mean	22 N		
	Specimen	Cross Direction	Requirement	Pass/Fail
-	1	43.6 N	> 10 N	Pass
	2	42.4 N		
	3	38.4 N		
	4	39.5 N		
	5	48.5 N		
	Arithmetic Mean	42 N		
	Performance Level (*)	Level 1		

Remark: * = The Lowest Individual Value Is Used To Describe The Performance Level.

Performance Level	1	2	3	4	5	6
Trapezoidal Tear Resistance	> 10 N	> 20 N	> 40 N	> 60 N	> 100 N	> 150 N



6 Tensile Strength (EN 13034:2005+A1:2009(E), 4.1 & ISO 13934-1:2013)

Sample	Specimen	Machine Direction	Requirement	Pass / Fail
-	1	75 N	> 30 N	Pass
	2	70 N		
	3	81 N		
	4	74 N		
	5	67 N		
	Arithmetic Mean	73 N		
	Specimen	Cross Direction	Requirement	Pass / Fail
-	1	43 N	> 30 N	Pass
	2	44 N		
	3	44 N		
	4	41 N		
	5	44 N		
	Arithmetic Mean	43 N		
	Performance Level (*)	Level 1	≥ Level 1	Pass

Remark: * = The Lowest Individual Value Is Used To Describe The Performance Level.

Performance Level	1	2	3	4	5	6
Tensile Strength	> 30 N	> 60 N	> 100 N	> 250 N	> 500 N	> 1000 N

7 Puncture Resistance (EN 13034:2005+A1:2009(E), 4.1 & EN 863:1996)

Sample	Results	Requirement	Pass / Fail
-	Specimen 1	7 N	≥ Level 1 (> 5 N)
	Specimen 2	7 N	
	Specimen 3	6 N	
	Specimen 4	7 N	
	Performance Level (*)	1	

Remark: * = The Lowest Individual Value Is Used To Describe The Performance Level.

Performance Level	1	2	3	4	5	6
Puncture Resistance	> 5 N	> 10 N	> 50 N	> 100 N	> 150 N	> 250 N



8 Liquids Repellency (EN 13034:2005+A1:2009(E), 4.1 & EN 14325:2004, 4.12 & BS EN ISO 6530:2005(C1))

Sample	Chemical	Concentration Weight (%)	Specimen	Repellency Index (%)	Requirement	Pass/Fail
-	H ₂ SO ₄	30	1	98.0	-	-
			2	97.8	-	-
			3	97.3	-	-
			4	98.1	-	-
			5	97.7	-	-
			6	95.5	-	-
Performance Level (*)			3	≥ Level 3 (> 95%)	Pass	

Sample	Chemical	Concentration Weight (%)	Specimen	Repellency Index (%)	Requirement	Pass/Fail
-	NaOH	10	1	96.2	-	-
			2	96.8	-	-
			3	96.2	-	-
			4	96.5	-	-
			5	96.7	-	-
			6	96.3	-	-
Performance Level (*)			3	≥ Level 3 (> 95%)	Pass	

Remark: * = The Performance Level Is Determined By The Lowest Of The Six Values.

NOTE: The Performance Level Below Refers To EN 14325:2004, Clause 4

Performance Level	1	2	3
Repellency Index	> 80%	> 90%	> 95%



9 Resistance To Penetration By Liquids (EN 13034:2005+A1:2009(E), 4.1 & EN 14325:2004, 4.13 & BS EN ISO 6530:2005(C1))

Sample	Chemical	Concentration Weight (%)	Specimen	Penetration Index (%)	Requirement	Pass/Fail
-	H ₂ SO ₄	30	1	0	-	-
			2	0	-	-
			3	0	-	-
			4	0	-	-
			5	0	-	-
			6	0	-	-
			Performance Level (*)			3

Sample	Chemical	Concentration Weight (%)	Specimen	Penetration Index (%)	Requirement	Pass/Fail
-	NaOH	10	1	0	-	-
			2	0	-	-
			3	0	-	-
			4	0	-	-
			5	0	-	-
			6	0	-	-
			Performance Level (*)			3

Remark: * = The Performance Level Is Determined By The Highest Of The Six Values.

NOTE: The Performance Level Below Refers To EN 14325:2004, Clause 4

Performance Level	1	2	3
Penetration Index	< 10%	< 5%	< 1%



10 Seam Strength (EN 13034:2005+A1:2009(E), 4.2.2 & EN ISO 13935-2:2014)

Sample	Type Of Seam	Results		Requirement	Pass/Fail
		Specimen 1	43 N	> 30 N	Pass
		Specimen 2	37 N		
		Specimen 3	49 N		
		Mean Value	43 N		
	Performance Level (*)	Level 1		≥ Level 1	Pass

Remark: * = The Garment Seam Performance Is Classified According To The Weakest Seam Type.

