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NOTICE

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

Pre-Award Technical Evaluation Plan for the Interim Extreme Cold Weather Mukluk (ECWM) Assembly

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Interim Extreme Cold Weather Mukluk (ECWM) Assembly**

1.0 General.

1.1 Evaluation Plan. This annex describes how The Department of National Defence (DND) is to perform the pre-award technical evaluation of Interim Extreme Cold Weather Mukluk (ECWM) Assembly submissions in terms of evaluating physical samples for the quality of workmanship and for their ability to demonstrate capability to meet requisite technologies, and for conformance to specified materials and measurements outlined in **Annex B** (DSSPM 2-3-87-ECWM). The technical portion of the evaluation plan will be done through a technical verification performed by a team of DND Subject Matter Experts (SMEs) with the exception for the conformance to specified materials which will be proven by the submission from the Manufacturer with the appropriate test results from accredited independent laboratories or, when stated, Certificate(s) of Compliance (C of C) or results from in-house laboratory testing.

1.1.1 Stages. There are two (2) stages to the evaluation:

- **Stage I (Technical Verification)** will be completed on all bid submissions to determine technical compliance through the examination of the physical examples, mandatory test results, C of C's, and supporting information outlined in paragraphs 1.2 to 1.4. Stage I will be a pass (compliant) or fail (non-compliant) scenario; and
- **Stage II (Rated Requirements)** will be completed solely on submissions deemed compliant in Stage I. Stage II consists of each compliant bid being compared or rated against each other in terms of Moisture Vapour Transmission Rate (MVTR), Drying Rate (of removable liner only), Ease of Ignition (of removable liner only), Slip Resistance, and IRR reflectance (upper materials only). See **Annex D** (Bid Evaluation Rated Requirements) for details.

1.2 Samples. As part of the evaluation, to confirm a Manufacturers' capability of meeting the technical and performance requirements, the following samples outlined in Table I must be submitted:

Table I – Physical Samples To Be Submitted

Requirement
One (1) pair of the Interim Extreme Cold Weather Mukluk Assembly in size 9 Medium.

1.2.1 The Manufacturer must ensure that the required sample is manufactured in accordance with the technical and performance requirements outlined in **Annex B** (DSSPM 2-3-87-ECWM) and are fully representative of any quantity production.

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1.2.2 **Material Substitutions.** There will be no material substitutions allowed in the pre-award sample.

1.3 **Evaluation of Conformance To Specified Materials And Measurements Outlined In Annex B (DSSPM 2-3-87-ECWM).**

1.3.1 **Mandatory Material Testing Information.** As part of the evaluation, to confirm a Manufacturers' capability of meeting the technical and performance requirements, the test results and/or certificates of compliance outlined in Table II must be submitted.

Table II – Mandatory Material Testing Information

Material	Reference in Annex B (DSSPM 2-3-87-ECWM)	Requirement and Reference	Testing Requirements and Frequency
			Pre-Award
Upper	Paragraph 2.2.1	COLOUR AND INFRA-RED REFLECTANCE REQUIREMENTS in accordance with paragraph 2.2.1 and DSSPM 2-2-80-502	Certificate of Compliance from the source of supply showing test results from in-house laboratory or accredited independent laboratory.
Whole Boot	Paragraph 2.5.1	WHOLE BOOT LEAKAGE TEST in accordance with Annex B, paragraph 8.2	Certificate of Compliance from the source of supply showing test results from in-house laboratory.
Whole Boot	Paragraph 2.5.3	MOISTURE VAPOUR TRANSMISSION RATE (MVTR) test results in accordance with Annex B, paragraph 8.3	Test results done by accredited independent laboratory.
Removable Liner	Paragraph 2.6.2	DRYING RATE test results in accordance with Annex B, paragraph 8.4	Test results done by accredited independent laboratory.
Whole Boot	Paragraph 2.7	FOOT THERMAL RATING test results in accordance with Annex B, paragraph 8.5	Test results done by accredited independent laboratory.
Removable Liner	Paragraph 2.8.1	EASE OF IGNITION test results in accordance with CAN/CGSB-4.2, No. 27.4	Test results done by accredited independent laboratory.
Microbial Resistance in Removable Liner and Footbed	Paragraph 2.9	PEST CONTROL PRODUCT REGISTRATION NUMBER that has been issued by the Pest Management Regulatory Agency of Health Canada or confirmation that the microbial is an Environmental Protection Agency (EPA)-registered product.	Certificate of Compliance from the source of supply.

