

**E3. Declaration of Conformity**

## Declaration of Conformity to ANSI/ISEA 107-2020, High-Visibility Safety Apparel

Certificate No. S78122C-2020
Supplier name and address: Tingley Rubber Corporation 1551 S. Washington Ave., Suite 403 Piscataway, NJ 08854
Product information (name, model number, part number or other information as applicable): X – Back Hoodie, Fluorescent Yellow-Green and Orange-Red Model Number: S78122C
Company declares that the above product meets all set requirements as stated in ANSI/ISEA 107-2020 as a compliant high-visibility safety item for Performance Class <u>3</u> , Type <u>R</u> ; All relevant materials have been tested with documents referenced under this certificate number. This item meets all design requirements and has been measured for appropriate amount of visible reflective material and background materials for the smallest size offered for this product.

**1. VISIBLE BACKGROUND MATERIAL:**

- Amount of visible background material (smallest size offered): >0.80m<sup>2</sup> (1240 in.<sup>2</sup>)

Please list each material that contributes towards the amount **VISIBLE BACKGROUND MATERIAL** listed above. Use separate sheet for addition materials.

**Material 1 Identification**

Test Lab: Intertek	Material Type: <input checked="" type="checkbox"/> Knitted <input type="checkbox"/> Woven <input type="checkbox"/> Other: _____
Report #: GZHT91071732	Material Content (such as Polyester, Modacrylic, and others): 100% Polyester
Date: 11/15/2021	Weight: 8.25 oz                      Color: Fl. Yellow-Green
Description: 100% Polyester Knit Fleece	

**Material 2 Identification**

Test Lab: Intertek	Material Type: <input checked="" type="checkbox"/> Knitted <input type="checkbox"/> Woven <input type="checkbox"/> Other: _____
Report #: GZHT91071781	Material Content (such as Polyester, Modacrylic, and others): 100% Polyester
Date: 11/15/2021	Weight: 8.25 oz                      Color: Fl. Orange-Red
Description: 100% Polyester Knit Fleece	

**Material 3 Identification**

Test Lab:	Material Type: <input type="checkbox"/> Knitted <input type="checkbox"/> Woven <input type="checkbox"/> Other: _____
Report #:	Material Content (such as Polyester, Modacrylic, and others):
Date:	Weight:                                      Color:
Description:	

**Declaration of Conformity (page 2 of 2)****2. VISIBLE RETROREFLECTIVE MATERIAL**

- Amount of visible retroreflective material (smallest size offered) 0.20m<sup>2</sup> (310 in.<sup>2</sup>)

Please list each type of material that contributes towards **VISIBLE RETROREFLECTIVE MATERIAL** listed above.

**Material 1 Identification**

Test Lab: Intertek	
Report #: GZHT91069017	
Date: 11/11/2021	Style #: VB211A
Description: 50mm wide sew on silver reflective trim	

**Material 2 Identification**

Test Lab:	
Report #:	
Date:	Style #:
Description:	

*\*Use separate sheet for additional materials*

**3. OVERALL LUMINANCE**


Check here if test report for optional Overall Luminance testing is attached.

The undersigned hereby warrants that he/she is authorized to legally bind the company identified above.

Signed: Meghan Bowser Title: Product Manager

Print Name: Meghan Bowser Date: 8/17/22

## Certificate of Test

**Issued To:** TRC NANJING REPRESENTATIVE  
**OFFICE**  
ROOM 1809,#3 BUILDING,  
DEYING INT'L PLAZA,#222 CHANGHONG  
ROAD,  
YUHUATAI DISTRICT,NANJING 210012

Our Reference No.: GZHT9107173202

Certificate Issue Date: Nov 15, 2021

Attn: ANNE WANG

Description: One (1) piece of submitted sample said to be Hi-Vis Yellow Polyester Fleece,  
280gsm,#TY21092203.

We Hereby Declare That The Sample Described Above Has Been Tested By Intertek Testing Services Shenzhen Ltd. Guangzhou Branch And Meets The Requirements Of The Following Selected Tests Of ANSI/ISEA 107-2020.

Color Performance Of Background And Combined-performance Materials  
Colorfastness To Crocking Of Background Material  
Color Fastness To Perspiration Of Background Material  
Colorfastness To Water Of Background Material  
Color Fastness To Laundry Of Background Material  
Dimension Change Of Background Material  
Bursting Strength

The test results are given in our report

No.: GZHT91071732 Dated: Nov 15, 2021

**Note:**

- 1 This Declaration Applies To The Particular Sample Tested And To The Specific Tests Carried Out As Dated And Detailed In The Report(S) Referenced Above.
- 2 This Certificate Is Valid Only For The Applicant's Selected Test Items And Must Not Be Used Without The Attached Test Report.
- 3 This Certificate Must Not Be Confused Neither With The EU Type Examination Certificate Released By Nofified Body Nor With The Conformaity Declaration Released By Manufacturer.