Performance Level	1	2	3	4	5	6
Seam Strength	> 30 N	> 50 N	> 75 N	> 125 N	> 300 N	> 500 N

11 Marking (EN 13034:2005+A1:2009(E), 6)

The Chemical Protective Clothing Shall Be Marked With At Least Following Information. The Marking Shall Be Clearly Visible And As Durable As Adequate For The Life Of The Clothing.

Requirement	Pass	Fail	N/A
A) The Name, Trade Mark Or Other Means Of Identification Of The Manufacturer;	√		
B) The Type, I.E. Type 6 For Chemical Protective Suits Or Type PB (6) For Partial Body Protection;	√		
C) The Number And Date Of Publication Of This Document;	√		
D) The Year Of Manufacture, And Also The Month Of Manufacture If The Expected Shelf-Life Of The Clothing Is Less Than 24 Months. This Information May Be Marked On Every Commercial Packaging Unit Instead Of Being Marked On Every Item Of Clothing;	√		
E) The Manufacturer's Type, Identification Or Model Number;	√		
F) The Size Range As Defined In EN 340;	√		
G) A Pictogram Showing That The Clothing Is Intended To Protect Against Chemicals And A Pictogram Inviting To Read The Instructions For Use And Any Other Information Supplied By The Manufacturer;	√		
H) Re-Usable PPE Shall Be Marked With Care Pictograms According To EN 23758. Single-Use PPE Shall Be Marked With The Warning Phrase: "Do Not Re-Use."	√		

Compliance: The Submitted Sample **MEETS** The Requirements Of EN 13034:2005+A1:2009(E) Clause 6.0 For Marking.





12 Information Supplied By The Manufacturer (EN 13034:2005+A1:2009(E), 7)

Requirement	Pass	Fail	N/A
This Information Shall Accompany Every Item Of Chemical Protective Clothing Or At Least Every Commercial Packaging Unit. The Purpose Is To Guarantee That The Wearer Is Confronted With These Instructions.	√		
The Information Shall Be At Least In The Official Language(s) Of The Country Or Region Of Destination. They Shall Be Unambiguous And – If Helpful – Illustrations, Part Numbers, Marking Etc. Shall Be Added. If Appropriate, Warnings Shall Be Given Against Problems Likely To Be Encountered.	√		
The Instructions Together With The Information On The Marking Shall Contain At Least The Following Information:			
A) The Name, Trademark Of Other Means Of Identification, And Address Of The Manufacturer And/Or His Authorised Representative Established In The European Union Or The Country Where The Product Is Placed On The Market;	√		
B) The Reference Number Of This Document;	√		
C) The Type, i.e. Type 6 For Chemical Protective Suits Or Type PB (6) For Partial Body Protection;	√		
D) If Applicable, Additional Items Of Personal Protective Equipment To Be Worn To Ensure The Level Of Protection Needed And How To Attach Them. This Statement Shall Be Precise Enough To Help The User To Select The Appropriate Equipment, E.G. A Hood Model YY Or Equivalent, Or Respiratory Protection Including A Full Face Mask, Etc.;	√		
E) The Manufacturer's Type, Identification Or Model Number;	√		
F) The Size Range (As Defined In EN 340);	√		
G) The Names Of Chemicals And Chemical Products (Including The Names And Approximate Concentrations Of The Components) To Which The Protective Clothing Has Been Tested. This Will Include The Performance Levels Obtained For Liquid Repellency And Penetration For Each Chemical / Composition Tested. If Additional Information Is Available, A Reference To Where This Information Can Be Obtained (E.G. Manufacturer's Telephone Or Fax Number Or Web Site) Shall Be Added;	√		
H) All Other Performance Levels, As Specified In Table 1, Preferably In A Table;	√		
I) A Statement That: - Type 6 Chemical Protective Suits Have Been Tested To The Whole Suit Test (5.2); - Type PB (6) Partial Body Protection Has Not Been Tested To The Whole Suit Test (5.2);	√		





Information Supplied By The Manufacturer (EN 13034:2005+A1:2009(E), 7) (Cont)

