

Dated 27 November, 2012



NOTICE

This document has been examined by the Technical Authority for content and confirmed that it has no references to controlled goods

**REFERENCES, SEALED PATTERNS,
AND TERMINOLOGY FOR THE
PERFORMANCE SPECIFICATION
FOR THE INTERIM
CANADIAN FORCES EXTREME COLD WEATHER MUKLUK
(ECWM) ASSEMBLY**

PSCN 8430-20-A0F-5856

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1.0 REFERENCES:

The following documents are referenced and will be considered part of the requirement for the Interim Extreme Cold Weather Mukluk Assembly. Sources are as shown:

**Department of National Defence,
Ottawa, Ontario, K1A 0K2
Attention: DSCO 4-7-5.**

DSSPM 2-2-80-502

CADPAT™ (WO) [CANADIAN DISRUPTIVE
PATTERN (WINTER OPERATIONS)]

CFTPO-ECWM

Canadian Forces Transportation Packaging
Order

**AATCC
P.O. Box 12215
Research Triangle Park, NC
27709, USA
Telephone: (919) 549-3526
Website: www.aatcc.org**

AATCC Evaluation Procedure #9 Visual Assessment of Colour Differences of
Textiles

**American Society for Testing and Materials (ASTM)
100 Barr Harbor Drive, P.O. Box C700
West Conshohocken, Pennsylvania, U.S.A.
19428-2959**

D98

Standard Specification for Calcium Chloride

D975

Standard Specification for Diesel Fuel Oils

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D2699	Test Method for Research Octane Number of Spark Ignition Engine Fuel
F2913	Test Method for Measuring the Coefficient of Friction for Evaluation of Slip Performance of Footwear and Test Surfaces/Flooring Using a Whole Shoe Tester

Canadian General Standards Board
Gatineau, QC
K1A 1G6
Telephone: 819-956-0425 or 1-800-665-2472
Email: ncr.cgsb-ongc@pwgsc.gc.ca
Website: <http://www.pwgsc.gc.ca/cgsb/home/index-e.html>

CAN/CGSB-3-22	Wide-Cut Type Aviation Turbine Fuel
CAN/CGSB-4.2	Textile Test Methods Method 9.2 Breaking Strength of Fabrics - Grab Method - Constant-time-to-break Principle Method 12.1 Tearing Strength - Single-Rip Method Method 21 Colourfastness To Sea Water Method 26.2 Determination of Resistance to Surface Wetting (Spray Test) Method 26.5 Water Resistance - High-Pressure Penetration Test Method 27.4 Burning Behaviour - Determination of Ease of Ignition of Vertically Oriented Specimens
CAN/CGSB-15.19	Insect Repellent Diethyltoluamide

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Group CTT Group
3000, rue Boullé,
Saint-Hyacinthe, Québec
J2S 1H9

Phone: (450) 778-1870
Phone (Toll Free): (877) 288-8378
Fax: (450) 778-3901

Foot Thermal Rating Test (Dry) (Test CTT/PTC-1)

Drying Rate

SAE International
World Headquarters
400 Commonwealth Drive
Warrendale, PA 15096-0001 USA
Telephone: 1-877-606-7323
Website: <http://www.sae.org>

SAE J 1966*6

Lubricating Oils, Aircraft Piston Engine (Non-Dispersant Mineral Oil)

Standards Council of Canada
270 Albert Street, Suite 200
Ottawa, ON
K1P 6N7
Telephone: (613) 238-3222
Email: info@scc.ca

ISO 9407

Shoe sizes - Mondopoint system of sizing and marking

Shoe and Allied Trades Research Association (SATRA)
SATRA House, Rockingham Road,
Kettering, Northants, England NN169JH

SATRA TM144

Friction (Slip Resistance) of Footwear and Floorings

SATRA TM223

Floor Marking By Solings or Top Pieces

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2.0 SEALED PATTERNS:

The following sealed patterns are referenced and will be considered part of the requirement for the Interim Extreme Cold Weather Mukluk Assembly.

