

**E3. Declaration of Conformity**

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

|  |
|--|
| Certificate No. C24122-2020  |
| Supplier name and address: Tingley Rubber Corporation<br>1551 S. Washington Ave., Suite 403<br>Piscataway, NJ 08854  |
| Product information (name, model number, part number or other information as applicable):<br>Icon Coat, Fluorescent Yellow-Green<br>Model Number: C24122   |
| 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 type="checkbox"/> Knitted <input checked="" type="checkbox"/> Woven <input type="checkbox"/> Other:<br>_____ |
| Report #: GZHT91069709   | Material Content (such as Polyester, Modacrylic, and others):<br>Polyurethane on 300 denier Polyester                              |
| Date: 11/12/2021   | Weight: 5.5 oz                      Color: Fl. Yellow-Green  |
| Description: Breathable interior coated Polyurethane on 300D Polyester with exterior DWR coating |  |

**Material 2 Identification**

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

**Material 3 Identification**

|              |   |
|--------------|---|
| Test Lab:    | Material Type: <input type="checkbox"/> Knitted <input type="checkbox"/> Woven <input type="checkbox"/> Other:<br>_____ |
| 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.: GZHT9106970902

Certificate Issue Date: Nov 12, 2021

Attn: ANNE WANG

Description: One (1) piece of submitted sample said to be Hi-Vis Yellow Breathable PU on 300D Polyester.

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  
Water Repellency Protection  
Waterproof Protection  
Water Vapor Permeability  
Color Fastness To Laundry Of Background Material  
Dimension Change Of Background Material  
Tear Resistance

The test results are given in our report  
No.: GZHT91069709 Dated: Nov 12, 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 Conformality Declaration Released By Manufacturer.

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



Guiliang Dong  
Senior Lab Manager





Total Quality. Assured.

TEST REPORT



中国认可  
国际互认  
检测  
TESTING  
CNAS L0220

Number: GZHT91069709

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

Date: Nov 12, 2021

Attn: ANNE WANG

Sample Description:

One (1) piece of submitted sample said to be Hi-Vis Yellow Breathable PU on 300D Polyester.  
Standard : ANSI/ISEA 107-2020  
Buyer : Tingley Rubber Corporation  
Ref. No. : Hi-Vis YG Breathable PU on 300D Polyester, #202105/LOT11  
Goods Exported to : U.S.A  
Date Received/Date Test Started Oct. 11, 2021  
Date Final Information Confirmed/ Nov. 10, 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



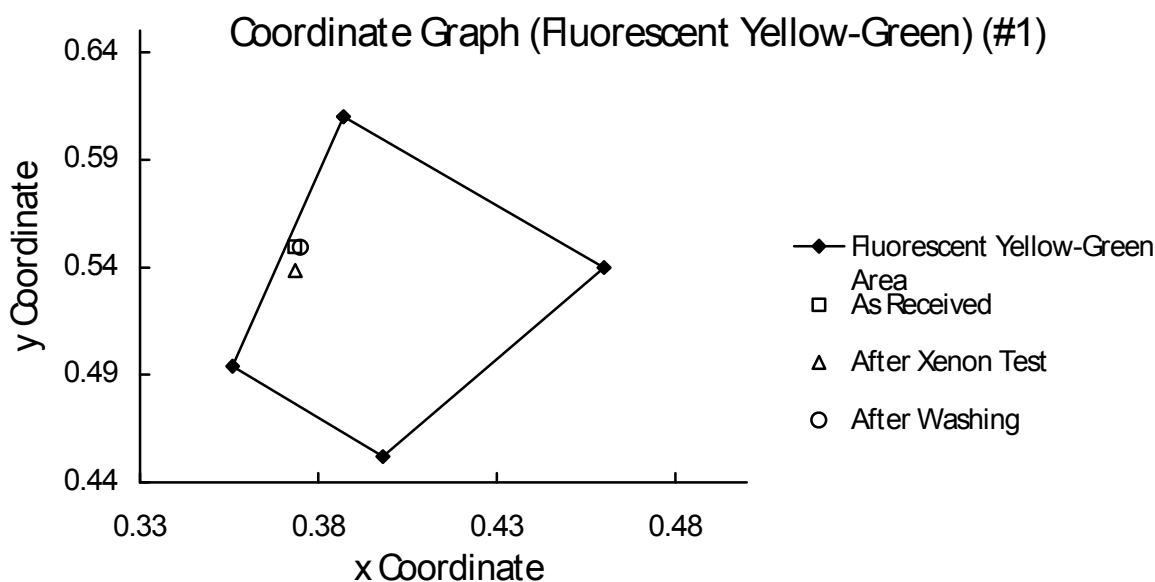
- 1 Color Performance Of Background And Combined-performance Materials (ANSI/ISEA 107-2020, 8.1.1 (Prior To Exposure Tests) & 8.1.2 (After Xenon Test) & ASTM E1164-17)