Authorized By:  
For Intertek Testing Services Shenzhen Ltd.  
Guangzhou Branch



Guiliang Dong  
Senior Lab Manager





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TEST REPORT



中国认可  
国际互认  
检测  
TESTING  
CNAS L0220

Number: GZHT91071732

Applicant: TRC NANJING REPRESENTATIVE OFFICE  
ROOM 1809,#3 BUILDING,  
DEYING INT'L PLAZA,#222 CHANGHONG ROAD,  
YUHUATAI DISTRICT,NANJING 210012

Date: Nov 15, 2021

Attn: ANNE WANG

Sample Description:

One (1) piece of submitted sample said to be Hi-Vis Yellow Polyester Fleece, 280gsm,#TY21092203.  
Standard : ANSI/ISEA 107-2020  
Buyer : Tingley Rubber Corporation  
Ref. No. : Hi-Vis YG Polyester Fleece, 280gsm,#TY21092203  
Goods Exported to : U.S.A  
Date Received/Date Test Started Oct. 19, 2021  
Date Final Information Confirmed/ Nov. 12, 2021/--  
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](mailto:gzfootwear@intertek.com)

Authorized By:  
For Intertek Testing Services Shenzhen Ltd.  
Guangzhou Branch

Guiliang Dong  
Senior Lab Manager

MI / lydiayang



**Intertek Testing Services Shenzhen Ltd. Guangzhou Branch**  
深圳天祥质量技术服务有限公司广州分公司  
Room 02, 1-8/F. & Room 01, E101/E201/E301/E401/E501/E601/E701/E801,  
No.7-2, Caipin Road, Guangzhou Science City, GETDD, Guangzhou, Guangdong, China  
广州经济技术开发区科学城彩频路7号之二第1-8层 02房、01房 101、  
E201、E301、E401、E501、E601、E701、E801  
Tel: +86 208213 9001 Fax: +86 20 82089909 Postcode: 510663



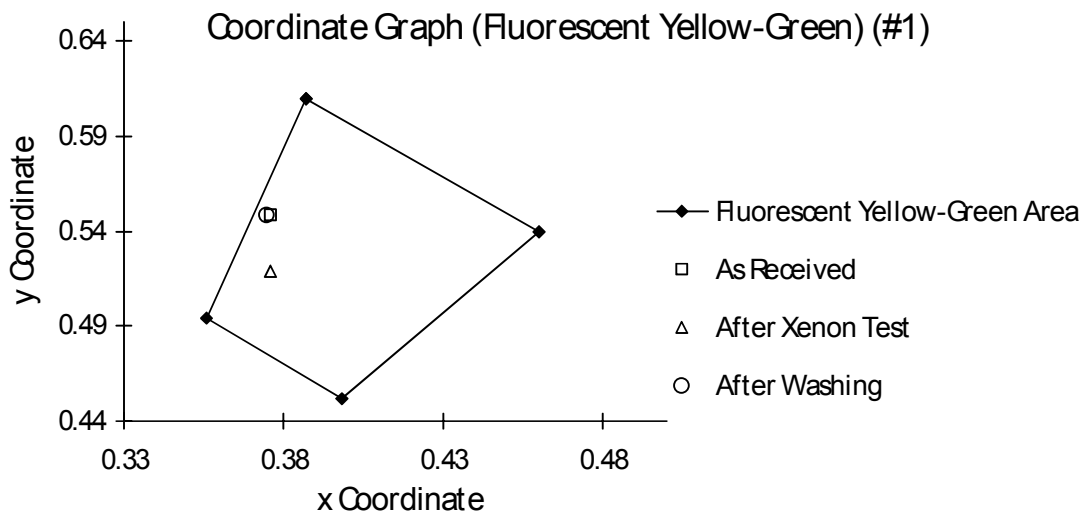
1 Color Performance Of Background And Combined-performance Materials (ANSI/ISEA 107-2020, 8.1.1 (Prior To Exposure Tests) & 8.1.2 (After Xenon Test) & ASTM E1164-17)

Sample	Color	Pre-condition	Chromaticity Coordinates			Total Luminance Factor	Requirement	Pass/Fail
			$\epsilon$	x	y	Y (%)		
-	Fluorescent Yellow-Green	As Received (#1)	0°	0.3763	0.5479	107	-	-
			90°	0.3761	0.5481	107	-	-
			Mean	0.376	0.548	107	*	Pass
		After Xenon Test (# & #1)	0°	0.3758	0.5189	99	-	-
			90°	0.3758	0.5195	99	-	-
			Mean	0.376	0.519	99	*	Pass

Note: The Specimen Is Backed By A Black Underlay With A Reflectance Of Less Than 0.04.

Sample	Color	Pre-Condition	Chromaticity Coordinates			Total Luminance Factor	Applicant's Requirement	Pass/Fail
			$\epsilon$	x	y	Y (%)		
-	Fluorescent Yellow-Green	After Washing (#1 & #2)	0°	0.3746	0.5483	107	-	-
			90°	0.3748	0.5480	106	-	-
			Mean	0.375	0.548	106	*	Pass

Note: The Specimen Is Backed By A Black Underlay With A Reflectance Of Less Than 0.04.





