Finnish Institute of
Occupational Health

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

EC TYPE EXAMINATION CERTIFICATE

12068BRS01rev11

for electrostatic dissipative protective clothing
against heat and flame and thermal effects of electric arc
as defined in EN 1149-5:2008, EN ISO 11612:2015, A1+A2 B1 C1,
and IEC 61482-2:2009 class 1 (4 kA)

Single-Layer Anti-Static Protective Clothing
Coveralls 600, 601, 607, 608, 609, 727, 735,
73100, 76202, 76651, Vented Coverall V06
Jacket 620, Lab coat 628, Bib'n brace 640
Trousers 661, 664, Shirt 663, Vented Shirt V63
Red Wing Shoe Company Inc.
Minnesota, USA

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

Helsinki, 10 August 2018
Expiry date: 21 April 2023

Minna Torenius
Specialist

Erja Tammela
Senior Specialist

FINAS
Finnish Accreditation Service
S039 (EN 45011)
(ISO/IEC Guide 65)

This certificate comprises 3 pages and two appendices.
This certificate replaces certificate 12068BRS01rev10, 2017-10-16

Finnish Institute of Occupational Health, Notified Body No. 0403,
Topeliuksenkatu 41 b, FI-00250 Helsinki, Finland

1. Applicant

Red Wing Shoe Company Inc.
314 Main Street
Red Wing
55066 Minnesota
USA

2. Description and identification of the product

Type: Electrostatic dissipative protective clothing against heat and flame, and thermal effects of electric arc as defined in EN 1149-5:2008 and EN ISO 11612:2015 and IEC 61482-2:2009

EN ISO 11612: Performance levels A1+A2 B1 C1
IEC 61482-2: Class 1 (4 kA)

Name: Single-Layer Anti-Static Protective Clothing
Coveralls 600, 601, 607, 608, 609, 727, 735, 73100, 76202, 76651,
Vented Coverall V06
Jackets 620, Lab coat 628, Bib'n brace 640, Trousers 661, 664,
Shirt 667, Vented Shirt V63

Description: Garments can be made of the following alternative materials:

- Quality 00: Art# 4531, 93% Nomex, 5% Kevlar, 2% P140, 153 g/m² (Westex by Milliken, USA)
- Quality 01: Art# 6531, 93% Nomex, 5% Kevlar, 2% P-140, 203 g/m² (Westex by Milliken, USA)
- Quality 11: Art# VRE129 Flashguard, 54% Modacrylic, 35% CO, 10% Aramid, 1% carbon fibre, 195 g/m² (Kurabo, Japan)
- Quality 11P: Art# VRE129-P (permethrin treated) Flashguard, 54% Modacrylic, 35% CO, 10% Aramid, 1% carbon fibre, 195 g/m² (Kurabo, Japan)
- Quality 12: Art# BRE71042 Flashguard, 54% Modacrylic, 45% CO, 1% carbon fibre, 295 g/m² (Kurab, Japan)
- Quality 15: Art# 502251, 98% CO, 2% Carbon, Twill, 220 g/m² (Daletec AS, Norway)
- Quality 19: Art# 502551, 98% CO, 2% Carbon, 250 g/m² (Daletec AS, Norway)
- Quality 21/Quality 11:
  Art# Flashguard TM VRE130 5.8/6.5, 48% Tencel, 39% MAC, 12% para-aramid, 1% carbon, Twill, 220 g/m² (Westex by Milliken, USA) or
  Art# Flashguard TM 5.8/6.5 (872251), 48% Tencel, 39% MAC, 12% para-aramid, 1% carbon, Twill, 220 g/m², with and without permethrin treatment (Daletec C/O, Sapphire Finishing Mills, Pakistan)
- Quality 08/Quality 22: Art# Flashguard TM (872951), 48% Tencel, 39% MAC, 12% para-aramid, 1% carbon, Twill, 290 g/m² (Daletec C/O, Sapphire Finishing Mills, Pakistan)
- Quality 29: Art# 642881, 74% CO, 24% PES, 2% Carbon, 290 g/m² (Daletec AS, Norway)
- Quality 30: Art# 603581, 99% CO, 1% Negastat, Satin, 350 g/m² (Daletec AS, Norway) or Art# 503551, 98% CO, 2% Carbon, Satin, 350 g/m² (Daletec AS, Norway).