Requirement	Pass	Fail	N/A
J) For Re-Usable Items: The Explanation Of The Care Pictograms According To EN 23758 And Additional Information On Cleaning And Disinfection (See Also EN 340:2003, 5.4); In Particular The Number Of Times The Clothing Can Be Cleaned Before It No Longer Meets The Liquid Repellency Requirements, Or Until Reapplication Of Repellency Treatments Becomes Necessary (See Also 7m));	√		
K) The Expected Shelf-Life Of The Garment If Ageing Can Occur;	√		
L) Information Necessary For Trained Persons On: <ul style="list-style-type: none"> - Application, Limitations Of Use (Temperature Range Etc.); - Tests To Be Carried Out By The Wearer Before Use (If Applicable); - Fitting; - Use; - Removal; - Maintenance And Cleaning (Including Guidance For Decontamination And Disinfection); - Storage; 	√		
M) Special Attention To Potential Problems Which May Be Caused By Deterioration Of Special Repellency Treatments And The Correct Way Of Reapplying And/Or Regenerating These Treatments;	√		
N) If Applicable, A Statement To Advise That The Prolonged Wearing Of Chemical Protective Suits May Cause Heat Stress;	√		
O) If Applicable, The Warning Phrase: "Flammable Material. Keep Away From Fire"	√		

Compliance: The Submitted Sample **MEETS** The Requirements Of EN 13034:2005+A1:2009(E) Clause 7.0 For Information Supplied By The Manufacturer.



13 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.	Result (mg/kg)	
			Method T	Method D
			(1)	(1)
1.	4-Aminodiphenyl	92-67-1	< 5	< 5
2.	Benidine	92-87-5	< 5	< 5
3.	4-Chloro-o-toluidine	95-69-2	< 5	< 5
4.	2-Naphthylamine	91-59-8	< 5	< 5
5.	o-Aminoazotoluene	97-56-3	< 5	< 5
6.	2-Amino-4-nitrotoluene	99-55-8	< 5	< 5
7.	p-Chloroaniline	106-47-8	< 5	< 5
8.	2,4-Diaminoaniso	615-05-4	< 5	< 5
9.	4,4'-Diaminodiphenylmethane	101-77-9	< 5	< 5
10.	3,3'-Dichlorobenzidine	91-94-1	< 5	< 5
11.	3,3'-Dimethoxybenzidine	119-90-4	< 5	< 5
12.	3,3'-Dimethylbenzidine	119-93-7	< 5	< 5
13.	3,3'-Dimethyl-4,4'diaminodiphenylmethane	838-88-0	< 5	< 5
14.	p-Cresidine	120-71-8	< 5	< 5
15.	4,4'-Methylene-bis(2-chloroaniline)	101-14-4	< 5	< 5
16.	4,4'-Oxydianiline	101-80-4	< 5	< 5
17.	4,4'-Thiodianiline	139-65-1	< 5	< 5
18.	o-Toluidine	95-53-4	< 5	< 5
19.	2,4-Toluylenediamine	95-80-7	< 5	< 5
20.	2,4,5-Trimethylaniline	137-17-7	< 5	< 5
21.	o-Anisidine	90-04-0	< 5	< 5
22.	4-Aminoazobenzene	60-09-3	< 5	< 5

Remark: Requirement = 30 mg/kg
Reporting Limit = 5 mg/kg

Method T: Direct Buffer Extraction As Per ISO 14362-1:2017 Section 10.2

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 Protective Clothing - General Requirements - Azo Colourants Content

Result

Pass





14 pH Value

As Per ISO 13688:2013, 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)	5.8	*
(2)	5.9	*

Temperature Of The Extracting Solution: 24.3°C

pH Of The Extracting Solution: 5.75

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

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

Conclusion:

Standard
ISO 13688:2013 For pH Value

Result
Pass

Component List:

- (1) Blue PP+PE Background Fabric
- (2) White Knitted Cuff





End Of Report

This report is made solely on the basis of your instructions and/or information and materials supplied by you. It is not intended to be a recommendation for any particular course of action. Intertek does not accept a duty of care or any other responsibility to any person other than the Client in respect of this report and only accepts liability to the Client insofar as is expressly contained in the terms and conditions governing Intertek's provision of services to you. Intertek makes no warranties or representations either express or implied with respect to this report save as provided for in those terms and conditions. We have aimed to conduct the Review on a diligent and careful basis and we do not accept any liability to you for any loss arising out of or in connection with this report, in contract, tort, by statute or otherwise, except in the event of our gross negligence or wilful misconduct. No copy of the test report(except for full text copy) shall be made without the written approval by Intertek.



To : HEALTHCARE PRODUCTS LIMITED
Attention : Date : Mar 15, 2021

Re : Report Revision Notification

Labtest Report Number GZHT91010620 date FEB 02, 2021

Please be informed that all the content recorded in the above captioned report will be void. This captioned report is now superseded by a revised Labtest Report, Number GZHT91010620(S1) , issued on Mar 15, 2021 .

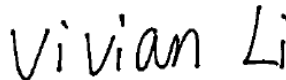
Thank you for your attention

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