Color Performance Of Background And Combined-performance Materials (ANSI/ISEA 107-2020, 8.1.1 (Prior To Exposure Tests) & 8.1.2 (After Xenon Test) & ASTM E1164-17)(Cont)

Remark: \* =

Color	Chromaticity Coordinates		Minimum Total Luminance Factor Y (%)
	x	y	
Fluorescent Yellow-Green	0.387	0.610	70
	0.356	0.494	
	0.398	0.452	
	0.460	0.540	

NOTE The Coordinate Of Sample Should Be Inside The Area Specified By The Table Above.

# = Xenon Test Based On AATCC 16.3-2014, Colorfastness To Light Xenon Arc. Expose The Materials To 40 AATCC Fading Units (170 KJ/m<sup>2</sup>@420nm).

#1= Single Layer

#2 = ISO 6330:2012, Wash Condition:

Washing Standard:	ISO 6330:2012
Machine:	Type A
Reagent:	Reference Detergent 3
Washing Procedure:	4 N
Bleaching Procedure:	-
Drying Procedure:	Line Dry
Ironing Procedure:	-
Professional Textile Care Procedure:	-
Number Of Cycles:	25

2 Colorfastness To Crocking Of Background Material (ANSI/ISEA 107-2020, 8.2.1 & AATCC 8-2016)

Preconditioning:

Temperature: (20 ± 2)°C

Relative Humidity: (65 ± 5)%

Period: 24 Hours

Sample	Test Condition	Results	Requirement	Pass / Fail
-	Dry	Grade 4.0	Min. Grade 3.0	Pass
	Wet	Grade 3.5	Min. Grade 3.0	Pass





3 Colorfastness To Perspiration Of Background Material (ANSI/ISEA 107-2020, 8.2.2 & AATCC 15-2013)

Test Condition:

Load: 4.54 kg  
Oven temperature: (38 ± 1) °C  
Test Period: 6 h ± 5 min

Sample	Results			Requirement	Pass / Fail
-	Color Change:		Grade 4.5	Min. Grade 4.0	Pass
	Color Stain:	-Acetate	Grade 4.5	Min. Grade 3.0	Pass
		-Cotton	Grade 4.5		
		-Nylon	Grade 4.0		
		-Polyester	Grade 4.5		
		-Acrylic	Grade 4.5		
-Wool	Grade 4.0				

4 Colorfastness To Water Of Background Material (ANSI/ISEA 107-2020, 8.2.3 & AATCC 107-2013)

Test Condition:

Pressure: 4.5 kg  
Oven Temperature: (38 ± 1) °C  
Test Period: 18 h

Sample	Results			Requirement	Pass / Fail
-	Color Change:		Grade 4.5	Min. Grade 3.0	Pass
	Staining	-Acetate	Grade 4.5	Min. Grade 3.0	Pass
		-Cotton	Grade 4.5		
		-Nylon	Grade 3.5		
		-Polyester	Grade 4.5		
		-Acrylic	Grade 4.5		
-Wool	Grade 3.5				





5 Color Fastness To Laundry Of Background Material (ANSI/ISEA 107-2020, 8.2.3)

Test Condition:

Test Method: AATCC 61-2013-2A, Modified To Use 105°F (Domestic Laundry)

Sample	Results		Requirement	Pass / Fail
	Color Change:	Grade 4.5	Min. Grade 4.5	Pass
	Color Stain:			
	-Acetate	Grade 3.0	Min. Grade 3.0	Pass
	-Cotton	Grade 4.0		
	-Nylon	Grade 3.0		
	-Polyester	Grade 4.0		
	-Acrylic	Grade 4.5		
	-Wool	Grade 3.5		

Remark: This Test Was Conducted At Room 801/901, No. 8, East BaoYing Road, Huangpu District, Guangzhou.

6 Dimension Change Of Background Material (Home Laundering) (ANSI/ISEA 107-2020, 8.3 & ASTM D1776-16)

Test Condition:

Standard Code: AATCC 135-2012 (3)(III)(A)(iii)

Cleaning Cycles: 5

Sample	Results		Requirement	Pass / Fail
	Length	-0.8%	± 7%	Pass
	Width	-0.4%	± 5%	Pass

Remark: \* =

Material Type	Knit Fabrics And All Other Materials
Length	Not Exceed ± 7%
Width	Not Exceed ± 5%

Remark: This Test Was Conducted At Room 801/901, No. 8, East BaoYing Road, Huangpu District, Guangzhou.







7 Bursting Strength Of Knitted Materials And Other Nonwoven Constructions (ANSI/ISEA 107-2020, 8.4.1 & ASTM D6797-07(2015))

Preconditioning:

Temperature: (20 ± 2) °C

Relative Humidity: (65 ± 5) %

Period: 24 Hours

Sample	Specimen	Results	Requirement	Pass/Fail
	1	680.5 N	Min. 178 N	Pass
	2	630.0 N	Min. 178 N	Pass
	3	669.0 N	Min. 178 N	Pass
	4	674.0 N	Min. 178 N	Pass
	5	636.5 N	Min. 178 N	Pass
	Average	658.0 N	Min. 178 N	Pass

Remark: N = Newton

Remark: This Test Was Conducted At Room 801/901, No. 8, East BaoYing Road, Huangpu District, Guangzhou.