Optional ventilation openings under arms and in mid back in coveralls are made of FR antistatic knitted fabric, 60% Modacrylic, 37% CO, 3% carbon, 210 g/m². Zippers used are YKK Polyester Coil Zippers. Ventilation openings in armpits of patterns V06

and V63 are made of mesh fabric quality BFCZ-083K, 98% Protex modacrylic, 2% PES, 160 g/m² (Changshu Baofeng Special Fiber Co. Ltd., China).

Garments can be provided with the following alternative retroreflective materials:

- Loxy art. 9801 Silver (Loxy AS, Norway)
- Loxy art. 9808 Trim yellow/silver/yellow (Loxy AS, Norway)
- 3M Scotchlite 9687 Trim yellow/silver/yellow (3M, Minnesota, USA.

Representative in Europe: Red Wing Shoe BV, Van Diemenstraat 272, NL-1013 CR Amsterdam, the Netherlands

Pictures of the standard patterns and specific styles are shown in Appendix 2. The style number comprises of 5 digits including the pattern number followed by the quality number.

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 11612:2008 and IEC 61482-1-2:2007 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, last amended by 96/58/EC.

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.

Appendix 1. Technical documentation

Appendix 2. Pictures of the different standard patterns and specific styles

End of EC type examination certificate 12068BRS01rev11.

Technical documentation regarding EC type examination certificate 12068BRS01rev11

Product name: Single-Layer Anti-Static Protective Clothing

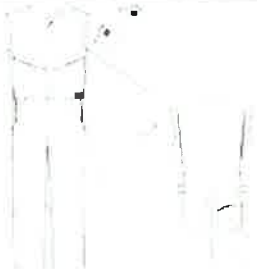
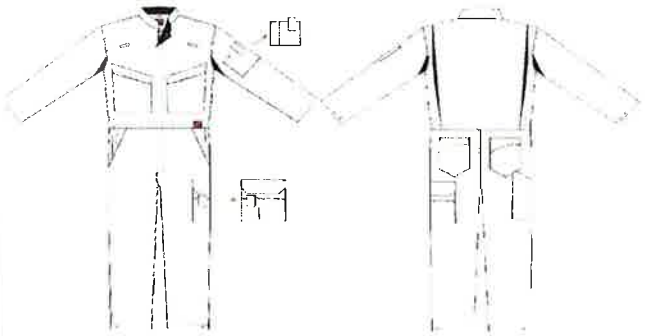
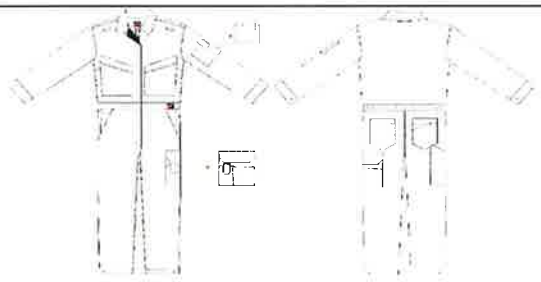
Applicant: Red Wing Shoe Company Inc., 314 Main Street, Red Wing, 55066 Minnesota, USA