| Sample | Color                     | Pre-condition             | Chromaticity Coordinates |        |        | Total Luminance Factor | Requirement | Pass/Fail |
|--------|---------------------------|---------------------------|--------------------------|--------|--------|------------------------|-------------|-----------|
|        |                           |                           | $\epsilon$               | x      | y      | Y (%)                  |             |           |
| -      | Fluorescent Yellow -Green | As Received (#1)          | 0°                       | 0.3734 | 0.5496 | 130                    | -           | -         |
|        |                           |                           | 90°                      | 0.3733 | 0.5497 | 130                    | -           | -         |
|        |                           |                           | Mean                     | 0.3734 | 0.5496 | 130                    | *           | Pass      |
|        |                           | After Xenon Test (# & #1) | 0°                       | 0.3736 | 0.5385 | 125                    | -           | -         |
|        |                           |                           | 90°                      | 0.3734 | 0.5387 | 125                    | -           | -         |
|        |                           |                           | Mean                     | 0.3735 | 0.5386 | 125                    | *           | 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°                       | 0.3748 | 0.5493 | 128                    | -                       | -         |
|        |                           |                         | 90°                      | 0.3750 | 0.5493 | 129                    | -                       | -         |
|        |                           |                         | Mean                     | 0.3749 | 0.5493 | 128                    | *                       | 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<br>Y (%) |
|-----------------------------|--------------------------|-------|---|
|                             | x                        | y     |   |
| Fluorescent<br>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 4.5 | 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 4.5   |                |      |
|        |               | -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 4.5   |                |      |
|        |               | -Polyester | Grade 4.5   |                |      |
|        |               | -Acrylic   | Grade 4.5   |                |      |
|        |               | -Wool      | Grade 4.5   |                |      |





Total Quality. Assured.

TEST REPORT

Tests Conducted (As Requested By The Applicant)



中国认可  
国际互认  
检测  
TESTING  
CNAS L0220

Number: GZHT91069709

5 Water Repellency Protection (Spray Test) (ANSI/ISEA 107-2020, 8.5.1 & AATCC 22-2017)

Specimen Conditioning:

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

Test Condition:

Water Temperature: (27 ± 1)°C  
Water Volume: 250 ml  
Spray Time 25 - 30 Seconds

| Sample | Pre-treatment              | Results | Requirement | Pass/Fail |
|--------|----------------------------|---------|-------------|-----------|
| -      | As Received                | 100     | Min. 90     | Pass      |
|        | After 5 Laundry Cycles (*) | 80      | Min. 70     | Pass      |

Remark: \* = AATCC 135-2018





6 Waterproof Protection (Hydrostatic Pressure Test) (ANSI/ISEA 107-2020, 8.5.3 & AATCC 127-2017)

Specimen Conditioning:

Temperature: (20 ± 2)°C

Relative Humidity: (65 ± 5)%

Period: 24 Hours

Test Condition:

Equipment Type: Hydrostatic Head Tester

Water Temperature: (21 ± 2)°C

Gradient: 60 mbar/min

| Sample | Pre-treatment             | Specimen | Results  | Requirement | Pass/Fail |
|--------|---------------------------|----------|----------|-------------|-----------|
|        | As Received               | 1        | > 500 cm | Min. 200 cm | Pass      |
|        |                           | 2        | > 500 cm | Min. 200 cm | Pass      |
|        |                           | 3        | > 500 cm | Min. 200 cm | Pass      |
|        | After 5 Laundry Cycles(*) | 1        | > 500 cm | Min. 200 cm | Pass      |
|        |                           | 2        | > 500 cm | Min. 200 cm | Pass      |
|        |                           | 3        | > 500 cm | Min. 200 cm | Pass      |

| Sample | Pre-treatment              | Specimen | Results  | Applicant's Requirement | Pass/Fail |
|--------|----------------------------|----------|----------|-------------------------|-----------|
|        | After 25 Laundry Cycles(*) | 1        | > 500 cm | Min. 200 cm             | Pass      |
|        |                            | 2        | > 500 cm | Min. 200 cm             | Pass      |
|        |                            | 3        | > 500 cm | Min. 200 cm             | Pass      |

Remark: \* = AATCC 135-2018





7 Water Vapor Permeability For Background Materials Classified As Breathable (ANSI/ISEA 107-2020, 8.6 & ASTM E96-16, Procedure B – Upright For Microporous )

Test Condition:

Temperature: 23°C

Relative Humidity: 50%

| Sample | Specimen | Results (WVT)                    | Requirement | Pass/Fail |
|--------|----------|----------------------------------|-------------|-----------|
|        | 1        | 892.5 g/m <sup>2</sup> /24 Hours | -           | -         |
|        | 2        | 851.9 g/m <sup>2</sup> /24 Hours | -           | -         |
|        | 3        | 872.2 g/m <sup>2</sup> /24 Hours | -           | -         |
|        | Average  | 872.2 g/m <sup>2</sup> /24 Hours | *           | Pass      |