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Material	Reference in Annex B (DSSPM 2-3-87-ECWM)	Requirement and Reference	Testing Requirements and Frequency
			Pre-Award
Bottoming Components / Outsole	Paragraph 2.10.1	CHANGES TO APPEARANCE test results in accordance with Annex B, paragraph 8.6	Certificate of Compliance from the source of supply showing test results from in-house laboratory.
Upper Materials	Paragraph 2.10.1	CHANGES TO APPEARANCE test results in accordance with Annex B, paragraph 8.6	Certificate of Compliance from the source of supply showing test results from in-house laboratory.
Seams	Paragraph 2.10.3	EXPOSURE TO CHEMICALS FOR LEAKAGE test results in accordance with Annex B, paragraph 8.6 and CAN/CGSB-4.2 Method 26.5	Certificate of Compliance from the source of supply showing test results from in-house laboratory.
Upper Materials	Paragraph 3.1.2	BREAKING STRENGTH test results in accordance with CAN/CGSB-4.2 Method 9.2	Certificate of Compliance from the source of supply showing test results from in-house laboratory.
Upper Materials	Paragraph 3.1.3	TEARING STRENGTH test results in accordance with CAN/CGSB-4.2 Method 12.1	Certificate of Compliance from the source of supply showing test results from in-house laboratory.
Upper Materials	Paragraph 3.1.4	WATER REPELLENCE test results in accordance with CAN/CGSB-4.2 Method 26.2	Certificate of Compliance from the source of supply showing test results from in-house laboratory.
Upper Materials	Paragraph 3.1.5	WATER RESISTANCE test results in accordance with CAN/CGSB-4.2 Method 26.5	Certificate of Compliance from the source of supply showing test results from in-house laboratory.
Bottoming Components	Paragraph 4.2	SLIP RESISTANCE test results in accordance with SATRA TM144 OR ASTM F2913.	Test results done by accredited independent laboratory.

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- 1.3.1.1 **Tests and Test Results or Certificate of Compliance (C of C):** Test results or Certificates of Compliance (C of C) will be required on each component as stated in Table II.
- 1.3.1.1.1 Test results submitted at pre-award will be evaluated for compliance to the applicable specifications.
- 1.3.1.1.2 **Certificate of Compliance (C of C):** A Certificate of Compliance (C of C) is a written statement from the supplier guaranteeing the full compliance of the product to the specification, or portion thereof, referenced. This document must be on official company stationary, it must be current, it must make reference to the applicable specification and have the original signature of the company's designated representative. The Crown reserves the right to verify the statements made in the C of C. Full test results, demonstrating the product's compliance, will be accepted in lieu of a C of C.
- 1.3.1.1.3 Unless otherwise specified, all tests and test methods shall be in accordance with the specified requirements. All testing shall be conducted by an accredited independent laboratory familiar with textile testing. Testing carried out by university textile testing laboratories will also be acceptable. Should a non-accredited laboratory be required for specific tests, approval shall be sought and received in writing from the Design Authority in advance.
- 1.3.2 **Component, Design, and Manufacturing Process Information.** In addition to the physical samples (as outlined in Table I) and the test results (outlined in Table II) to be provided, submissions must include a written description of the overall component, design, and manufacturing process features.
- 1.4 **Evaluation of quality of workmanship and ability to demonstrate capability to meet requisite technologies.**
- 1.4.1 **Workmanship and Construction Evaluation.** As part of the evaluation, to confirm a Manufacturers' submission for the quality of workmanship and for the ability to demonstrate capability to meet requisite technologies, the workmanship and construction will be evaluated using the criteria outlined in Table III.
- 1.4.1.1 **Definitions.**
- 1.4.1.1.1 **Critical Infraction.** A critical infraction is defined as a non-compliance of a performance requirement deemed essential in Annex B.
- 1.4.1.1.2 **Deviation.** A deviation is defined as a workmanship or construction issue evaluated to be non-compliant that directly affects serviceability of the boot or affects overall quality assurance.
- 1.4.1.1.3 **Observation.** An observation is defined as a workmanship or construction issue evaluated to be non-compliant that does not necessarily affect serviceability of the boot but affects overall quality assurance.

