



Finnish Institute of  
Occupational Health

FIOH

notified by the Ministry of Social Affairs and Health  
and identified under 0403 grants

# EC TYPE EXAMINATION CERTIFICATE

15293RLS01

for high visibility clothing  
as defined in EN ISO 20471:2013

**Safety Trousers class 1**

**Art. 53590233 44-64 Hi vis orange,**

**Art. 53590234 44-64 Hi vis yellow**

**Safety Trousers class 2**

**Art. 53590235 44-64 Hi vis orange,**

**Art. 53590236 44-64 Hi vis yellow**

Synfiber AS

Oslo, Norway

These products comply with Directive 89/686/EEC,  
as amended

Helsinki, 26 June 2015  
Expiry date: 25 June 2020

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## 1. Applicant

Synfiber AS  
Professor Birkelands vei 35  
N-1081 Oslo  
Norway

## 2. Description and identification of the product

Type: High visibility clothing as defined in EN ISO 20471:2013

Trousers 53590233 44-64 and 53590234 44-64 class 1  
Trousers 53590235 44-64 and 53590236 44-64 class 2

Name: Safety Trousers class 1,  
Art. 53590233 44-64 Hi vis orange, Art. 53590234 44-64 Hi vis yellow  
Safety Trousers class 2,  
Art. 53590235 44-64 Hi vis orange, Art. 53590236 44-64 Hi vis yellow

Size range: 44 ->

Description: Fluorescent material is a fluorescent orange or yellow quality WORKCODE® 71,  
85% PES/15% CO, 295 g/m<sup>2</sup> (IBS International Co. Ltd., Korea).

Non-fluorescent material is black woven fabric 65% PES/35% CO, Twill, 310 g/m<sup>2</sup>  
(Mianyang Jialian Printing & Dyeing Co. Ltd., China).

Alternative reinforcement materials:

- Kordura 500D AC coating, 100% PA, 203 g/m<sup>2</sup>, black (Changshu Huamao Textile Co. Ltd., China)
- 500D cordura, 100% PA, AC coating, 213 g/m<sup>2</sup>, black (Zhejiang Huaxing Garments Co. Ltd, China)
- woven fabric 65% PES/35% CO, Twill, 310 g/m<sup>2</sup>, black (Mianyang Jialian Printing & Dyeing Co. Ltd., China).

Retroreflective material is LOXY® 9201 Silver (Sto-Nor Industri AS, Norway).

Manufacturer: Zhejiang Huaxing Garments Co. Ltd, China

Pictures of the products are on page 3.

## 3. Adequacy and validity of the technical documentation

The documentation supplied by the applicant is listed in Appendix 1. The technical documentation is considered adequate and valid. Materials and the products have been tested in accordance with a harmonized European standard EN ISO 20471:2013 by accredited testing laboratories. The models of the products supplied by the applicant conform to the technical documentation.



#### 4. Compliance with basic health and safety requirements

The products and the technical documentation relating to them comply with the relevant basic health and safety requirements stated in Directive 89/686/EEC Annex II as amended.

Note: Any modification in design, materials, or in the technical documentation, carried out on these type examined products must be brought to the attention of FIOH.

Pictures of the products

Safety Trousers class 1

Art. 53590233 44-64 Hi vis orange



Safety Trousers class 2

Art. 53590235 44-64 Hi vis orange



Art. 53590234 44-64 Hi vis yellow



Art. 53590236 44-64 Hi vis yellow



Appendix 1. Technical documentation

End of EC type examination certificate 15293RLS01.



**Technical documentation regarding EC type examination certificate 15293RLS01**

Product name: Safety Trousers class 1,  
Art. 53590233 44-64 Hi vis orange, Art. 53590234 44-64 Hi vis yellow  
Safety Trousers class 2  
Art. 53590235 44-64 Hi vis orange, Art. 53590236 44-64 Hi vis yellow

Applicant: Synfiber AS, Professor Birkelands vei 35, N-1081 Oslo, Norway

Item of technical documentation	Document identification	Assessment
1. Application for the EC type examination	2015-06-02	
2. Product drawing, construction, and material list	Drawings of the products, 2016-06-02: <ul style="list-style-type: none"><li>Art. 53590233 44-64 Safety Trousers Cl. 1</li><li>Art. 53590235 44-64 Safety Trousers Cl. 2</li></ul> Material list	Products are identified and materials are specified
3. Compliance with Directive 89/686/EEC relevant basic requirements	The compliance assessment is based on reports mentioned below items 3.1-3.11	
3.1 FIOH assessment of relevant Directive basic requirements	2015-06-26	The applied harmonised standards EN ISO 13688:2013 and EN ISO 20471:2013 support the relevant requirements
3.2 Centexbel test report	CR/2603_2013, 2013-10-21 WORKCODE® 71, HV Yellow CR/2602_2013, 2013-10-21 WORKCODE® 71, HV Orange	Fluorescent material and colours meet the requirements of EN ISO 20471:2013
3.3 Testex Oeko-Tex Certificate	No. SEWO 096081, 2014-06-12 IBS International Co. Ltd Fabrics made in PES and PES blends	Material meets the innocuousness requirements of EN ISO 13688:2013
3.4 SGS test report	HZSL1412103988TX, 2015-01-12 Woven fabric 65% PES 35% CO twill, black	Non-fluorescent material meets the requirements of EN ISO 20471:2013
3.5 SGS test report	HZSL1407057202TX, 2014-08-14 100% Nylon fake cordura, black	Non-fluorescent reinforcement material meets the requirements of EN ISO 20471:2013
3.6 SGS test report	HZSL1407060234TX, 2014-08-12 100% Nylon cordura, black	Non-fluorescent reinforcement material meets the requirements of EN ISO 20471:2013
3.7 SGS test report	HZSL1412103988TX, 2015-01-12, Woven fabric 65% PES, 35% CO, 310 g/m <sup>2</sup> , black	Non-fluorescent reinforcement material meets the requirements of EN ISO 20471:2013
3.8 Satra test report	SPC0219613/1345, 2014-01-17 LOXY 9201	Retroreflective material meets the requirements of EN ISO 20471:2013
3.9 FIOH test record	Assessment of the design and measurements of areas, 2015-06-05	Trousers 53590233/34 in size 44 meets the requirements of class 1, trousers 53590235/36 in size 44 of class 2 as defined in EN ISO 20471:2013. Areas of visible materials: <ul style="list-style-type: none"><li>Trousers 53590233/34: reflex 0.11 m<sup>2</sup>, fluorescent 0.17 m<sup>2</sup></li><li>Trousers 53590235/36: reflex 0.13 m<sup>2</sup>, fluorescent 0.59 m<sup>2</sup></li></ul>



3.10 Draft information sheet	EN 20471 High Visibility, Synfiber Workwear	Document meets the requirements of Directive 89/686/EEC, EN ISO 13688:2013 and EN ISO 20471:2013
3.11 Product markings	Drafts of markings, 2015-06-02	Markings meet the requirements of EN ISO 13688:2013 and EN ISO 20471:2013
4. Description of the production quality system and related product control and test facilities	Quality Management System Certificate No. UK13Q10012R2M, 06/07/2013, Zhejiang Huaxing Garments Co. Ltd, 2013	Adequate to category II products