Remark: \* = Min. 600 g/m<sup>2</sup>/24 Hours For Procedure B

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

8 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:  |           | Min. Grade 3.0 | Pass        |
|        | -Acetate      | Grade 4.0 |                |             |
|        | -Cotton       | Grade 4.5 |                |             |
|        | -Nylon        | Grade 4.0 |                |             |
|        | -Polyester    | Grade 4.5 |                |             |
|        | -Acrylic      | Grade 4.5 |                |             |
|        | -Wool         | Grade 4.5 |                |             |

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



9 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  | -1.2% | *           | Pass        |
|        | Width   | -0.4% | *           | Pass        |

Remark: \* =

| Material Type | Knit Fabrics And All Other Materials |
|---------------|--------------------------------------|
| Length        | Not Exceed $\pm 7\%$                 |
| Width         | Not Exceed $\pm 5\%$                 |

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

10 Tear Resistance Of Woven Materials (Uncoated, Coated Or Laminate) (ANSI/ISEA 107-2020, 8.4.2 & ASTM D1424-09(2019))

Preconditioning:  
Temperature:  $(20 \pm 2)^\circ\text{C}$   
Relative Humidity:  $(65 \pm 5)\%$   
Period: 24 hours

| Sample | Specimen | Machine Direction       | Requirement | Pass/Fail |
|--------|----------|-------------------------|-------------|-----------|
|        | 1        | Over 62.8 N#            | -           | -         |
|        | 2        | Over 62.8 N#            | -           | -         |
|        | 3        | Over 62.8 N#            | -           | -         |
|        | 4        | Over 62.8 N#            | -           | -         |
|        | 5        | Over 62.8 N#            | -           | -         |
|        | Average  | Over 62.8 N#            | Min. 13 N   | Pass      |
|        |          |                         |             |           |
|        |          |                         |             |           |
| Sample | Specimen | Cross-Machine Direction | Requirement | Pass/Fail |
|        | 1        | Over 62.8 N#            | -           | -         |
|        | 2        | Over 62.8 N#            | -           | -         |
|        | 3        | Over 62.8 N#            | -           | -         |
|        | 4        | Over 62.8 N#            | -           | -         |
|        | 5        | Over 62.8 N#            | -           | -         |
|        | Average  | Over 62.8 N#            | Min. 13 N   | Pass      |

Remark: # = The maximum capacity of the tester is 62.8 N  
N = Newton

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.
- 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



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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

**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号之二第十一-八层 02房、01房 101、  
E201、E301、E401、E501、E601、E701、E801  
Tel: +86 208213 9001 Fax: +86 20 82089909 Postcode: 510663





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<br>b) 20 H At -30±2°C; Immediately Followed By<br>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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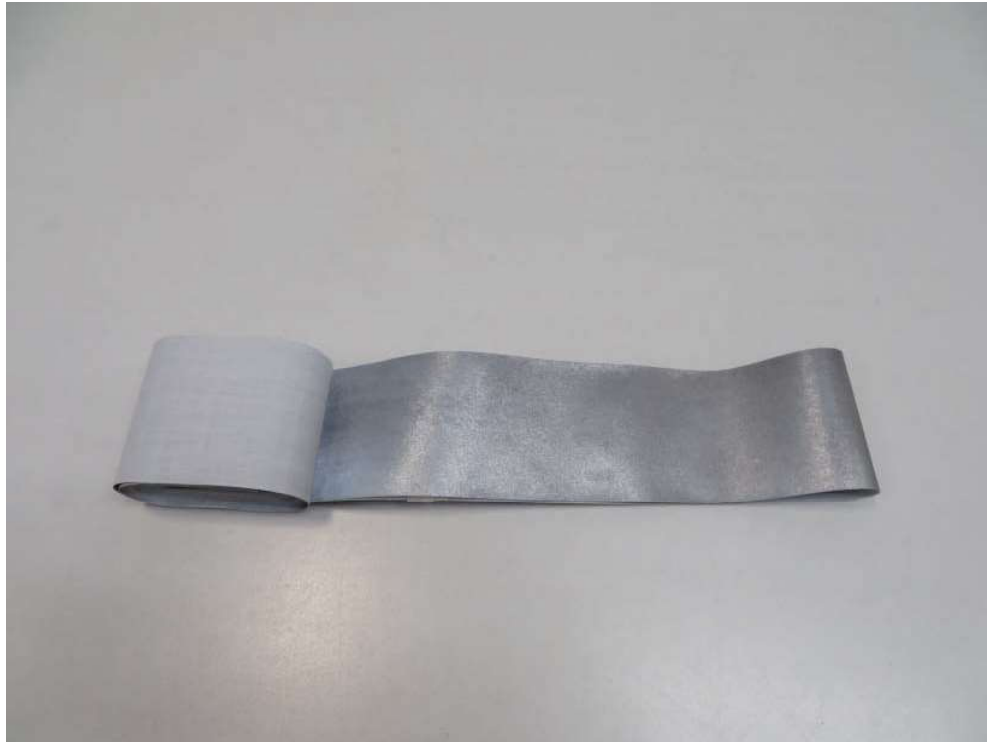
TEST REPORT

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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