DSSPM 258-09P	CADPAT™ (WO), independent of substrate. Sealed for colour guidance only
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3.0 TERMINOLOGY:

- a. **Anti-FOD:** Foreign Object Damage (FOD) is any damage attributed to a foreign object that can be expressed in physical or economic terms that may or may not degrade the product's required safety and/or performance characteristics. Typically, FOD is an aviation term used to describe debris on or around an aircraft or damage done to an aircraft when the debris comes in contact with it. In terms of the design of footwear soles, the sole must be hard enough as not to allow the embedding of foreign objects (screws, nails, stones, etc.), which can later dislodge to become a FOD hazard. In terms of the overall design, the fittings (eyelets, cord locks, etc) on the boot must be secured somehow to prevent them falling off the boot to become "foreign object debris".
- b. **Canadian Disruptive Pattern Winter Operations (CADPAT™ WO):** Canadian Disruptive Pattern Winter Operations or CADPAT™ WO is a computer generated grey and white pattern designed to be worn in arctic conditions and incorporating sophisticated infra-red protection designed to conceal soldiers from image intensification devices (night vision). First quality CADPAT™ fabrics can only be provided to garment or equipment manufacturers who have contracts with Canada for approved Department of National Defense (DND) military equipment and clothing. There is no need for an end item manufacturer using CADPAT™ for government contracts to register as they are bound by the terms of the contract with Canada. In order to obtain first quality CADPAT™ from a fabric supplier, you must provide the fabric supplier with proof that you have a contract by Public Works and Government Services Canada (PWGSC) for the provision of CADPAT™ goods to DND. If you wish to bid on a government contract for DND, and samples are required for a bid submission, you must work with the fabric suppliers to obtain the sample quantity required for the bid. Fabric suppliers are permitted to provide sample quantities to end item manufacturers for the purposes of bidding on DND contracts. The use of CADPAT™ is protected by Canadian copyright laws and patents held by Canada. Anyone using first quality CADPAT™ outside of a DND contract may be subject to legal action.
- c. **Extended Combat Sock System:** The extended combat sock system consists of four socks: a polyester/nylon liner sock to wick moisture away from the foot, a medium weight hot weather sock for wear in hot to warm temperatures, a medium weight, wool and nylon temperate sock for wear in mild to cold temperatures, and a wool/nylon, heavyweight, thermal sock for wear in colder temperatures. The temperate and thermal socks are designed to be worn with the liner sock in order to increase comfort and decrease friction-causing foot injuries. These socks, alone

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or in combination, allow the user to choose the level of thermal protection required to address personal variables in work rate and metabolism.

- d. **Field conditions /operational tasks:** For this requirement, field conditions or operational tasks are defined as being a combination of environmental factors (outlined in Annex B, paragraph 2.1.1) and daily tasks that dismounted soldiers are expected to complete. The daily functions of dismounted soldiers in the field operating alone or in a section are shown in Table 1:

Table 1 – Tasks of Dismounted Infantry Soldier

Priority	Description	Task
1	Tasks primarily related to immediate combat or the preparation of immediate combat	Engage threat targets; Fight at close quarters; Adopt fire positions; Move undetected; Prepare defensive fighting positions; Overcome obstacles; and Employ camouflage.
2	Tasks related to planning / logistic preparation and peacekeeping	Determine location and bearing; Emplace obstacles; Gather technical information; Prepare reports; Move cross country; Communicate; Participate in operations other than war; Mount / Dismount tactical transport; and Participate in Nuclear, Biological and Chemical Defence (NBCD) operations.
3	Tasks primarily related to sustainability	Administer medical first aid; Prepare and consume nutrition; Carry heavy loads; Rest and conduct personal hygiene; Set up / operate equipment; Maintain / repair equipment; and Employ survival techniques.

- e. **Mondopoint sizing:** The Canadian Forces has adopted the mondopoint (in accordance with ISO 9407) sizing system to standardize the sizing of military footwear. In the mondopoint sizing system, there is a direct relationship between foot size (wearing appropriate socks) and boot size. Mondopoint marking is composed of two sets of figures expressed in millimeters; the first represents the foot length and the second represents foot width at the ball joint (example: 280/110).

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- f. **Shelf Life:** Shelf life is defined as the length of time an item can be stores under specific conditions of temperature, humidity, and light and continue to remain viable for its' intended use.