



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

EC TYPE EXAMINATION CERTIFICATE

14108FLS01rev2

for electrostatic dissipative high visibility clothing against heat and flame,
thermal effects of electric arc, and for use in welding and allied processes
as defined in EN 1149-5:2008, EN ISO 20471:2013,
coverall class 3, jacket class 2, trousers class 1,
ensemble of jacket and trousers class 3,
EN ISO 11612:2015, A1 B1 C1 E2 F1, IEC 61482-2:2009, class 2 (7 kA),
and EN ISO 11611:2015, class 1 A1,
jacket and trousers in addition against cold as defined in EN 342:2004,
 I_{cler} 0.317 m²K/W (B), air permeability class 2

Winter Coverall 51516 6 00-07,

Winter Jacket 54016 6 00-07,

Winter Trousers 54116 6 00-07

Synfiber AS
Hagan, Norway

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

Helsinki, 2 June 2017
Expiry date: 1 June 2022

Minna Torenus
Specialist

Erja Tammela
Senior Specialist



1. Applicant

Synfiber AS
Brennaveien 6
NO-1481 Hagan
Norway

2. Description and identification of the products

Type: Electrostatic dissipative high visibility clothing against heat and flame, and thermal effects of electric arc, for use in welding and allied processes as defined in EN 1149-5:2008, EN ISO 20471:2013, EN ISO 11612:2015, IEC 61482-2:2009 and EN ISO 11611:2015
Jacket and trousers against cold as defined in EN 342:2004

Performance levels:

EN ISO 20471: Coverall class 3, Jacket class 2, Trousers class 1;
Ensemble of jacket and trousers class 3
EN 11612: Performance levels A1 B1 E2 C1 F1
IEC 61482-2: Class 2 (7 kA)
EN ISO 11611: Class 1 A1
EN 342: Jacket and trousers I_{cler} 0.317 m²K/W (B), air permeability class 2

Name: Winter Coverall 51516 6 00-07, Winter Jacket 54016 6 00-07,
Trousers 54116 6 00-07

Size range: Coverall and jacket XS->, trousers 44 ->

Description: Garments are partly made of fluorescent yellow quality BG 9025, 79% CO, 20% PES, 1% static-control, Satin, 260 g/m² or of quality BG 9035, 79% CO, 20% PES, 1% static-control, Satin, 350 g/m² (Ten Cate Protect bv, Netherlands).

Non-fluorescent parts are made of quality BG 9035, 79% CO, 20% PES, 1% static-control, Satin, 350 g/m², in grey 65436 or blue river 60662 (Ten Cate Protect bv.).

Garments are lined with a quilted lining, inner lining FR cotton fabric (Ten Cate Union).

Retroreflective material is Loxy 9801 Silver (Sto-Nor Industri AS, Norway).

Manufacturer: Union Garment, Thailand; SRC Brasa Ltd, Thailand or Latvia

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 harmonized European standards EN 1149-5:2008, EN ISO 20471:2013, EN ISO 11612:2015, IEC 61482-2:2009 and EN ISO 11611:2015, and jacket and trousers in accordance with EN 342:2004 by accredited testing laboratories.



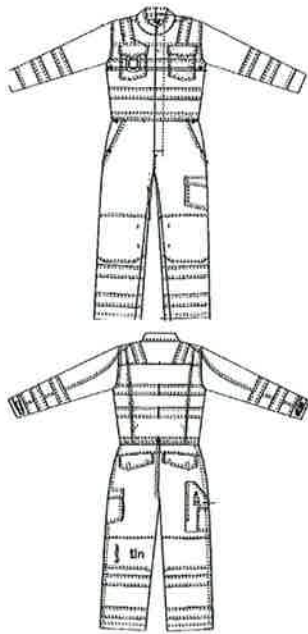
4. Compliance with basic health and safety requirements

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.

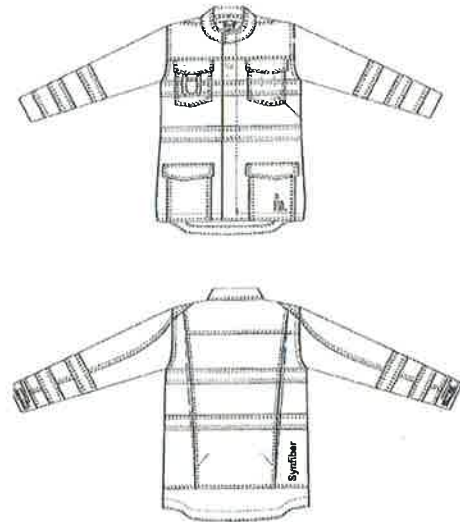
Note: Any modification in design, materials, or in the technical documentation, carried out on these type examined products must be brought to the attention of FIOH.

Pictures of the products

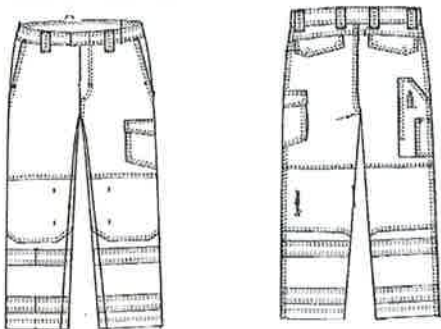
Winter Coverall 51516 6 00-07



Winter Jacket 54016 6 00-07



Trousers 54116 6 00-07



Appendix 1. Technical documentation

End of EC type examination certificate 14108FLS01rev2.



