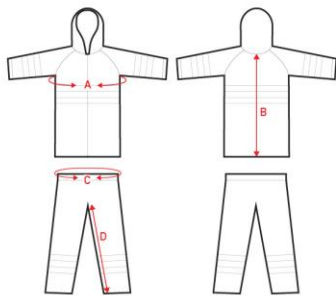


# High Visibility Rain Set



|   | Measurement                            | M/L | XL/XXL | UOM |
|---|----------------------------------------|-----|--------|-----|
| A | Jacket : Round chest width             | 128 | 136    | CM  |
| B | Jacket : Center back length            | 80  | 88     | CM  |
| C | Trousers : Round waist stretched width | 112 | 124    | CM  |
| D | Trousers : Inseam length               | 70  | 77     | CM  |



## High Visibility Rain Set

Hooded long sleeve jacket with front zipper closure

Trousers with elastic waistband

Reflective strip 50 mm width on sleeves, body and legs

Fabric and Reflective tape are EN20471 certified quality.

Fabric : 100% polyester 135 g/m2, with PU milky coating

Reflective tape : Width 50 mm

Zipper : Vislon no.5

# Certificate of Test



For Zhejiang Chinastars New Materials  
Group Co., Ltd  
24th floor, Jinzun Tower  
Zunbao Mansion, No.98 Shimin Street  
Shangcheng District  
Hangzhou  
China

Our reference SPC0344316 /2307 /2  
Date 15 August 2023

**Product** Retro-reflective Separate Performance Material – CSR-1303-2

**Test Data** EN ISO 20471:2013+A1:2016

|     |                                                                                                                                                                  |      |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 6.1 | Retro-reflective performance of new material                                                                                                                     | PASS |
| 6.2 | Retro-reflective performance after test exposure -<br>Abrasion, flexing, folding at cold temperature, & temperature variation<br>Under the influence of rainfall | PASS |
| 6.2 | Retro-reflectivity after washing (ISO6330), 25 cycles, 60°C with normal heat<br>tumble drying after each wash                                                    | PASS |
| 6.2 | Retro-reflectivity after washing (ISO6330), 25 cycles, 40°C with normal heat<br>tumble drying after each wash                                                    | PASS |

**Description** Retro-reflective separate performance material

**Recommendations** The following test report provides full details of test data:  
SPC0344316 /2307 /2

**Report date**

15 August 2023

Tests marked † fall outside the UKAS Accreditation Schedule for SATRA.

All interpretations are outside the scope of UKAS  
Accreditation and are based on SATRA experience.

This report is designed to indicate the performance of the sample tested by SATRA.  
SATRA have not approved the on-going quality control. It is the responsibility of  
purchasers to satisfy themselves that other production batches perform similarly.

**SIGNATURE**

J Darlow  
Team Leader  
Safety Products

SATRA Technology Centre, Wyndham Way, Telford Way, Kettering, Northamptonshire, NN16 8SD, United Kingdom  
Tel: +44 (0) 1536 410000 Fax: +44 (0) 1536 410626 email: [info@satra.co.uk](mailto:info@satra.co.uk) Website: [www.satra.co.uk](http://www.satra.co.uk)

# CERTIFICATE OF TEST

Certificate of test nº

AITEX declares that the articles:

Given by the company:

"WT-4 HV YELLOW"  
"WT-4 HV ORANGE"

According information supplied by the customer:  
Composition: 150D Polyester oxford fabric with PU milky coating  
Weight: 130 – 140 gsm  
Color: Hi vis Yellow / Hi vis Orange

Complies with the requirements of the standard/s:

**EN ISO 20471:2013+EN ISO 20471:2013+AMD1:2016. HIGH VISIBILITY CLOTHING. TEST METHODS AND REQUIREMENTS**

|            | TEST                                                                                      | RESULTS                                            | REQUIREMENTS                                                                                               | REPORT No. |
|------------|-------------------------------------------------------------------------------------------|----------------------------------------------------|------------------------------------------------------------------------------------------------------------|------------|
| Clause 5.1 | Yellow fabric<br>Determination of chromaticity coordinates<br>- As received               | x = 0,3880<br>y = 0,5410<br>$\beta_{min} = 1,1000$ | x:0,3870 y:0,6100<br>x:0,3560 y:0,4940<br>x:0,3980 y:0,4520<br>x:0,4600 y:0,5400<br>$\beta_{min}: 0,7000$  | 2023CN0277 |
|            | Yellow fabric<br>Determination of chromaticity coordinates<br>- After 50 washing cycles   | x = 0,3880<br>y = 0,5410<br>$\beta_{min} = 1,1400$ |                                                                                                            |            |
| Clause 5.2 | Yellow fabric<br>Determination of chromaticity coordinates<br>- After Xenon test exposure | x = 0,3850<br>y = 0,5350<br>$\beta_{min} = 1,0800$ |                                                                                                            |            |
| Clause 5.1 | Orange fabric<br>Determination of chromaticity coordinates<br>- As received               | x = 0,5940<br>y = 0,3570<br>$\beta_{min} = 0,4700$ | x:0,6100 y:0,3900<br>x:0,5350 y:0,3750<br>x:0,5700 y:0,3400<br>x:0,6550 y:0,34500<br>$\beta_{min}: 0,4000$ | 2023CN0277 |
|            | Orange fabric<br>Determination of chromaticity coordinates<br>- After 50 washing cycles   | x = 0,5930<br>y = 0,3560<br>$\beta_{min} = 0,4900$ |                                                                                                            |            |
| Clause 5.2 | Orange fabric<br>Determination of chromaticity coordinates<br>- After Xenon test exposure | x = 0,5580<br>y = 0,3610<br>$\beta_{min} = 0,5400$ |                                                                                                            |            |

Remark: Washing instructions according to Standard EN ISO 6330:2021, method 4N and F type drying (type A1 tumble drying).

The test results above indicated are shown in the testing report:

Issued by AITEX on: 05/05/2023.

This document is of application for the tested sample, according to the tests that have been done in the previously mentioned dates in the reports above shown. This does not implies any monitoring or control activity on this product done by AITEX. This document is a test summary and does not imply a product certification.

Signed by: Raquel Muñoz González  
Manager Innovation Area

Firmado  
digitalmente por  
[ISABELLOPIS]  
LUMBRERAS  
Fecha: 2023.05.09  
11:47:16 +02'00'

## CERTIFICATE OF TEST

Certificate of test n°

AITEX declares that the articles:

Given by the company:

"WT-4 HV YELLOW"  
"WT-4 HV ORANGE"

According information supplied by the customer:  
Composition: 150D Polyester oxford fabric with PU milky coating  
Weight: 130 - 140 gsm  
Color: Hi vis Yellow / Hi vis Orange

Complies with the requirements of the standard/s:

**EN ISO 20471:2013+EN ISO 20471:2013+AMD1:2016. HIGH VISIBILITY CLOTHING. TEST METHODS AND REQUIREMENTS**

| TEST         |                                                                 | RESULTS                                      |             | REQUIREMENTS                                                      | REPORT No. |
|--------------|-----------------------------------------------------------------|----------------------------------------------|-------------|-------------------------------------------------------------------|------------|
| Clause 5.3.1 | Yellow fabric<br>Colour fastness to rubbing                     | Dry staining = 4-5                           |             | Dry staining ≥ 4                                                  | 2023CN0277 |
|              | Orange fabric<br>Colour fastness to rubbing                     | Dry staining = 4-5                           |             |                                                                   |            |
| Clause 5.3.2 | Yellow fabric<br>Colour fastness to perspiration                | Change in colour = 5<br>Staining = 4-5       |             | Change in colour ≥ 4<br>Staining ≥ 4                              | 2023CN0277 |
|              | Orange fabric<br>Colour fastness to perspiration                | Change in colour = 5<br>Staining = 4-5       |             |                                                                   |            |
| Clause 5.3.3 | Yellow fabric<br>Colour fastness to washing<br>Test A1M at 40°C | Change in colour = 5<br>Staining = 4-5       |             | Change in colour ≥ 4-5<br>Staining ≥ 4                            | 2023GN0277 |
|              | Orange fabric<br>Colour fastness to washing<br>Test A1M at 40°C | Change in colour = 5<br>Staining = 4-5       |             |                                                                   |            |
| Clause 5.4   | Dimensional stability after 5 washing cycles                    | Warp: 0,0%                                   | Weft: -1,0% | ≤ ±3%                                                             | 2023CN0277 |
| Clause 5.5.3 | Tensile resistance                                              | Warp: 0,0%                                   | Weft: -1,0% | ≥ 100 N                                                           | 2023CN0277 |
| Clause 5.5.3 | Tear resistance                                                 | Warp: 0,0%                                   | Weft: -1,0% | ≥ 20 N                                                            | 2023CN0277 |
| Clause 5.6.3 | Water vapour resistance (R <sub>e</sub> )                       | Class 1<br>R <sub>e</sub> = 300,69 (m²·Pa/W) |             | According EN 343:2019<br>Class 1<br>R <sub>e</sub> ≤ 40 (m²·Pa/W) | 2023CN0277 |

Remark: Washing instructions according to Standard EN ISO 6330:2021, method 4N and F type drying (type A1 tumble drying).

