

Documentation No.: *Reflective vest/89315, 89316*

Creation Date: *2022-10-15*

Revision No.: *Version 0*

Revision Date: /

TECHNICAL FILE

**Protective clothing – Enhanced visibility equipment
for medium risk situations -Test methods and
requirements**

-EN 17353: 2020

Technical File to comply with the requirements of the Personal Protective Equipment
Regulation (EU) 2016/425

Section 1

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Section 2**Manufacturer/ Supplier & Product General Information****1. Manufacturer/ Supplier & General Information**

| | |
|---|---|
| Manufacturer Name | Roth GmbH |
| Manufacturer Address | Gewerbestraße 9,08115 Lichtentanne Germany |
| Supplier Name | Nanjing Hengyuan Apparel Co.,Ltd |
| Supplier Address | West 506, Building 1,No.23,Huashen Avenue,Yuhuatai District,Nanjing,China |
| EU declaration of conformity can be accessed at | www.roth-ideen.de |

2. Product General Information

| | |
|---------------------------------------|--|
| Description of products | Reflective Vest |
| Description standard/ Type | EN 17353:2020 Type AB3 |
| Product style/order No. and colors | 89315: pink 89316: yellow |
| Size(s) range | One size |
| Destination Country | Germany |
| Brand name (if any) | ROTH |
| Brand Owner Name | Roth GmbH |
| Brand Owner Address | Gewerbestraße 9,08115 Lichtentanne Germany |

| | |
|---|---|
| Product style/ order No. and colors | Reflective Vest 89315: pink, 89316: yellow |
| Size(s) range | One Size |



89315-pink is same design with 89316-yellow, but different color.

2.Parts List

| | Colour/ composition | Supplier name/Address |
|---------------------------|---|---|
| Fluorescent material | Color: Fluorescent pink, Fluorescent yellow Material: 100% polyester | Nanjing Hengyuan Apparel Co., Ltd Building 1, No.23, Huashen Avenue, Yuhuatai District, Nanjing |
| Wrapping | Color: burgundy, blue Material: 100% polyester | Nanjing Hengyuan Apparel Co., Ltd Building 1, No.23, Huashen Avenue, Yuhuatai District, Nanjing |
| Retro-reflective material | Color: silver Material: 100% polyester with micro-glass beads | Nanjing Hengyuan Apparel Co., Ltd Building 1, No.23, Huashen Avenue, Yuhuatai District, Nanjing |
| Sewing threads | Color: pink, yellow, burgundy, blue Material: 100% polyester | Nanjing Hengyuan Apparel Co., Ltd Building 1, No.23, Huashen Avenue, Yuhuatai District, Nanjing |
| Wash label | Color: white Material: 100% polyester | Nanjing Hengyuan Apparel Co., Ltd Building 1, No.23, Huashen Avenue, Yuhuatai District, Nanjing |
| Zipper | Color: white Material: Zipper tape: 50% nylon 50% cotton Zipper teeth: 100% plastic Zipper head: Metal | Nanjing Hengyuan Apparel Co., Ltd Building 1, No.23, Huashen Avenue, Yuhuatai District, Nanjing |
| Print | Color: wine/silver, blue/silver Material: 100% polyester with print | Nanjing Hengyuan Apparel Co., Ltd Building 1, No.23, Huashen Avenue, Yuhuatai District, Nanjing |

Section 4

Manufacture Information

1. Sequence of Manufacture

| Sequence No. | Manufacture Description |
|--------------|---|
| 1 | Purchasing material |
| 2 | Checking the material with QC machine and making approval sample |
| 3 | Send layouts for confirmation and confirming the instruction and the wash label |
| 4 | Cutting fabric based on confirmation of approval sample |
| 5 | Sewing edges/wrapping and fixing wash label |
| 6 | Sewing reflective tape |
| 7 | Fixing the zipper and sewing the shoulder |
| 8 | Overlapping, quality checking and outgoing inspections. |
| 9 | The final garment is packed by the poly-bag, the user information is given to each individual package |

