



Royal Canadian Mounted Police
Gendarmerie royale du Canada

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Specification

Trousers, Storm, Unisex

This document has 17 pages including the drawings.

This document was created in English.

The document is available in English and French.

English/Anglais
Français/French

The photograph on this page is for reference only.



Modifications

Date	Para. No's	Modifications
1992-06-15		Original specification
1992-06-16	Specification re-issued	Amended to show lining material to be grey shirting material; zipper changed.
1999-04-20	Pg. 1, Para. 2.2; Pg. 2, Para 4.1.1	Amended to show use of poly/cotton shell material.
2005-10-18	Para. 2.2 Para. 2.3 Para. 4.1.4.1, 4.1.4.2 Para. 4.1.8	DND, PSNL-12-21F, Fasteners, Slide, Interlocking omitted. DND, PSNL-9-2-1, Thread, Nylon, Machine omitted. Slide fasteners changed. Reference to Para. 2.3 removed.
2011-01-20	Para. 4.1.4.1, Para. 4.1.4.2 Para. 1.4	Change slide fasteners description. Added clause indicating French document has been translated from this original English document.
2011-07-08	Para. 4.1.3 Para. 4.1.5 Para. 4.1.6 Para. 4.1.8 Para. 4.3.2 Para. 4.1.10 Entire specification	Information added for insulation. New information for fastener. Hook and loop information changed. Additional thread information. Clarification to paragraph Draw cord lock added. Nomenclature for sealed sample to viewing sample.
2013-06-13	Para. 2.5 – 2.9 Para. 4.1.3 Para. 4.1.4.1, 4.1.4.2, Para. 4.1.5, Para. 4.1.8 & Para. 4.1.10 Para. 4.3.6 All Drawings	Added testing standards relating to insulation. Insulation information revised and Table I and Appendix A added. Added Certificate of Compliance for slide fasteners, quick release buckle, thread and drawcord lock. Added more specific label requirements and care instructions. Drawings re-done in Illustrator.
2014-03-11	Para. 4.1.4.1 & 4.1.4.2	Updated slide fastener identification.

RCMP VIEWING SAMPLE

A viewing sample, when available, will be supplied to the successful tenderer.

This will be used for the guidance of the manufacturer in all factors not covered by this specification or referred to therein. Variation from the specification may appear in the sample in which case the specification shall govern.

It may be obtained from:

Royal Canadian Mounted Police
ATTN: Uniform & Equipment Program
(440 Coventry Road, Warehouse Building)
1200 Vanier Parkway
Ottawa, Ontario
K1A 0R2

It will be sent "prepaid" and is to be returned "prepaid".

The viewing sample shall be returned to the RCMP in the same condition as received by the manufacturer. Lost or damaged viewing samples shall be replaced by an identical item or the RCMP shall be reimbursed for the cost of an acceptable replacement.

SPECIFICATION

TROUSERS, STORM, UNISEX

1. Definitions

- 1.1 This specification shall govern the manufacture and inspection of Trousers, Storm, Unisex.
- 1.2 This specification, pattern, drawing, viewing sample, or other information issued in connection therewith, may only be used for specific enquiries, tenders, or orders placed on behalf of the Royal Canadian Mounted Police.
- 1.3 This specification supersedes all previous specifications for Trousers, Storm, Unisex.
- 1.4 This specification has been translated into French from this original English language document.

2. Applicable Specifications

- 2.1 The following publications are applicable to this specification and to the issues in effect on the date of the invitation to tender, unless otherwise specified.
- 2.2 R.C.M.P., G.S.1045-284, Cloth, Twill Poly/Cotton.
- 2.3 R.C.M.P., G.S.1045-009, Cloth, Polyester Fibre/Cotton Poplin.
- 2.4 CAN/CGSB 4.131-93, Thread, Polyester, Polyester Covered.
- 2.5 CAN/CGSB 86.1-2003, Care Labeling of Textiles.
- 2.6 ASTM, American Society for Testing and Materials, Method D4970, D4770.

- 2.7 AATCC-100 American Association of Textile Chemists and Colorists - Technical Manual.
- 2.8 FED-STD191-5206 Federal Standard, Textile Test Methods.
- 2.9 ISO 6330, ISO 11092, International Standards Organization.

3. **General Requirements**

- 3.1 The article or material covered by this specification shall be free from imperfections or blemishes such as may affect its appearance or serviceability. In all particulars not covered by this specification or contract documents, production shall be equivalent in all respects to the pattern and viewing sample.
- 3.2 **Design** - The Trousers, Storm, Unisex, shall be bib overall style, similar to the attached drawing and shall conform in every respect to the viewing sample.
- 3.3 In the event of any inconsistency in contract documents, specification, drawing, or viewing sample, the aforementioned shall prevail in the following order:
- (iii) Contract
 - (ii) Specification
 - (iii) Drawings
 - (iv) Viewing Sample.