# intertek

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TEST REPORT

Tests Conducted (As Requested By The Applicant)



中国认可  
国际互认  
检测  
TESTING  
CNAS L0220

Number: GZHT91071732



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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.*

/ lydiayang

Page 7 Of 7

**Intertek Testing Services Shenzhen Ltd. Guangzhou Branch**

深圳天祥质量技术服务有限公司广州分公司

Room 02, 1-8/F. & Room 01, E101/E201/E301/E401/E501/E601/E701/E801,  
No.7-2, Caipin Road, Guangzhou Science City, GETDD, Guangzhou, Guangdong, China

广州经济技术开发区科学城彩频路7号之二第一-八层 02房、01房 101、  
E201、E301、E401、E501、E601、E701、E801

Tel: +86 208213 9001 Fax: +86 20 82089909 Postcode: 510663



## Certificate of Test

**Issued To:** TRC NANJING REPRESENTATIVE  
**OFFICE**  
ROOM 1809,#3 BUILDING,  
DEYING INT'L PLAZA,#222 CHANGHONG  
ROAD,  
YUHUATAI DISTRICT,NANJING 210012

Our Reference No.: GZHT9107178102

Certificate Issue Date: Nov 15, 2021

Attn: ANNE WANG

Description: One (1) piece of submitted sample said to be Hi-Vis Orange Polyester Fleece, 280gsm,  
#TY21092203 .

We Hereby Declare That The Sample Described Above Has Been Tested By Intertek Testing Services Shenzhen Ltd. Guangzhou Branch And Meets The Requirements Of The Following Selected Tests Of ANSI/ISEA 107-2020.

Color Performance Of Background And Combined-performance Materials  
Colorfastness To Crocking Of Background Material  
Color Fastness To Perspiration Of Background Material  
Colorfastness To Water Of Background Material  
Color Fastness To Laundry Of Background Material  
Dimension Change Of Background Material  
Bursting Strength

The test results are given in our report  
No.: GZHT91071781 Dated: Nov 15, 2021

**Note:**

- 1 This Declaration Applies To The Particular Sample Tested And To The Specific Tests Carried Out As Dated And Detailed In The Report(S) Referenced Above.
- 2 This Certificate Is Valid Only For The Applicant's Selected Test Items And Must Not Be Used Without The Attached Test Report.
- 3 This Certificate Must Not Be Confused Neither With The EU Type Examination Certificate Released By Nofified Body Nor With The Conformaity Declaration Released By Manufacturer.

Authorized By:  
For Intertek Testing Services Shenzhen Ltd.  
Guangzhou Branch



Guiliang Dong  
Senior Lab Manager





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TEST REPORT



中国认可  
国际互认  
检测  
TESTING  
CNAS L0220

Number: GZHT91071781

Applicant: TRC NANJING REPRESENTATIVE OFFICE  
ROOM 1809,#3 BUILDING,  
DEYING INT'L PLAZA,#222 CHANGHONG ROAD,  
YUHUATAI DISTRICT,NANJING 210012

Date: Nov 15, 2021

Attn: ANNE WANG

Sample Description:

One (1) piece of submitted sample said to be Hi-Vis Orange Polyester Fleece, 280gsm, #TY21092203 .  
Standard : ANSI/ISEA 107-2020  
Buyer : Tingley Rubber Corporation  
Ref. No. : Hi-Vis OR Polyester Fleece, 280gsm, #TY21092203  
Goods Exported to : U.S.A  
Date Received/Date Test Started Oct. 19, 2021  
Date Final Information Confirmed/ Nov. 12, 2021/--  
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](mailto:gzfootwear@intertek.com)

Authorized By:  
For Intertek Testing Services Shenzhen Ltd.  
Guangzhou Branch

Guiliang Dong  
Senior Lab Manager



MR / lydiayang

**Intertek Testing Services Shenzhen Ltd. Guangzhou Branch**  
深圳天祥质量技术服务有限公司广州分公司  
Room 02, 1-8/F. & Room 01, E101/E201/E301/E401/E501/E601/E701/E801,  
No.7-2, Caipin Road, Guangzhou Science City, GETDD, Guangzhou, Guangdong, China  
广州经济技术开发区科学城彩频路7号之二第1-8层 02房、01房 101、  
E201、E301、E401、E501、E601、E701、E801  
Tel: +86 208213 9001 Fax: +86 20 82089909 Postcode: 510663