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1.4.1.2 **Maximum Infractions.** No critical workmanship and construction infractions will be accepted in any of the pre-award samples. A maximum of three (3) workmanship and construction deviations will be accepted in any of the pre-award samples. Observations will be noted and referenced in the pre-award evaluation. Note that if a workmanship or construction issue is not listed in Table III, it will be deemed an observation.

Table III – Workmanship and Construction Evaluation

Reference in Annex B (DSSPM 2-3-87-ECWM)	Criteria	Classification (*see note)		
		Critical	Deviation	Observation
Paragraph 2.2.2 (Colour of Bottoming Components)	The colour of the bottoming components is not white or grey.	X		
Paragraph 2.2.3 (Colour of Fittings)	The colour of the fittings is not white or grey.	X		
Paragraph 2.3 (Weight)	Maximum weight of a size 9M Interim Extreme Cold Weather Mukluk Assembly exceeds 1350.0 grams per boot.	X		
Paragraph 2.4 (Height)	Height (without height of the snow cuff) is less than 13-1/2 inches (34.3 cm) or exceeds 16 inches (40.6 cm).	X		
Paragraph 2.4.1 (Adjustable Snow Cuff)	An adjustable snow cuff was not included at the upper edge of the shaft of the boot.	X		
Paragraph 4.1 (Bottoming Components)	The area directly under the foot/heel must be finished smooth, free of voids or material that may collect moisture.	X		
Paragraph 4.4 (Bottoming Components)	The lug depth or cleat height for any part of the sole must be a minimum of 4.0 mm.	X		
Paragraph 5.2 a. (Removable Liner)	If the removable liner is a two layer system, each layer must be able to detach from each other	X		
Paragraph 5.2 b. (Removable Liner)	The removable liner must be flexible enough to facilitate packing into the large field pack assembly.	X		
Paragraph 5.2 c. (Removable Liner)	The removable liner must incorporate a method of quick attach and detach from the ECWM shell.	X		
Paragraph 6.1 (Mandatory Components / Design Elements)	The Interim ECWM must include an adjustment/closure system that includes the use of eyelets and laces.	X		

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Reference in Annex B (DSSPM 2-3-87-ECWM)	Criteria	Classification (*see note)		
		Critical	Deviation	Observation
Paragraph 6.1 (Mandatory Components / Design Elements)	The ECWM must have round laces of sufficient length to ensure firm closure and easy adjustment.	X		
Paragraph 6.2 (Mandatory Components / Design Elements)	Heel Bar providing secure notch for snowshoes not used.	X		
Paragraph 10.1 (Labeling)	Labeling omitted, incorrect, illegible, or incomplete.			X
Paragraph 10.2 (Marking of removable pieces)	Marking omitted, incorrect, illegible, or incomplete.			X
Paragraph 12.0 (Packaging)	Packaging omitted, incorrect, or incomplete.			X
Construction and Assembly - General	Applicable to all components and assemblies unless otherwise indicated.			
Construction and Assembly - General	Any operation omitted or not properly performed, or any part missing.		X	
Construction and Assembly - General	Incomplete manufacturing process.		X	
Construction and Assembly - General	Cuts, tears, holes, rips, mend, lumps, creases, weak places, or other deficiencies seriously affecting serviceability.		X	
Construction and Assembly - General	Noticeable separation of parts.		X	
Construction and Assembly - General	Needle chews likely to develop into a hole.			X

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Reference in Annex B (DSSPM 2-3-87-ECWM)	Criteria	Classification (*see note)		
		Critical	Deviation	Observation
Construction and Assembly - General	Pairs of finished boots must be the same in terms of materials and design.			X
Construction and Assembly - General	Pairs of finished boots have significant variation in shade or colour.			X
Construction and Assembly - General	Pairs of finished boots not right and left of same size.			X
Construction and Assembly - General	Any open seam, any row of stitching missing, stitching uneven tension, appropriate number of stitches per inch for material, loose stitching resulting in loosely secured seam, tight stitch resulting in puckering of fabric or assembly, thread ends not trimmed, or parts caught in an unrelated row of stitching,		X	
Construction and Assembly - General	Grease, oil, or other foreign matter on outside or inside of finished footwear.			X

*Note: Classification of infraction is for the purposes of evaluation only.