4. **Detail Requirements**

4.1 **Materials**

- 4.1.1 **Shell** - The shell shall be 65% polyester, 35% cotton, 245 g/ m² ± 8g/m² navy blue in colour in accordance with R.C.M.P Specification G.S.1045-284.
Shall be purchased from the R.C.M.P.
- 4.1.2 **Lining** – The lining shall be a blend of polyester and cotton, 152 g/m² ± 8 g/m², grey in colour, in accordance with R.C.M.P. Specification G.S.1045-009.
Shall be purchased from the R.C.M.P.

- 4.1.3. **Insulation Material** - Shall be 100% polyester insulation with 1 layer of polyester scrim. An anti-microbial agent in the form of Silver Nano Particle with binder shall be applied to the insulation as a preventive agent to Odor, Fungi, Bacteria and Viruses. The insulation when tested as a single layer shall meet the requirements outlined in Table I forming part of this specification. There shall be 2 layers of insulation used.

Refer to Appendix A for required documentation.

4.1.4 **Slide Fasteners**

- 4.1.4.1 **Front Closure** – The front closure shall be a non-separating, two way, black in colour, opening ends with two sliders, one pull on each slider and top stops at each end of the fastener. YKK 33800 VFMC 106 5/8 *TS-TS*B-B* is known to meet this requirement.

Certification of compliance must be provided.

- 4.1.4.2 **Leg Opening** - The leg opening shall be a closed end, black in colour injection molded, DA automatic slider. YKK 33000 VFC 106 5/8 is known to meet this requirement..

Certification of compliance must be provided.

- 4.1.5 **Quick Release Buckle** – The buckle shall be made of a crystalline thermoplastic polymer material, black in colour, and be able to withstand temperatures of -40° C. It shall be approximately 4.5cm by 6.5cm. World SR 40 in Acetal by ITW Nexus is known to meet the requirement.

Certification of compliance must be provided.

- 4.1.6 **Hook and Loop** – Shall be woven nylon, black in colour, with a high life cycle. The combined hook and loop shall have no less than 8 P.S.I length-wise shear strength. The initial peel strength shall not be less than 1 P.I.W and after 1000 cycles shall be no less than .5 P.I.W. with a minimum lengthwise shear of 4 P.S.I.

Certification of compliance must be provided.

- 4.1.7 **Elastic** - The elastic shall be a good quality elastic, 30mm in width and navy blue in colour. The stretch and recovery requirements shall be similar in all respects to the viewing sample.

- 4.1.8 **Thread** - Shall be polyester core, polyester wrap, Tex 60, of matching colour, meeting CAN/CGSB 4.131-93.

Certification of compliance must be provided.

- 4.1.9 **Drawcord** – The drawcord shall be a spun plaited cord, black in colour, equal in all respect to the viewing sample.

- 4.1.10 **Drawcord Lock** – The lock shall be commercially available cord lock with springs loaded, nylon composition, black in colour, able to withstand temperature of -40° C, equal in respect to the viewing sample.
Certification of compliance must be provided.
- 4.1.2 **Size and Dimensions** - Trousers, Storm, Unisex, to this specification, shall be supplied in the sizes specified by the R.C.M.P. and to the scale of measurements and drawing attached and forming part of this specification.
- 4.3 **Construction**
- 4.3.1 **Stitching** – All stitched shall be lockstitch or lockchain stitch using the thread specified in Para. 4.1.8. There shall be not less than three nor more than four stitches per centimetre. The beginning and ending of all stitching shall be securely backstitch tacked unless secured by other stitching.
- 4.3.2 **Body** - The body shall be made of material specified in Para. 4.1.1, lined with the material specified in Para. 4.1.2 and insulated with material specified in Para. 4.1.3. The front shall be fitted with a zipped specified in Para. 4.1.4.1, length as required, and hook and loop tape as specified in Para 4.1.6 for closure of the entire fly opening. The fly opening shall be 53cm in length for all sizes. There shall be a casing stitched on at the waistline and drawstrings as specified in Para. 4.1.9 inserted. The bottom edges of the trousers shall be hemmed 25mm. There shall also be a suppression strap of hook and loop tape, constructed, dimensioned and positioned in accordance with the drawing and the viewing sample. Each leg shall be equipped with a slide fastener specified in Para. 4.1.4.2 located 25mm from the bottom of the hem, outside seam, and sized and attached in accordance with the viewing sample.
- 4.3.3 **Pockets** - There shall be four patch pockets with flaps, two on the front and two on the back of shell material, with hook and loop tape closure, constructed and dimensioned in accordance with the drawing and viewing sample the pockets shall be positioned with the bottom edge 61cm below the top edge of the body.
- 4.3.4 **Suspenders Straps** - The suspender straps of elastic and shell material shall be crossed over and stitched together forming a diamond shape. The straps shall adjust and close by means of the buckles specified in Para. 4.1.5. The straps shall be as constructed, dimensioned and positioned in accordance with the drawings and viewing sample.