2. Quality Control Procedure

| No. | Procedure | Quality Control |
|-----|----------------------|--|
| 1 | Raw material control | <p>The 3rd party testing under EN 17353 report should be submitted including the background materials and retro-reflective materials. Supplier should also submit the "Declaration of Innocuousness" of raw materials.</p> <p>Bulk production products will be sent to 3rd party lab to retest EN 17353, EN ISO 13688 from batch to batch/year to year to ensure performance. Rework the problem goods. Make sure all the goods are in good quality.</p> |
| 2 | In house lab testing | The appearance and physical performance will be checked by own lab. Reject the raw materials if they cannot meet the minimum requirement |
| 3 | Cutting | Cutting the raw materials as per the specification, make sure the cutting board is clear to avoid pollution. |
| 4 | Stitching | During the stitching, Online QC will pick up 1 sample per batch to test the seam strength in own lab. Change the stitching thread if any failure. |
| 5 | Labeling | The care label should be stitched in the inside back neck, The label must be visible & legible |
| 6 | Ergonomics | The QC will carry out the fitting test for the final garments 1 sample per batch. Make sure the size is correct. |
| 7 | Packing | The final garment is packed by the poly-bag, the user information is given to each individual package |

The Third Party Tests

Material performance of background materials and Retro-reflective of reflective materials will be carried out by an external independent ISO 17025 accredited test house (or equivalent). See Section 8: Test reports.

Section 5

Essential Health and Safety Requirements

In accordance with Personal Protective Equipment Regulation (EU) 2016/425 - Annex II

| Regulation (EU) 2016/425 Annex II | Conformity |
|---|---|
| 1.1.2.2 Classes of protection appropriate to different levels of risk | EN 17353 :2020, clause 4.1 |
| 1.2.1 Absence of inherent risks and other nuisance factors | EN 17353 :2020, clause 4.1, 4.2, 5.2, 5.3, 5.4, 6.2 |
| 1.3.2 Lightness and strength | EN 17353 :2020, clause 6.1.2, 6.1.3, 6.4 |
| 1.4 Manufacturer's instructions and information | EN 17353 :2020, clause 8.9 |
| 2.4 PPE subject to ageing | EN 17353 :2020, clause 7.5 |
| 2.12 PPE bearing one or more identification markings or indicators directly or indirectly relating to health and safety | EN 17353 :2020, clause 8 |
| 2.13 PPE capable of signalling the user's presence visually | EN 17353 :2020, clause 6.1.1, 6.3.1, 6.3.2, 6.3.3 |

Section 6

Manufacturer's Instructions and Information

Sample Description: Reflective Vest, 100% polyester

Product Style/Order No& Colors : 89315: pink , 89316: yellow

Risks against which the PPE is intended to protect:

The reflective vest is intended to provide conspicuity of the wearer in medium risk situations under any daylight conditions and/ or under illumination by vehicle headlights or searchlights in the dark.

The reflective vest is made of enhanced reflective material It can be used in the night or in low visible weather, and other circumstances that people who wears it is to be noticed. It has great importance to secure the life in people's daily life, and reduce the possibility of emergencies, caused by careless of attention.

| Risk | Standard Clause # | Assessment method |
|--|---------------------|--|
| Day and night visibility Visibility from all sides Design for movement recognition if applicable (not necessarily encircling the torso) Quantity for day and night (not necessarily EN ISO 20471) More freedom in colours and design | EN 17353 clause 5 | Design assessment |
| Night visibility Visibility from all sides Design for movement recognition if applicable (not necessarily encircling the torso) Quantity for day and night (not necessarily EN ISO 20471) No 'gadgets' | EN 17353 clause 5 | Design assessment |
| Enhanced visibility: Quality for day, Day visibility | EN 17353 clause 6.1 | Color performance for fluorescent material |
| Enhanced visibility: Quality for night, Night visibility | EN 17353 clause 6.3 | Photometric performance for retroreflective material |

EN 17353:2020

Type AB3 equipment for daylight and dark conditions



These garments comply with the requirements of (EU) 2016/425 and the above referenced standards

Storage: Always store in clean, dry conditions. Do NOT store in places subject to direct, strong sunlight.

Available Sizes:

Fit according to chest size Allowance built in for comfort and to allow the garment to be worn over light layers of clothing.

Unit: cm

| Size | Chest (A) | Height (B) | |
|----------|-----------|------------|--|
| One size | 40-46 | 110 - 140 | |

Limitations of Use:

Always wear the garment with zipper fastened.

Keep clean: Should the Enhanced Visibility properties of this garment become unrecoverable soiled or contaminated, replace the item with a new one. The reflective vest meets the European standard EN 17353:2020. Safety required only if the right size of the reflective vest is used and applied. Please check the dirt and damage before using. The special features may be restricted or even lost if it is excessive dirty and damaged, please replace it with a new one. The life time of the garment is two years.

