



Finnish Institute of
Occupational Health

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

EC TYPE EXAMINATION CERTIFICATE

28096RKS01rev2

for electrostatic dissipative high-visibility warning clothing
against heat and flame, for use in welding and allied processes
and against rain offering limited protection against liquid chemicals
as defined in EN 1149-5:2008, EN 471:2003+A1:2007,
EN ISO 11612:2008, A1+A2 B1 C1 F1, EN 470-1:1995,
EN 343:2003+A1:2007 and EN 13034:2005+A1:2009 Type BP[6],
tested against electric arc according to EN 61482-1-2:2007, class 2

Vinterjacka 5110, Vinterbyxa 5120

Tranemo Textil AB
Tranemo, Sweden

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

Helsinki, 10 February 2011

Helena Mäkinen
Team Leader

Erja Tammela
Senior Specialist

This certificate comprises 3 pages and an appendix.
This certificate replaces certificate 28096RKS01rev1, 2010-02-24.

Finnish Institute of Occupational Health, Work Environment Development,
Technical Solutions and Protection, Notified Body No. 0403,
Topeliuksenkatu 41 a A, FI-00250 Helsinki, Finland



1. Applicant

Tranemo Textil AB
Box 207
S-514 24 Tranemo
Sweden

2. Description and identification of the products

Type: Electrostatic dissipative high-visibility warning clothing against heat and flame, for use in welding and allied processes and against rain, offering limited protection against liquid chemicals as defined in EN 1149-5:2008, EN 471:2003+A1:2007 and EN ISO 11612:2008, EN 470-1:1995, EN 343:2003+A1:2007 and EN 13034:2005+A1:2007, tested against electric arc according to EN 61482-1-2:2007 class 2 (7 kA)

EN ISO 11612: Performance levels A1+A2 B1 C1 F1, when combined with Cantex Underwear also D3 and E3

EN 471: Jacket class 3, trousers class 2 for the minimum areas of visible material, level 2 for performance of reflective material

EN 343: Resistance to water penetration class 1, water vapour resistance class 1

EN 13034: Type PB[6]

Name: Vinterjacka 5110, Vinterbyxa 5120

Description: Garments are made of quality Cantex 240IR, 100% Marko (55% Acrylic, 45% CO) + membrane, Twill, 250 g/m² (Marina Textil S.L., Spain).

Lining material is Marko 150, 100% Marko, Taffeta, 150 g/m² (Marina Textil S.L.).

Retroreflective material is Giolite FR-120, Silver (Sue Heung Co. Ltd., Korea).

Manufacturer: Tranemo Textil AB, Box 207, S-514 24 Tranemo, Sweden

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. Material of the products has been tested in accordance with harmonized European standards EN ISO 11612:2008, EN 470-1:1995, EN 471:2003+A1:2007, EN 1149-5:2008, EN 343:2003+A1:2007, EN 13034:2005 and EN 61482-1-2:2007 by accredited testing laboratories.



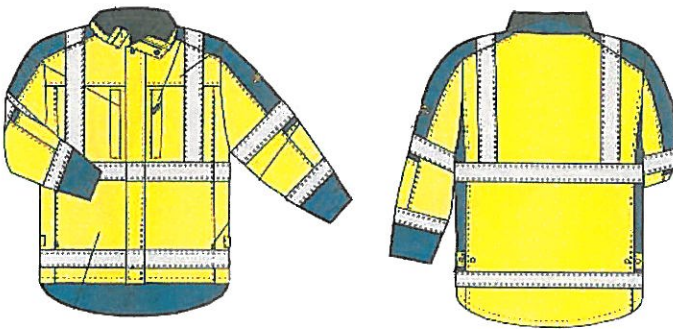
4. Compliance with basic health and safety requirements

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.

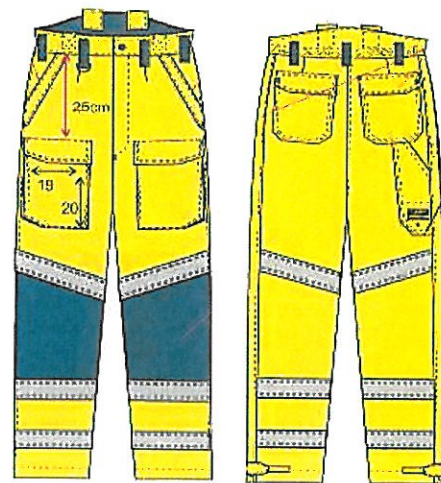
Note: Any modification in design, materials, or in the technical documentation, carried out on these type examined products must be brought to the attention of FIOH.

Pictures of the products

Vinterjacka 5110



Vinterbyxa 5120



Appendix 1. Technical documentation

End of EC type examination certificate 28096RKS01rev2.