Item of technical documentation	*Document identification*	*Assessment*
1. Application for the EC type examination	2012-02-12 2013-07-16 (Patterns 737 and 727) E-mail, 2014-07-08 (Qualities 15, 30, 21, 22) 2014-10-07 (Quality 29) 2015-07-24 (Quality 19) 2015-12-21 (Quality 11P) 2016-05-05 2016-10-12 2016-11-16 (SMU 76651) 2017-10-09 (Quality 08/22) 2018-07-11 (Patterns V06, V63)	
2. Product drawing, construction, and material list	Garment specifications	Products are identified and described, materials are specified
3. Compliance with Directive 89/686/EEC relevant basic requirements	The compliance assessment is based on reports mentioned below items 3.1-3.31	
3.1 FIOH assessment of relevant Directive basic requirements	2018-08-10	The applied harmonised standards EN ISO 13688:2013, EN 1149-5:2008 and EN ISO 11612:2015 support the relevant requirements
3.2 FIOH test report	No. 28530T01, 2008-12-298 No. 10724T01rev1, 2011-06-30 No. 163633T01rev1, 2011-06-30 Quality 11, Art# Nomex 4531 Quality 01, Art# Nomex 6531	Materials meets the requirements of EN ISO 11612:2015, A1+A2 B1 C1
3.3 Aitex test report	No. 2011EP0258, 2011-05-31 Quality 00, Art# 4531 No. 2011EP0269, 2011-05-20 Quality 01, Art# 6531	Materials meet the requirements of IEC 61482-2:2009 class 1 (4 kA)
3.4 FIOH test report	No. 28530T01, 2008-12-298 Quality 00, Art# 4531) Quality 01, Art# 6531	Materials meet the requirements of EN 1149-5:2008
3.5 FIOH test report	No. 10507T01rev1, 2011-02-16 No. 163632T01, 2011-04-29 Quality 11, Art# Flashguard	Material meets the requirements of EN ISO 11612:2015, A1+A2 B1 C1, and EN 1149-5:2008
3.6 FIOH test report	No. 241737T01, 2014-01-03 Quality 11P, art VRE129-P Flashguard (permethrin treated)	Material meets the requirements of EN ISO 11612:2015 for limited flame spread A1, and EN 1149-5:2008
3.7 FIOH test report	No. 27383T01, 2007-09-18 No. 27383T04, 2008-02-07 No. 10723T01, 2011-02-04 No. 163632T02rev, 2011-12-23 No. 163632T01, 2011-04-29 Quality 12, Art# Flashguard (BRE71042)	Material meets the requirements of EN ISO 11612:2015, A1+A2 B1 C1 F1, and EN 1149-5:2008
3.8 Aitex test report	No. 2011EP0266, 2011-05-20 Quality 11, Art# Flashguard No. 2011EP0267, 2011-05-20 Quality 12, Art# Flashguard	Materials meet the requirements of IEC 61482-2:2009 class 1 (4 kA)

3.9 West Yorkshire Materials Testing Service test report	No. 63452 (Amended), 2014-02-03 No. 63452-01, 2014-03-13 No. 63452, 2014-03-24 quality 15, Art# 502251/53	Material meets the requirements of EN ISO 11612:2015, A1 A2 B1 C1, EN 1149-5:2008 and IEC 61482-2:2009 class 1 (4 kA)
3.10 West Yorkshire Materials Testing Service test report	No. 65500, 2014-07-09 No. 64876-1, 2014-07-09 No. 66726-02, 2014-10-24 No. 69476, 2015-03-25 Quality 19, Art# 502551/53	Material meets the requirements of EN ISO 11612:2015, A1B1 C1, EN 1149-5:2008 and IEC 61482-2:2009 class 1 (4 kA)
3.11 FIOH test report	No. 256457T01, 2014-08-22 quality 21/11, Art# Flashguard TM VRE130 5.8/6.5	Material meets the requirements of EN ISO 11612:2015, A1 A2 B1 C1, EN 1149-5:2008 and IEC 61482-2:2009 class 1 (4 kA)
3.12 West Yorkshire Materials Testing Service test report	No. 76393 (Amended) & 76394 (Amended), 2016-09-08 No. 76393 (Amended) & 76394-03 (Amended), 2016-09-08 No. 76393-04, 2016-07-26 quality 21/11, Art# 87225/53/68, Red Wing Flashguard TM	Material meets the requirements of EN ISO 11612:2015, A1 A2 B1 C1, EN 1149-5:2008 and IEC 61482-2:2009 class 1 (4 kA)
3.13 West Yorkshire Materials Testing Service test report	No. 84188_03, 2017-06-27 No. 90109 (Amended), 2017-10-15 Quality 8/22, Art# 872951 Red Wing Flashguard 8.5 oz TM	Material meets the requirements of EN ISO 11612:2015, A1 A2 B1 C1 E1 and EN 1149-5:2008
3.14 Kinetrics test report	No. K-352002-1709B04 R00, 2017-09-28 Quality 8/22, Art# 872951 Red Wing Flashguard 8.5 oz TM	Material meets the requirements of IEC 61482-2:2009 class 1 (4 kA)
3.15 West Yorkshire Materials test report	No. 57165, 2013-03-19 No. 57165-02, 2013-04-15 Quality 29, Art# 642881	Material meets the requirements of EN ISO 11612:2015, A1 B1 C1 and EN 1149-5:2008
3.16 FIOH test report	No. 364104T01, 2017-10-02 Quality 29, Art# 642881	Material meets the requirements of EN ISO 11612:2015 for limited flame spread A2
3.17 STFI test report	Certificate of Test No. Z 4071/09-5166/09, 2009-03-27 Quality 29, Art# 642881	Material meets the requirements of IEC 61482-2:2009 class 1 (4 kA)
3.18 STFI test report	No. Z 4156/09-5280/09, 2009-06-24 Quality 30, Art# 603581	Material meets the requirements of EN ISO 11612:2015, A1 B1 C1 F1, and requirements of IEC 61482-2:2009 class 1 (4 kA)
3.19 FIOH test report	No. 163631T01rev1, 2011-06-30 Quality 30, Art# 603581	Material meets the requirements of EN ISO 11612:2015 for limited flame spread A2
3.20 West Yorkshire Materials Testing Service test report	No. 56633, 2013-03-01 No. 60220, 2013-05-03 No. 63454, 2014-02-12 No. 56633-04, 2013-04-17 Quality 30, Art# 503551	Material meets the requirements of EN ISO 11612:2015, A1 A2 B1 C1 E1 F1, EN 1149-5:2008 and IEC 61482-2:2009 class 1 (4 kA)
3.21 SGS test report	No. SL517252776566TX, 2017-11-06 FR mesh BFCZ-083K	Material meets the requirements of EN ISO 11612:2015 for limited flame spread A1
3.22 Aitex test report	No. 2011EP0532, 2011-06-21 Coverall 601 in quality 00, Art# 4531	Garment meets the requirements of IEC 61482-2:2009 class 1 (4 kA). Result can be applied to the garments with the same type of quality and accessories
3.23 FIOH test report	No. 176124T01, 2011-09-27 FR Antistatic Modacrylic Cotton Knit	Ventilation opening material meets the requirements of EN ISO 11612:2015, A1 B1 C1, and EN 1149-5:2008