Warning: The reflective vest does not protect against chemical hazards, such as heat, fire, electricity, or other mechanical hazards.

Any alterations of the product such as printing of logos may compromise the minimum areas and performance of the product.

Disposal: Follow local disposal rule

Aftercare:



Maximum 5 washes

The stated maximum number and type of cleaning cycles is not the only factor related to the lifetime of the garment. The lifetime depends on usage, care storage, and also, if relevant, on the number of cleaning cycles.

Manufacturer: Roth GmbH

Address: Gewerbestraße 9, 08115 Lichtentanne Germany

EU declaration of conformity can be accessed at: www.roth-ideen.de

Detailed content of the Instructions and information notice is the responsibility for manufacture

Made in China

EU type-examination for Regulation (EU) 2016/425 by

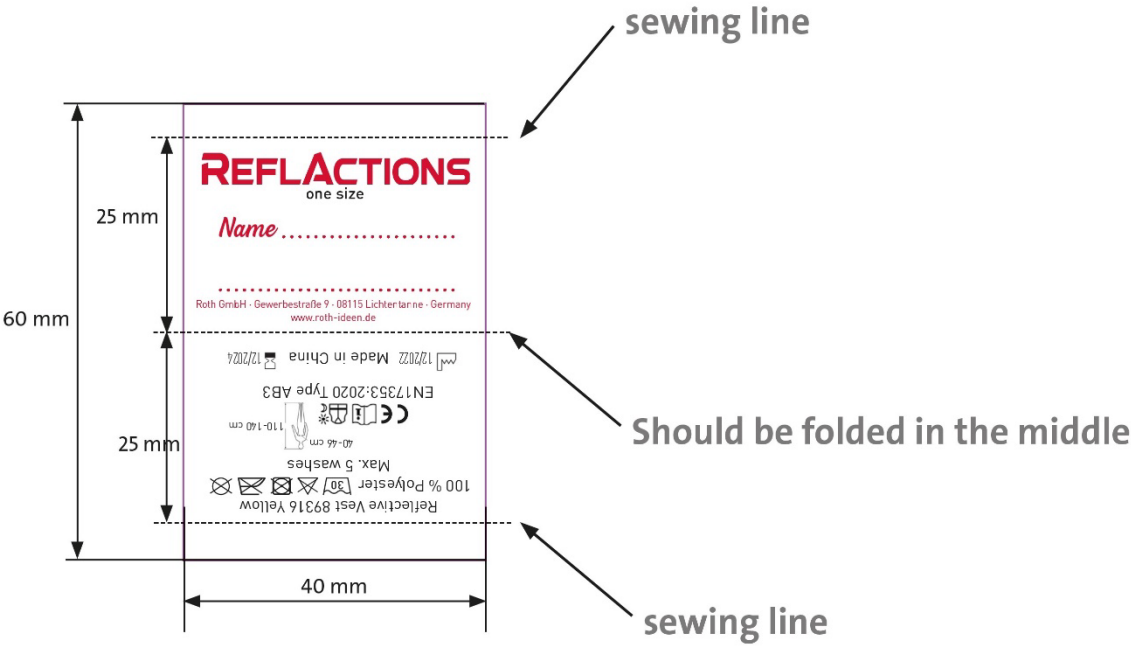
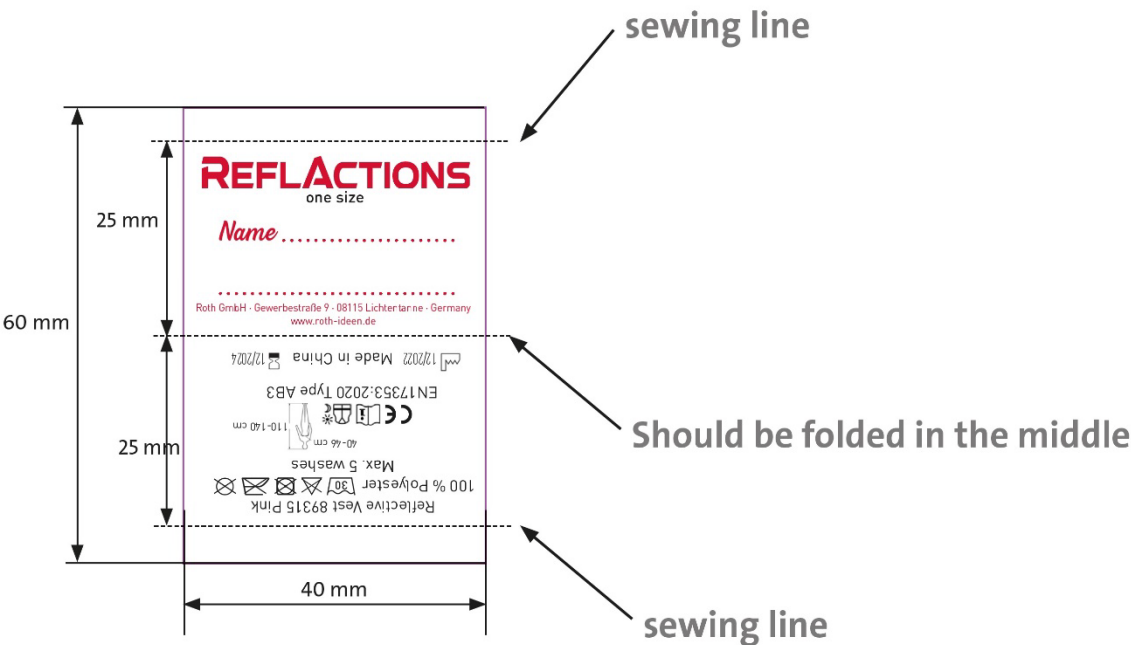
SGS Fimko Oy,