Technical documentation regarding EC type examination certificate 28096RKS01rev2

Product name: Vinterjacka 5110, Vinterbyxa 5120

Applicant: Tranemo Textil AB, Box 207, S-514 24 Tranemo, Sweden

<i>Item of technical documentation</i>	<i>Document identification</i>	<i>Assessment</i>
1. Application for the EC type examination	2008-02-14 E-mail, 2010-02-02 2011-01-27	
2. Product drawing, construction, and material list	Drawings and descriptions of the products: <ul style="list-style-type: none">Jacket Winter 5110, 2007-09-22Winter trousers 5120, 2007-09-27 Technical specifications: <ul style="list-style-type: none">Marko AT2401R HV (= Cantex 2401R), Marina TextilMarko 150, Marina Textil	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 3.1-3.18	
3.1 FIOH assessment of relevant Directive basic requirements	2011-02-10	The applied harmonised standards EN 340:2003, EN 471:2003+A:2007, EN ISO 11612:2008, EN 343:2003 +A1:2007, EN 1149-5:2008 and EN 13034:2005+A1:2009 support the relevant requirements
3.2 Leitac test report	No. 231.109, 2007-09-17 Marko 240HV, Yellow	Material meets the requirements of EN 340:2003 for innocuousness and the requirements of EN 471:2003 for a woven background material
3.3 Aitex test report	2010AN0207, 2010-01-19 Tejido Marko AT 240	Material meets the requirements of EN ISO 11612:2008, performance levels A1+A2 B1 C1 F1
3.4 Leitac test report	No. 229.999, 2007-10-19 Marko 240 IR	Outer material can be classified in class 3 for water vapour resistance as defined in EN 471:2003 for a laminated material
3.5 Leitac test report	No. 223.997-E, 2005-10-20 Marko 240	Material meets the requirements of EN 470-1:1995
3.6 Leitac test report	No. 223.110-E, 2005-06-30 Marko AT240	Material meets the requirements of EN 1149-5:2008 when tested to EN 1149-3:2004 (charge decay)
3.7 Aitex test report	No. 2007AN1619, 2007-07-03 Marko AT240 C/3	Material meets the requirements of EN 61482-1-2:2007 of class 1 (4 kA) when tested to ENV 50354:2001
3.8 Aitex test report	No. 2011AFP008, 2011-01-20 Marko AT240FC C/20	Material meets the requirements of EN 13034:2005 for repellency and penetration by liquids: H2SO4 30% indexes 3 and 3, NaOH 10% indexes 3 and 3, 1-Butanol indexes 1 and 1
3.9 Aitex test report	2008AN3044, 2008-05-14 Marko 240 FC	Material meets the requirements of EN 13034:2004 with the following performance levels: abrasion resistance level 6, tear resistance level 3, puncture resistance level 3



3.10 Leitat test report	No. 229.999, 2007-10-19 Marko 240 IR	Material meets the requirements of EN 343:2003, water penetration class 1, water vapour resistance class 1
3.11 FIOH test report	28371T01, 2008-12-10 Seam sample of Cantex 240IR	Seams meet the requirements of EN 343:2003+A1:2007 for seam strength and for water penetration, class 1
3.12 Leitat test report	No. 228.592, 2006-02-05 No.231.203, 2007-09-24 Marko 150	Lining material meets the requirements of EN 531:1995, performance levels A B1 C1, and the requirements of EN 1149-5:2007 when tested to EN 1149-3:2004
3.13 Aitex test report	No. 2007AN1620, 2007-07-03 Marko AT150 C/39	Material meets the requirements of IEC 61482-1-2:2007 of class 1 (4 kA) when tested to ENV 50354:2001
3.14 MTL test report	Certificate of Test, 2006-02-13 FR-120 reflective tape	Material meets the requirements of EN 471:2003 and the flame spread requirements of EN 531:1995
3.15 STFI test report	0615/08, 2008-05-20 Sample no. 04 (Jacket 5110)	Jacket meets the requirements of EN 61482-1-2:2007 for class 2 (7 kA)
3.16 FIOH test record	Assessment of the design and measurement of areas, 2008-04-14	Jacket meets the requirements of class 3 and trousers of class 2 as defined in EN 471:2003
3.17 Draft information sheet	Skyddskläder med god synbarhet enligt EN 471, 2007-04-24 Flame retardant clothing EN ISO 11612, EN 1149-5, EN ISO 11611, IEC 61482-1-2, EN 13034 Typ PB[6	Document meets the requirements of the Directive, EN 340:2003, EN 471:2003, EN ISO 11612:2008, EN 470-1:1995, EN 343:2003, EN 1149-5:2008 and EN 13034:2005
3.18 Product markings	Drafts of markings: <ul style="list-style-type: none">• Vinterjacka 5110, 2011-01-27• Vinterbyxa 5120. 2011-02-07	Markings meet the requirements of EN 340:2003, EN 471:2003, EN ISO 11612:2008, EN 470-1:1995, EN 343:2003, EN 1149-5:2008 and EN 13034:2005
4. Description of the production quality system and related product control and test facilities	Kvalitetshandbok, Tranemo Textil AB as in 95401S01	Adequate for category II products