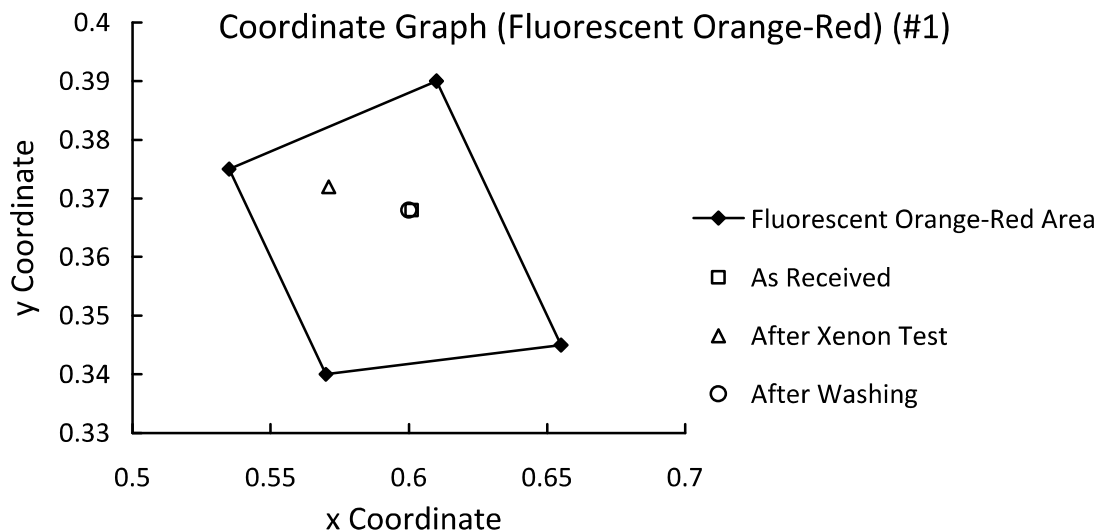
1 Color Performance Of Background And Combined-performance Materials (ANSI/ISEA 107-2020, 8.1.1 (Prior To Exposure Tests) & 8.1.2 (After Xenon Test) & ASTM E1164-17)

Sample	Color	Pre-condition	Chromaticity Coordinates			Total Luminance Factor	Requirement	Pass/Fail
			$\epsilon$	X	Y	Y (%)		
-	Fluorescent Orange-Red	As Received (#1)	0°	0.6009	0.3681	49	-	-
			90°	0.6013	0.3680	49	-	-
			Mean	0.601	0.368	49	*	Pass
		After Xenon Test (# & #1)	0°	0.5714	0.3715	52	-	-
			90°	0.5704	0.3714	52	-	-
			Mean	0.571	0.372	52	*	Pass

Note: The Specimen Is Backed By A Black Underlay With A Reflectance Of Less Than 0.04.

Sample	Color	Pre-Condition	Chromaticity Coordinates			Total Luminance Factor	Applicant's Requirement	Pass/Fail
			$\epsilon$	X	Y	Y (%)		
-	Fluorescent Orange-Red	After Washing (#1 & #2)	0°	0.6002	0.3682	49	-	-
			90°	0.5999	0.3684	50	-	-
			Mean	0.600	0.368	49	*	Pass

Note: The Specimen Is Backed By A Black Underlay With A Reflectance Of Less Than 0.04.





Color Performance Of Background And Combined-performance Materials (Cont)

Remark: \* =

Color	Chromaticity Coordinates		Minimum Total Luminance Factor Y (%)
	x	y	
Fluorescent Orange-Red	0.610	0.390	40
	0.535	0.375	
	0.570	0.340	
	0.655	0.345	

NOTE The Coordinate Of Sample Should Be Inside The Area Specified By The Table Above.

# = Xenon Test Based On AATCC 16.3-2014, Colorfastness To Light Xenon Arc. Expose The Materials To 40 AATCC Fading Units (170 KJ/m<sup>2</sup>@420nm).

#1= Single Layer

#2 = ISO 6330:2012, Wash Condition:

Washing Standard:	ISO 6330:2012
Machine:	Type A
Reagent:	Reference Detergent 3
Washing Procedure:	4 N
Bleaching Procedure:	-
Drying Procedure:	-
Ironing Procedure:	-
Professional Textile Care Procedure:	-
Number Of Cycles:	25



2 Colorfastness To Crocking Of Background Material (ANSI/ISEA 107-2020, 8.2.1 & AATCC 8-2016)

Preconditioning:  
Temperature: (20 ± 2) °C  
Relative Humidity: (65 ± 5)%  
Period: 24 Hours

Sample	Test Condition	Results	Requirement	Pass / Fail
-	Dry	Grade 4.5	Min. Grade 3.0	Pass
	Wet	Grade 4.5	Min. Grade 3.0	Pass

3 Colorfastness To Perspiration Of Background Material (ANSI/ISEA 107-2020, 8.2.2 & AATCC 15-2013)

Test Condition:  
Load: 4.54 kg  
Oven temperature: (38 ± 1) °C  
Test Period: 6 h ± 5 min

Sample	Results		Requirement	Pass / Fail	
-	Color Change:		Grade 4.5	Min. Grade 4.0	Pass
	Color Stain:	-Acetate	Grade 4.5	Min. Grade 3.0	Pass
		-Cotton	Grade 4.5		
		-Nylon	Grade 4.0		
		-Polyester	Grade 4.5		
		-Acrylic	Grade 4.5		
	-Wool	Grade 4.5			





4 Colorfastness To Water Of Background Material (ANSI/ISEA 107-2020, 8.2.3 & AATCC 107-2013)

Test Condition:

Pressure: 4.5 kg  
Oven Temperature: (38 ± 1) °C  
Test Period: 18 h

Sample	Results		Requirement	Pass / Fail
-	Color Change:	Grade 4.5	Min. Grade 3.0	Pass
	Staining			
	-Acetate	Grade 4.5	Min. Grade 3.0	Pass
	-Cotton	Grade 4.5		
	-Nylon	Grade 4.0		
	-Polyester	Grade 4.5		
	-Acrylic	Grade 4.5		
	-Wool	Grade 4.5		

5 Color Fastness To Laundry Of Background Material (ANSI/ISEA 107-2020, 8.2.3)

Test Condition:

Test Method: AATCC 61-2013-2A, Modified To Use 105°F (Domestic Laundry)

Sample	Results		Requirement	Pass / Fail
	Color Change:	Grade 4.5	Min. Grade 4.5	Pass
	Color Stain:			
	-Acetate	Grade 3.0	Min. Grade 3.0	Pass
	-Cotton	Grade 4.0		
	-Nylon	Grade 3.0		
	-Polyester	Grade 4.0		
	-Acrylic	Grade 4.5		
	-Wool	Grade 4.0		

Remark: This Test Was Conducted At Room 801/901, No. 8, East BaoYing Road, Huangpu District, Guangzhou.





6 Dimension Change Of Background Material (Home Laundering) (ANSI/ISEA 107-2020, 8.3 & ASTM D1776-16)

Test Condition:  
Standard Code: AATCC 135-2012 (3)(III)(A)(iii)  
Cleaning Cycles: 5

Sample	Results	Requirement	Pass / Fail
Length	-1.6%	± 7%	Pass
Width	-0.8%	± 5%	Pass

Remark: \* =

Material Type	Knit Fabrics And All Other Materials
Length	Not Exceed ± 7%
Width	Not Exceed ± 5%

Remark: This Test Was Conducted At Room 801/901, No. 8, East BaoYing Road, Huangpu District, Guangzhou.

7 Bursting Strength Of Knitted Materials And Other Nonwoven Constructions (ANSI/ISEA 107-2020, 8.4.1 & ASTM D6797-07(2015))

Preconditioning:  
Temperature: (20 ± 2)°C  
Relative Humidity: (65 ± 5)%  
Period: 24 Hours

Sample	Specimen	Results	Requirement	Pass/Fail
	1	717.5 N	Min. 178 N	Pass
	2	739.5 N	Min. 178 N	Pass
	3	731.0 N	Min. 178 N	Pass
	4	758.5 N	Min. 178 N	Pass
	5	723.5 N	Min. 178 N	Pass
	Average	734.0 N	Min. 178 N	Pass

Remark: This Test Was Conducted At Room 801/901, No. 8, East BaoYing Road, Huangpu District, Guangzhou.





*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.*



## Certificate of Test

**Issued To: TRC NANJING REPRESENTATIVE OFFICE**ROOM 1809,#3 BUILDING,  
DEYING INT'L PLAZA,#222 CHANGHONG  
ROAD,  
YUHUATAI DISTRICT,NANJING 210012

Our Reference No.: GZHT9106901702

Certificate Issue Date: Nov 11, 2021

Attn: ANNE WANG

Description: One (1) piece of submitted sample said to be Silver VB211A WP Reflective Tape.

We Hereby Declare That The Sample Described Above Has Been Tested By Intertek Testing Services Shenzhen Ltd. Guangzhou Branch And Meets The Requirements Of The Following Selected Tests Of ANSI/ISEA 107-2020.

Retroreflective Performance Prior to Test Exposure  
Retroreflection After Abrasion  
Retroreflection After Flexing  
Retroreflection After Folding At Cold Temperatures  
Retroreflection After Temperature Variation  
Retroreflection After Washing  
Retroreflection (Wet Performance)

The test results are given in our report

No.: GZHT91069017 Dated: Nov 11, 2021

**Note:**

- 1 This Declaration Applies To The Particular Sample Tested And To The Specific Tests Carried Out As Dated And Detailed In The Report(S) Referenced Above.
- 2 This Certificate Is Valid Only For The Applicant's Selected Test Items And Must Not Be Used Without The Attached Test Report.
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Authorized By:

For Intertek Testing Services Shenzhen Ltd.  
Guangzhou Branch

---

Guiliang Dong  
Senior Lab Manager

**Intertek Testing Services Shenzhen Ltd. Guangzhou Branch**

深圳天祥质量技术服务有限公司广州分公司

Room 02, 1-8/F. & Room 01, E101/E201/E301/E401/E501/E601/E701/E801,  
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E201、E301、E401、E501、E601、E701、E801

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TEST REPORT



中国认可  
国际互认  
检测  
TESTING  
CNAS L0220

Number: GZHT91069017

Applicant: TRC NANJING REPRESENTATIVE OFFICE  
ROOM 1809,#3 BUILDING,  
DEYING INT'L PLAZA,#222 CHANGHONG ROAD,  
YUHUATAI DISTRICT,NANJING 210012

Date: Nov 11, 2021

Attn: ANNE WANG

Sample Description:

One (1) piece of submitted sample said to be Silver VB211A WP Reflective Tape.  
Standard : ANSI/ISEA 107-2020  
Buyer : Tingley Rubber Corporation  
Ref. : VB211A WP Reflective Tape, #20210820-3  
Goods Exported to : U.S.A.  
Date Received/Date Test Started Oct. 09, 2021  
Date Final Information Confirmed/ Nov. 11, 2021/--  
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](mailto:gzfootwear@intertek.com)

Authorized By:  
For Intertek Testing Services Shenzhen Ltd.  
Guangzhou Branch

Guiliang Dong  
Senior Lab Manager



wx / lydiayang

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1 Retroreflective Performance Prior to Test Exposure (ANSI/ISEA 107-2020, 9.1 & 10.3 & ASTM E809-08(2013))

Sample	Observation Angle	Entrance Angle $\beta_1$ ( $\beta_2=0$ )	Coefficient Of Retroreflection $cd/(lx \cdot m^2)$		Requirement	Pass/Fail
-	0.20° [12']	5°	504	500	Min. 330/248 $cd/(lx \cdot m^2)$ (*)	Pass
		20°	475	468	Min. 290/218 $cd/(lx \cdot m^2)$ (*)	Pass
		30°	398	391	Min. 180/135 $cd/(lx \cdot m^2)$ (*)	Pass
		40°	232	216	Min. 65/47 $cd/(lx \cdot m^2)$ (*)	Pass
	0.33° [20']	5°	288	286	Min. 250/188 $cd/(lx \cdot m^2)$ (*)	Pass
		20°	274	267	Min. 200/150 $cd/(lx \cdot m^2)$ (*)	Pass
		30°	246	241	Min. 170/128 $cd/(lx \cdot m^2)$ (*)	Pass
		40°	171	168	Min. 60/45 $cd/(lx \cdot m^2)$ (*)	Pass
	1.0°	5°	82.5	80.7	Min. 25/18.8 $cd/(lx \cdot m^2)$ (*)	Pass
		20°	83.9	83.6	Min. 15/11.3 $cd/(lx \cdot m^2)$ (*)	Pass
		30°	79.9	79.5	Min. 12/9 $cd/(lx \cdot m^2)$ (*)	Pass
		40°	49.7	45.2	Min. 10/7.5 $cd/(lx \cdot m^2)$ (*)	Pass
1.5° [1° 30']	5°	19.8	18.5	Min. 10/7.5 $cd/(lx \cdot m^2)$ (*)	Pass	
	20°	21.5	21.0	Min. 7/5.25 $cd/(lx \cdot m^2)$ (*)	Pass	
	30°	24.7	24.4	Min. 5/3.75 $cd/(lx \cdot m^2)$ (*)	Pass	
	40°	22.7	22.4	Min. 4/3 $cd/(lx \cdot m^2)$ (*)	Pass	

\*= Retroreflective Material Shall Comply With The Minimum Requirements For The Coefficient Of Retroreflection At The One Of The Two Rotation Angles, And Shall Be Not Less Than 75% Of The Values At The Other Rotation Angle.

Note: Take Measurements At  $\epsilon_1=0^\circ$  And  $\epsilon_2=90^\circ$  . Maximum Value Is Recorded On Left Side Of The Result Column And The Other Value On Right Side Of Test Result Column.



2 Retroreflection After Abrasion (ANSI/ISEA 107-2020, 9.2 & 10.4.1)

Test Exposure	Test Method
Abrasion	ISO 12947-2:2016, Pressure: 9 kPa, 5,000 Cycles

Sample	x-Direction (Horizontal: $\epsilon=0^\circ$ )				
	Observation Angle	Entrance Angle $\beta_1$ ( $\beta_2 = 0^\circ$ )	Coefficient Of Retroreflection	Requirement	Pass / Fail
-	0.20° [12']	5°	471 cd/(lx·m <sup>2</sup> )	Min. 100 cd/(lx·m <sup>2</sup> )	Pass

Sample	y-Direction (Vertical: $\epsilon=90^\circ$ )				
	Observation Angle	Entrance Angle $\beta_1$ ( $\beta_2 = 0^\circ$ )	Coefficient Of Retroreflection	Requirement	Pass / Fail
-	0.20° [12']	5°	470 cd/(lx·m <sup>2</sup> )	Min. 75 cd/(lx·m <sup>2</sup> )	Pass

3 Retroreflection After Flexing (ANSI/ISEA 107-2020, 9.2 & 10.4.2)

Test Exposure	Test Method
Flexing	ISO 7854:1995, Method A, 7,500 Cycles

Sample	x-Direction (Horizontal: $\epsilon=0^\circ$ )				
	Observation Angle	Entrance Angle $\beta_1$ ( $\beta_2 = 0^\circ$ )	Coefficient Of Retroreflection	Requirement	Pass / Fail
-	0.20° [12']	5°	474 cd/(lx·m <sup>2</sup> )	Min. 100 cd/(lx·m <sup>2</sup> )	Pass