Notified Body Number: 0598

Takomotie 8, FI-00380 Helsinki, Finland.

Section 7

Markings



Section 8**Test reports**

| Clause in EN 17353:2020 | |
|--|-----------------------|
| Type AB3-garments | Test Report No |
| Minimum Area Requirements & Design Requirements | SL52215314966601TX |
| Dimension change | SL52215301379301TX |
| Fluorescent material | Test Report No |
| Chromaticity-As received | SL52215301379301TX |
| Chromaticity-After domestic washed material | |
| Chromaticity after xenon test | |
| Non-fluorescent material and fluorescent material | Test Report No |
| Colour Fastness to Rubbing | SL52215301379301TX |
| Colour Fastness to Perspiration | |
| Colour Fastness to Laundry | |
| Retro-reflective material | Test Report No |
| Retroreflective of new material | SL52215301379301TX |
| Retroreflective after abrasion | |
| Retroreflective after folding at cold temperatures | |
| Retroreflective after temperature variation | |
| Retroreflective-Rainfall exposure | |
| Retroreflective after washing | |

| Clause in EN ISO 13688:2013+A1:2021 | |
|--|-----------------------|
| | Test Report No |
| pH Value | SL52215301379301TX |
| Azo Dye Stuffs | |
| Nickel | |
| Design and Comfort (Ergonomic) | |

Section 9

EU DECLARATION OF CONFORMITY

Manufacturer

Name: Roth GmbH

Address: Gewerbestraße 9, 08115 Lichtentanne Germany

declares that the new PPE described hereafter

PPE (Reflective Vest / 89315, 89316)

is in conformity with the relevant union harmonization legislation (EU) 2016/425 and with relevant harmonized standard, EN 17353:2020 (for the PPE referred to in Annex I)

SGS Fimko Oy,

Notified Body Number: 0598

Takomotie 8, FI-00380 Helsinki, Finland.

performed the EU type-examination (Module B) and issued the EU type-examination certificate ?????

Done at West 506, Building 1, No.23, Huashen Avenue, Yuhuatai District, Nanjing, China

Date 1.11.22


.....
Name **ROTH** GmbH
Gewerbestraße 9
08115 Lichtentanne
Gute Ideen sind Roth
www.roth-ideen.de
On behalf of Company

Section 10

DECLARATION OF MATERIAL INNOCUOUSNESS

The manufacturer or his authorized representative established in the Community:

Manufacturer: Roth GmbH

Address: Gewerbestraße 9, 08115 Lichtentanne Germany

declares that the materials which are coming into contact with the human skin and body used on the new PPE described hereafter

Product description: Reflective Vest

Model No.: 89315, 89316

Size: One size

are known not to undergo appreciable alteration from contact with sweat or with substances likely to be found in toiletries and are known not to cause any harm to human skin and body.

Done at West 506, Building 1, No.23, Huashen Avenue, Yuhuatai District, Nanjing, China

1. 11. 2015

ROTH
Gute Ideen sind Roth
Roth GmbH
Gewerbestraße 9
08115 Lichtentanne
Signature and date
www.roth-ideen.de