4.3.5 **Bar Tacking** - The top of the pockets, pocket flaps and bottoms of the fly opening shall be bar-tacked in accordance with the drawing and viewing sample.

4.3.6 **Marking** - Each pair of Trousers, Storm, Unisex, shall have two labels sewn separately centered at the top inside of the back bib. The label information shall be as outlined below in a text no less than a size 8 font. The text shall be of permanent inks of a contrasting colour and shall withstand at least 50 washes showing no apparent change in appearance.

Marking Content Information (lines 1 to 4 below)

1. RCMP Item number, reference contract documents. (Ex. 7000 251)
2. Size of the article, using the sized designation referenced in the contract documents. (Ex. 42-44R)
3. Date of manufacturer, in numeric format year/month (Ex. 2001 / 11)
4. Your manufacturer identification (Company name or number).

Care instructions: As indicated in lines 5 to 10 below.

*** **Note:** A polyurethane adhesive heat transfer label for the Marking & Cleaning Instructions is permitted as an alternative to the sewn on label.

1	RCMP-GRC #	
2	Size/Taille	
3		
4		
5	RCMP Coveralls, Combat, Winter	Combinaison de combat d’hiver GRC
6	Machine wash – cool (30°C)	Laver à la machine – eau froide (30°C)
7	Do Not use fabric softener or chlorine bleach	Ne pas utiliser d’agent adoucissant ou d’agent de blanchiment
8	Tumble dry- low (Do Not use dryer sheets)	Séchage par culbutage – à basse température (Ne pas utiliser d’assouplissant en feuilles)
9	Steam iron - medium	Repassage à vapeur – à température moyenne
10	Do not dry clean	Ne pas nettoyer à sec

*** See note above

Identification label (Sewn on only): As illustrated below.

Name/Nom:

5. **Delivery, Packing and Marking of Containers**

- 5.1 Unless otherwise specified the items shall be delivered to the Commissioner, RCMP, Uniform & Equipment Program, Ottawa, Ontario, free of transportation charges, Provincial tax where applicable.
- 5.2 Packing and marking of shipping containers shall be as specified in the invitation to tender.
- 5.3 A packing slip shall be enclosed showing contents of each shipment.

6. **Quality Assurance Provisions**

6.1 **Responsibility for Inspection**

Unless otherwise stipulated in the contract, it is the prime contractor's responsibility to satisfy the RCMP, Uniform & Equipment Program, that the material and services being supplied conform to this specification. This may be accomplished by performing the tests specified in this specification or by demonstrating to the satisfaction of the RCMP, Uniform & Equipment Program that conformity to this specification of manufacturing processes is assured. The contractor may use any commercial testing establishment acceptable to the RCMP, Uniform & Equipment Program.

- 6.2 The RCMP, Uniform & Equipment Program reserves the right to perform any inspection considered necessary to ensure the material and services conform to the specified requirements. For the purpose of inspection, a portion of each delivery not exceeding two percent or two out of any number delivered under 100 may be put to tests that could destroy the articles. If found to be inferior or not in accordance with this specification, all articles so destroyed shall be replaced by others of proper quality and pattern at the expense of the contractor. The entire delivery may also be rejected if it is found that articles previously rejected due to non-repairable defects are re-delivered for inspection.
- 6.3 The contractor will be promptly notified when any articles are not accepted and such articles will be returned at the contractor's risk and expense.

TABLE I (INSULATION)

	TEST	RCMP REQUIREMENTS	TEST METHOD
1	Fibre content	100% Micro Denier Polyester with Binder Fibre and Acrylic resin	
2	Mass – Batt only	150g/m ² ± 10g/m ²	CAN/CGSB-4.2 No.5.1-M90
3	Scrim only	12g/m ² ± 1.5g/m ²	
4	Fabric Thickness -Batt & Scrim	<i>Initial:</i> 35 mm (max.) <i>After 5 Washes:</i> Maximum loss 20% of initial value	CAN/CGSB-4.2 No. 37-2002 <u>Washing -</u> ISO6330-1984 Procedure E (4B)
5	Stiffness (Drape) Cantilever Bending Method	Length 5cm (max.) Width 5cm (max.)	FED-STD-191 5206
6	Resistance to Pilling	3 (min.)	ASTM D-4970 After 1000 cycles Tested with the face of batt against shell material layer.
7	Dimensional Change in Laundering - Batt & Scrim <i>After 5 Washes</i>	Warp: 5% (max.) Weft: 5% (max.) The difference in the dimensional change between the batt and scrim shall not exceed 5%.	ISO6330-1984 Procedure E (4B)
8	CLO - Batt Only <i>Initial</i> <i>After 5 Washes</i>	1.9 (min.) 1.6 (min.)	ISO11092 (dry) <u>Washing -</u> ISO6330-1984 Procedure E (4B)
9	Standard Evaluation of Filling/Batting	4 (min.)	ASTM D4770 <u>Washing -</u> ISO6330-1984 Procedure E (4B)
10	Anti-Microbial Agent Silver Nano Particle Additive with Binder	99.9% killed within 1 hour	AATCC 100-2004 Tested for s. aureus, e. coli, k. pneumonia
11	Compression Recovery	91% (min.)	Procedure below