3.24 FIOH test certificate	No. 325539T01rev1, 2016-11-11 LOXY 9801	Retroreflective material meets the requirements of EN ISO 20471:2013, EN ISO 11612:2015 for limited flame spread and heat resistance and EN 1149-5:2008
3.25 Satra test report	Ref: SPC0218279/1338/4, 2013-09-30 Loxy 9808 Trim	Retroreflective material meets the requirements of EN ISO 20471:2013 and EN ISO 14116:2015 index 3 for limited flame spread, and of EN ISO 11612:2015 for heat resistance
3.26 FIOH test report	No. 300432T01, 2015-03-17 3M Scotchlite 9687 Fire Coat Trim Fluorescent yellow-silver-fluorescent yellow	Retroreflective material meets the requirements of EN ISO 20471:2013 and EN ISO 11612:2015 for limited flame spread A1 and heat resistance
3.27 FIOH test report	No. 163633T01rev1, 2011-06-30 Seam, chain stitch with overlocking and two stitchings	Seam meets the requirements of EN ISO 11612:2015 for limited flame spread A1 and A2, and for seam strength
3.28 FIOH test report	No. 362772T01, 2017-09-04 YKK Polyester Coil Zipper on fabrics Q11 & 21 and Q15	Zipper meets the requirements of EN ISO 11612:2015 for limited flame spread A1 and heat resistance
3.29 STFI test report	No. 2015 1373.4, 2015-08-03 Plastic snap button type DPV 300/15	Plastic snap buttons meet the requirements of EN ISO 11612:2015 for heat resistance and limited flame spread A1
3.30 Draft information sheet	User information	Document meets the requirements of the Directive, EN ISO 13688:2013, EN 1149-5:2008, EN ISO 11612:2015 and IEC 61482-2:2009
3.31 Product markings	Drafts of markings in the garment specifications	Markings meet the requirements of EN ISO 13688:2013, EN 1149-5:2008 and EN ISO 11612:2015 and IEC 61482-2:2009
4. Description of the production quality system and related product control and test facilities	ISO 9001:2008 Certificate No. 43276, 2012-05-21	Agreement with FIOH on the EC quality control system for the final product (PPE category III product)