**RAIL INDUSTRY STANDARD RIS-3279-TOM ISSUE 2:2019: HIGH VISIBILITY CLOTHING**

|              | TEST                         | RESULTS                                               | REQUIREMENTS                                            | REPORT No. |
|--------------|------------------------------|-------------------------------------------------------|---------------------------------------------------------|------------|
| Clause 4.4.3 | Determination of coordinates | x = 0,5940<br>y = 0,3570<br>β <sub>min</sub> = 0,4700 | According Table 2,<br>section 5 of BS EN ISO 20471:2013 | 2023CN0277 |

The test results above indicated are shown in the testing report:

2023CN0277

Issued by AITEX on: 05/05/2023.

This document is of application for the tested sample, according to the tests that have been done in the previously mentioned dates in the reports above shown. This does not implies any monitoring or control activity on this product done by AITEX. This document is a test summary and does not imply a product certification.

Signed by: Raquel Muñoz González  
Manager Innovation Area

Firmado digitalmente por  
[SABELLQIPG]  
LUMBRERAS  
Fecha: 2023.05.09  
11:47:29 +02'00'

# CERTIFICATE OF TEST

Certificate of test nº

AITEX declares that the articles:

Given by the company:

"WT-4 HV YELLOW"  
"WT-4 HV ORANGE"

According information supplied by the customer:  
Composition: 150D Polyester oxford fabric with PU milky coating  
Weight: 130 – 140 gsm  
Color: Hi vis Yellow / Hi vis Orange

Complies with the requirements of the standard/s:

**EN 343:2019 PROTECTIVE CLOTHING - PROTECTION AGAINST RAIN.**

|            | TEST                                                | RESULTS                                       |                  | REQUIREMENTS                              | REPORT No. |
|------------|-----------------------------------------------------|-----------------------------------------------|------------------|-------------------------------------------|------------|
| Clause 4.2 | Water penetration resistance as received            | Class 1<br>> 20000 Pa                         |                  | Class 1<br>≥ 8000 Pa                      | 2023CN0277 |
|            | Water penetration resistance after 5 washing cycles | Class 4<br>> 20000 Pa                         |                  | Class 4<br>≥ 20000 Pa                     |            |
|            | Water penetration resistance after abrasion cycles  | Class 4<br>> 20000 Pa                         |                  | Class 4<br>≥ 20000 Pa                     |            |
|            | Water penetration resistance after flexing cycles   | Class 4<br>> 20000 Pa                         |                  | Class 4<br>≥ 20000 Pa                     |            |
|            | Water penetration resistance after fuel and oil     | Class 4<br>> 20000 Pa                         |                  | Class 4<br>≥ 20000 Pa                     |            |
| Clause 4.3 | Water vapour resistance, (R <sub>et</sub> )         | Class 1<br>R <sub>et</sub> = 300,69 (m²·Pa/W) |                  | Class 1<br>R <sub>et</sub> ≤ 40 (m²·Pa/W) | 2023CN0277 |
| Clause 4.4 | Fabric tensile strength                             | Warp:<br>1072 N                               | Weft:<br>715 N   | ≥ 450 N                                   | 2023CN0277 |
| Clause 4.5 | Tear resistance                                     | Warp:<br>41,26 N                              | Weft:<br>43,02 N | ≥ 20 N                                    | 2023CN0277 |
| Clause 4.7 | Dimensional change after 5 washing cycles           | Warp:<br>0,0%                                 | Weft:<br>-1,0%   | ≤ ±3%                                     | 2023CN0277 |

Remark: Washing instructions according to Standard EN ISO 6330:2021, method 4N and F type drying (type A1 tumble drying).

The test results above indicated are shown in the testing report:

2023CN0277

Issued by AITEX on: 05/05/2023.

This document is of application for the tested sample, according to the tests that have been done in the previously mentioned dates in the reports above shown. This does not implies any monitoring or control activity on this product done by AITEX. This document is a test summary and does not imply a product certification.

Signed by: Raquel Muñoz González  
Manager Innovation Area