PROCEDURE FOR COMPRESSION RECOVERY

- The compression recovery of the insulation shall be determined as stated below.
- A cloth specimen shall be measured for thickness using a 64 cm² pressure foot at a pressure of 0.07kPa.
- The specimen shall be compressed under a suitable template (not less than 127mm by 127mm) for a period of 60 minutes at a pressure of 7.0 kPa. The specimen shall be at least 50 mm larger in length and width than the template.
- The template and the weight shall be removed and the specimen allowed to relax for 3 minutes. Immediately after the 3-minute relaxation period, the thickness shall be measured again at the pressure of 0.07 kPa.
- The compressional recovery shall be calculated as follows:

Per cent compressional recovery =

$$\frac{\text{Thickness of specimen after compression}}{\text{Thickness of specimen before compression}} \times 100$$

Note: Refer to Appendix A for required documentation.

Appendix A

Certification & Testing Criteria

Appendix A contains the definitions for certificate of compliance and test reports that are required for this specification. The tables of requirements shall be used by the manufacturer and RCMP Uniform & Equipment Program to ensure proper documentation is received and meets the requirements outlined in this specification.

Certification of compliance: Compliance certification documents shall be based on testing from a raw goods manufacturer from an in-house or independent, third-party accredited laboratory acceptable to the RCMP to verify performance requirements as specified in this specification or where indicated an invoice from the raw good supplier is also acceptable.

Test Report: Test report documents shall include the test method, test conditions and test results performed by an independent, third-party accredited laboratory acceptable to the RCMP to verify requirements as specified in this specification.

Appendix A Continued - Certification & Evaluation Criteria

Para. Title/Test	Certification of Compliance	Test Report	Pass/Fail
Para. 4.1.2 Table I - Insulation			
Fiber Content		Required	
Mass		Required	
Fabric Thickness <i>Initial</i> <i>After 5 Washes</i>		Required	
Stiffness (Drape)		Required	
Resistance to Pilling		Required	
Dimensional Change to Laundering <i>After 5 washes</i>		Required	
CLO <i>Initial</i> <i>After 5 Washes</i>		Required	
Standard Evaluation of Filling/Batting		Required	
Anti-Microbial Agent		Required	
Compression Recovery		Required	
Slide Fastener - Front Para. 4.1.4.1	Required		
Slide Fastener – Leg Opening Para. 4.1.4.2	Required		
Quick Release Buckle Para. 4.1.5	Required		
Hook & Loop Tape Para. 4.1.6	Required		
Para 4.1.8 Thread	Required		
Drawcord Lock Para. 4.1.10	Required		

SCALE OF MEASUREMENTS FOR TROUSERS, STORM, UNISEX

SIZE DESIGNATION		BODY MEASUREMENTS	GARMENT MEASUREMENTS				
HEIGHT	SIZE	CHEST	TOP AROUND AT ARMHOLE	WAIST	INSEAM	OUTSEAM	BOTTOM
<u>Short</u> 160-169 5'3"-5'6"	34-36S	86-91	104	112	77	119	53
	38-40S	97-102	114	122	77	119	53
	42-44S	107-112	124	132	77	119	53
	46-48S	117-122	134	142	77	119	53
<u>Regular</u> 170-179 5'7"-5'10"	34-36R	86-91	104	112	80	122	53
	38-40R	97-102	114	122	80	122	53
	42-44R	107-112	124	132	80	122	53
	46-48R	117-122	134	142	80	122	53
<u>Tall</u> 180-189 5'11"- 6'2"	34-36T	86-91	104	112	85	127	53
	38-40T	97-102	114	122	85	127	53
	42-44T	107-112	124	132	85	127	53
	46-48T	117-122	134	142	85	127	53
TOLERANCES ±			12 mm	12 mm	12 mm	12 mm	6 mm

NOTE: All measurements are in centimetres unless otherwise indicated.