Technical documentation regarding EC type examination certificate 14108FLS01rev2

Product name: Winter Coverall 51516 6 00-07, Winter Jacket 54016 6 00-07,
Trousers 54116 6 00-07

Applicant: Synfiber AS, Brennaveien 6, NO-1481 Hagan, Norway

Item of technical documentation	Document identification	Assessment
1. Application for the EC type examination	2014-03-27 Correction request, 2014-10-12 E-mail, 2017-03-03	
2. Product drawing, construction, and material list	Garment sketches & Design features: <ul style="list-style-type: none"> • Coverall 51516 6, 2014-02-05 • Jacket 54016 6, 2014-02-05 • Trousers 54166 6, 2014-02-05 	Products are described and materials are specified
3. Compliance with Directive 89/686/EEC relevant basic requirements	The compliance assessment is based on reports mentioned below items 3.1-3.14	
3.1 FIOH assessment of relevant Directive basic requirements	2017-06-02	The applied harmonised standards EN ISO 13688:2013, EN 1149-5:2008, EN ISO 20471:2013, EN ISO 11612:2015, EN ISO 11611:2015 and EN 342:2004 support the relevant requirements
3.2 Centexbel test report	No. CR/460_2014, 2014-02-18 CR/657_2013, 2013-03-29 CR/655_2013, 2013-03-29 CR/1269_2013, 2013-06-04 Tecapro BG 9025, HV Yellow	Fluorescent material meets the requirements of EN ISO 20471:2013, EN 1149-5:2008, EN ISO 11612:2015, A1+A2 B1 C1 E2 F1, and EN ISO 11611:2015 class 1 A1+A2
3.3 STFI test report	No. Z 5877/13-7171/13, 2013-08-20 Tecapro BG 9025, HV Yellow	Material meets the requirements of IEC 61482-2:2009 class 1 (4 kA)
3.4 Centexbel test report	CR/2589_2013, 2013-11-28 Tecapro BG 9035, HV Yellow	Fluorescent material meets the requirements of EN ISO 20471:2013
3.5 Centexbel test report	No. CR/331_2014, 2014-02-03 Tecapro BG 9035, Grey 65436 No. CR/9924_2011, 2011-12-08 Tecapro BG 9035, Blue river 60662	Non-fluorescent colours meet the requirements of EN 471:2003 for colour fastness to washing
3.6 Centexbel test report	CR/2042_2013, 2013-09-24 CR/174_2012, 2012-01-24 CR/174_2012, 2012-01-24 Tecapro BG 9035	Material meets the requirements of EN ISO 11612:2015, A1 A2 B1 C1 E3 F1, EN ISO 11611:2015, class 1 A1 A2, and EN 1149-5:2008
3.7 STFI test report	No. Z 5321/11-6543/11, 2011-12-20 BG 9035	Material meets the requirements of IEC 61482-2:2009 class 1 (4 kA)
3.8 Aitex test report	No. 2014EP1305, 2014-07-08 Material combination BG9035, lining, padded lining No. 2014EP1306, 2014-07-02 Winter jacket	Material combination and the garments meets the requirements of IEC 614822:2009 class 2 (7 kA)
3.9 FIOH test report	No. 325539T01rev1, 2016-11-11 LOXY 9801 Silver	Retroreflective material meets the requirements of EN 1149-5:2008, EN ISO 20471:2013 (100 x 60°C) and EN ISO 11612:2015 for limited flame spread A1 and heat resistance
3.10 FIOH test report	No. 10309T01, 2010-06-23 Seam sample of material 642881, chain stitch with overlocking	Seam structure meets the requirements of EN ISO 11612:2015 and EN ISO 11611:2015 for flame spread A1 and seam strength



3.11 FIOH test report	No. 356118T01, 2017-04-18 Winter jacket 54016 with Trousers 54116	Clothing ensemble meets the requirements of EN 342:2004, I_{cler} 0.317 m ² K/W (B). Material assembly meets the requirements of class 2 for air permeability
3.12 FIOH test record	Assessment of the design and measurement of areas, 2013-02-26, 2014-08-14	Coverall meets the requirements of class 3, jacket class 2 and trousers class 1, jacket and trousers together class 3 as defined in EN ISO 20471:2013. Garments meet the specific design requirements of EN 1149-5:2008, EN 11612:2015, IEC 61482-2:2009 and EN ISO 11611:2015
3.13 Draft information sheet	Synfiber EN ISO 20471, EN 1149-5, EN ISO 11612, EN ISO 11612, EN 342	Document meets the requirements of the Directive, EN ISO 13688:2013, EN 1149-5:2008, EN ISO 20471:2013, EN ISO 11612:2015, IEC 61482-2:2009, EN ISO 11611:2015 and EN 342:2004
3.14 Product markings	Drafts of markings	Markings meet the requirements of EN ISO 13688:2013, EN 1149-5:2008, EN ISO 20471:2013, EN ISO 11612:2015, IEC 61482-2:2009 and EN ISO 11611:2015, and jacket & trousers in addition of EN 342:2004
4. Description of the production quality system and related product control and test facilities	Bureau Veritas ISO 9001:2008 Certificate No. TH 001900, 2011-06-25, Union Garment Co., Ltd Bureau Veritas ISO 9001:2008 Certificate No. DNKFRO95580A, 2012-06-12, SIA "SRC Brasa"	Agreement with FIOH on the EC quality control system for the final product (PPE category III product)