Pictures of the different basic styles

Style RW 600 FR Coverall	Style RW 601 FR Coverall
	
Style RW 607 FR Coverall	**Style RW 608 FR Coverall**
	
Style RW 609 FR Coverall	**Style RW 620 FR Jacket**
	

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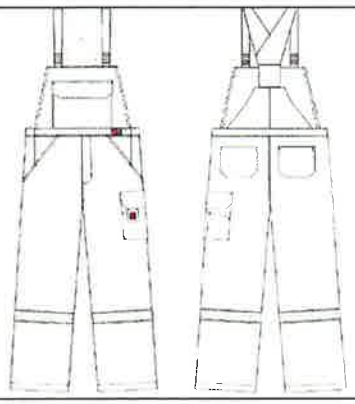
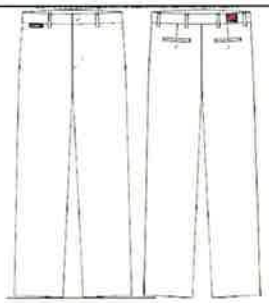
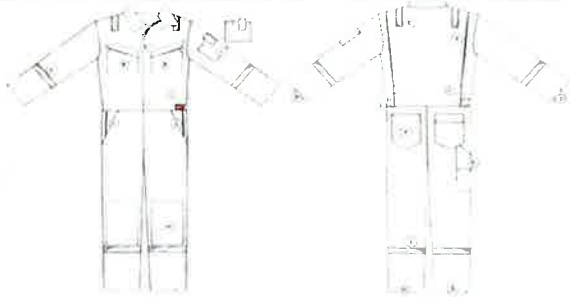
Style RW 628 FR Lab Coat	Style RW 640 Bib and Brace
	
Style RW 661 Trousers	**Style RW 663 FR Shirt**
Style RW 664 FR Trousers	**Style RW 727 FR Coverall**
	

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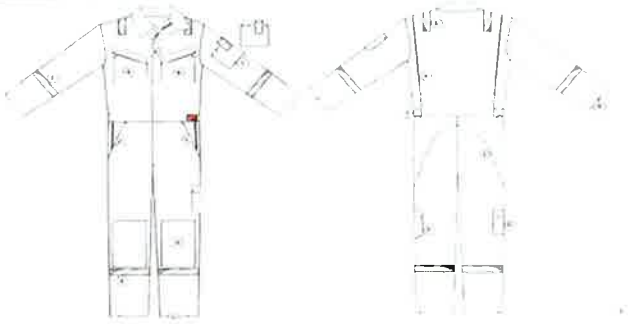
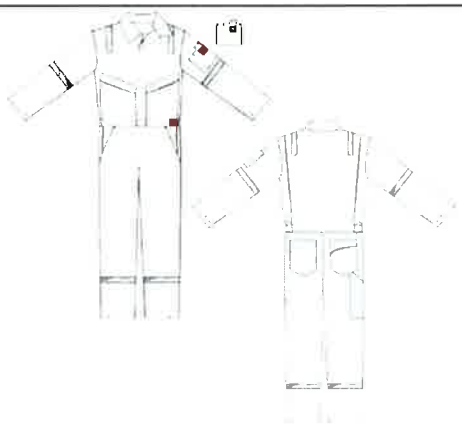
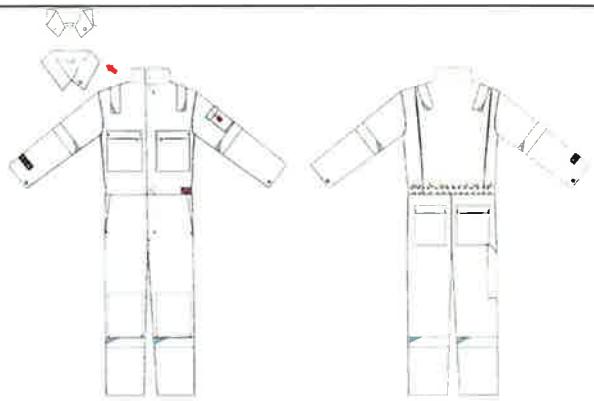
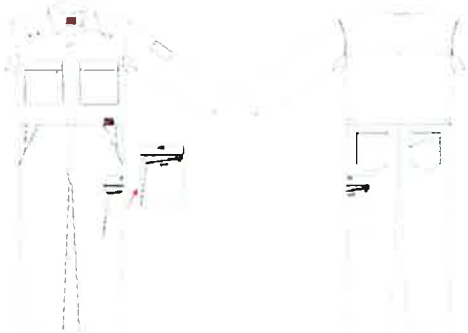
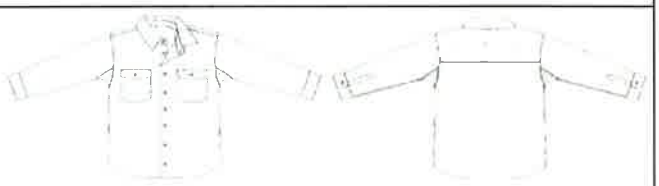
Style RW 735 FR Coverall	Style RW 73100 FR Women's summer coverall
	
Style RW 76202 Coverall	**Style RW 76651 Coverall**
	
Vented Coverall V06	**Vented Shirt V63**
	

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