Sample	y-Direction (Vertical: $\epsilon=90^\circ$ )				
	Observation Angle	Entrance Angle $\beta_1$ ( $\beta_2 = 0^\circ$ )	Coefficient Of Retroreflection	Requirement	Pass / Fail
-	0.20° [12']	5°	474 cd/(lx·m <sup>2</sup> )	Min. 75 cd/(lx·m <sup>2</sup> )	Pass





4 Retroreflection After Folding At Cold Temperatures (ANSI/ISEA 107-2020, 9.2 & 10.4.3)

Test Exposure	Test Method
Folding At Cold Temperatures	ISO 4675:2017, Exposure At (-20±1)°C For 4 Hours

Sample	x-Direction (Horizontal: $\epsilon=0^\circ$ )				
	Observation Angle	Entrance Angle $\beta_1$ ( $\beta_2 = 0^\circ$ )	Coefficient Of Retroreflection	Requirement	Pass / Fail
-	0.20° [12']	5°	500 cd/(lx·m <sup>2</sup> )	Min. 100 cd/(lx·m <sup>2</sup> )	Pass

Sample	y-Direction (Vertical: $\epsilon=90^\circ$ )				
	Observation Angle	Entrance Angle $\beta_1$ ( $\beta_2 = 0^\circ$ )	Coefficient Of Retroreflection	Requirement	Pass / Fail
-	0.20° [12']	5°	496 cd/(lx·m <sup>2</sup> )	Min. 75 cd/(lx·m <sup>2</sup> )	Pass

5 Retroreflection After Temperature Variation (ANSI/ISEA 107-2020, 9.2 & 10.4.4)

Test Exposure	Test Method
Temperature Variation	a) For 12 H At 50±2°C; Immediately Followed By b) 20 H At -30±2°C; Immediately Followed By c) For At Least 2 H At 20±2°C And 65±5 % Relative Humidity

Sample	x-Direction (Horizontal: $\epsilon=0^\circ$ )				
	Observation Angle	Entrance Angle $\beta_1$ ( $\beta_2 = 0^\circ$ )	Coefficient Of Retroreflection	Requirement	Pass / Fail
-	0.20° [12']	5°	503 cd/(lx·m <sup>2</sup> )	Min. 100 cd/(lx·m <sup>2</sup> )	Pass

Sample	y-Direction (Vertical: $\epsilon=90^\circ$ )				
	Observation Angle	Entrance Angle $\beta_1$ ( $\beta_2 = 0^\circ$ )	Coefficient Of Retroreflection	Requirement	Pass / Fail
-	0.20° [12']	5°	499 cd/(lx·m <sup>2</sup> )	Min. 75 cd/(lx·m <sup>2</sup> )	Pass



6 Retroreflection After Washing (ANSI/ISEA 107-2020, 9.2 & 10.4.5.2 (Washing))

Wash Condition:

Washing Standard:	ISO 6330:2012
Machine:	Type A
Reagent:	Reference Detergent 3
Washing Procedure:	6N
Bleaching Procedure:	-
Drying Procedure:	After Each Wash Cycle Dried The Samples At 50±5°C.
Ironing Procedure:	-
Professional Textile Care Procedure:	-
Number Of Cycles:	25

Sample	x-Direction (Horizontal: $\epsilon=0^\circ$ )				
	Observation Angle	Entrance Angle $\beta_1$ ( $\beta_2 = 0^\circ$ )	Coefficient Of Retroreflection	Requirement	Pass / Fail
-	0.20° [12']	5°	278 cd/(lx·m <sup>2</sup> )	Min. 100 cd/(lx·m <sup>2</sup> )	Pass

Sample	y-Direction (Vertical: $\epsilon=90^\circ$ )				
	Observation Angle	Entrance Angle $\beta_1$ ( $\beta_2 = 0^\circ$ )	Coefficient Of Retroreflection	Requirement	Pass / Fail
-	0.20° [12']	5°	270 cd/(lx·m <sup>2</sup> )	Min. 75 cd/(lx·m <sup>2</sup> )	Pass

7 Retroreflection (Wet Performance) (ANSI/ISEA 107-2020, 9.2 & Appendix B)

Test Exposure	Test Method
Retroreflective Wet Performance	ANSI/ISEA 107-2020, Appendix B

Sample	x-Direction (Horizontal: $\epsilon=0^\circ$ )				
	Observation Angle	Entrance Angle $\beta_1$ ( $\beta_2 = 0^\circ$ )	Coefficient Of Retroreflection	Requirement	Pass / Fail
-	0.20° [12']	5°	358 cd/(lx·m <sup>2</sup> )	Min. 100 cd/(lx·m <sup>2</sup> )	Pass

Sample	y-Direction (Vertical: $\epsilon=90^\circ$ )				
	Observation Angle	Entrance Angle $\beta_1$ ( $\beta_2 = 0^\circ$ )	Coefficient Of Retroreflection	Requirement	Pass / Fail
-	0.20° [12']	5°	343 cd/(lx·m <sup>2</sup> )	Min. 75 cd/(lx·m <sup>2</sup> )	Pass





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TEST REPORT

Tests Conducted (As Requested By The Applicant)



中国认可  
国际互认  
检测  
TESTING  
CNAS L0220

Number: GZHT91069017



*End Of Report*

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/ lydiayang

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