

26SEPT22

**Request for Information– Navy Clothing and Textile Research Facility  
Fleece Fabric for Navy Parka Liner Jacket**

The Navy Clothing and Textile Research Facility (NCTRF) is conducting a market survey to determine the availability of black low pile velour fleece fabrics for use as the basic material as part of a layering system and as a stand-alone jacket (See Figure 1). As a liner, the fleece will be used as a zip-in liner for the US Navy Utility and Dress Parkas and shall be compatible with the laminated outer shell Parka, adding warmth and comfort. The layered system is designed to provide environmental protection to Sailors ashore operating in temperate, wet cold (20°F to 39°F) and dry cold (-4°F to 19°F) weather conditions. When worn as a standalone jacket, the fleece shall keep the wearer warm and provide protection against wind and light precipitation.

The fabric should be capable of meeting or exceeding the performance attributes outlined in Table I. Performance Attributes. The most promising fabrics will be down selected and subjected to physical property testing. Successful fabrics may be used in future uniform procurements.

**Interested Parties:** To respond to this request for information (RFI), interested parties are REQUIRED to submit the following to enable NCTRF to conduct physical property testing and determine suitability for end use:

1. A cover sheet that identifies the interested party, their cage code, their business size under the North American Industry Classification System (NAICS), their technical point of contact (TPOC), and contact information (email and phone number) for the TPOC.
2. Material Submission
  - a. A minimum of 5 yards full width material.
  - b. A material description, to include: identification of fiber content (fiber percentage), yarn structure (yarns per inch and ply), material structure, performance characteristics, color capabilities, dye application method (e.g., pieced dyed), width of finished material, production lead time, production locations (fiber, yarn, weaving and finishing). Complete disclosure of chemical treatment for topical finishes, applicable Safety Data Sheets (SDS) and documentation for Berry Amendment (10 USC 4862a) compliance is required.
  - c. Technical data sheet(s) and applicable test reports for the material properties listed in Table I.
  - d. Anticipated lead-time to deliver yardage.
  - e. An estimated cost per yard (specify width of material), which may be broken down by quantity reflecting economies of scale.
  - f. Country of Origin of material
  - g. Information which certifies that the finished product is composed of materials which have been safely used commercially or provide sufficient toxicity data to show compatibility with prolonged, direct skin contact. The finished cloth shall not present a dermal health hazard when used as intended.

Required documentation and fabric yardage shall be submitted to NCTRF no later than COB 14 OCTOBER 2022, Information will be handled as proprietary, and samples will not be returned.

**Contact Information:** Please submit responses to this RFI to Kelly Fratelli, Navy Clothing and Textile Research Facility, 10 General Greene Ave, Bldg. 86, Natick, MA 01760-5019, 508-206-2762, [kelly.a.fratelli.civ@us.navy.mil](mailto:kelly.a.fratelli.civ@us.navy.mil).

This notice is for market survey purposes only. THIS IS NOT A SOLICITATION OR REQUEST FOR PROPOSALS. No solicitation document exists.

**Table I. Performance Attributes**

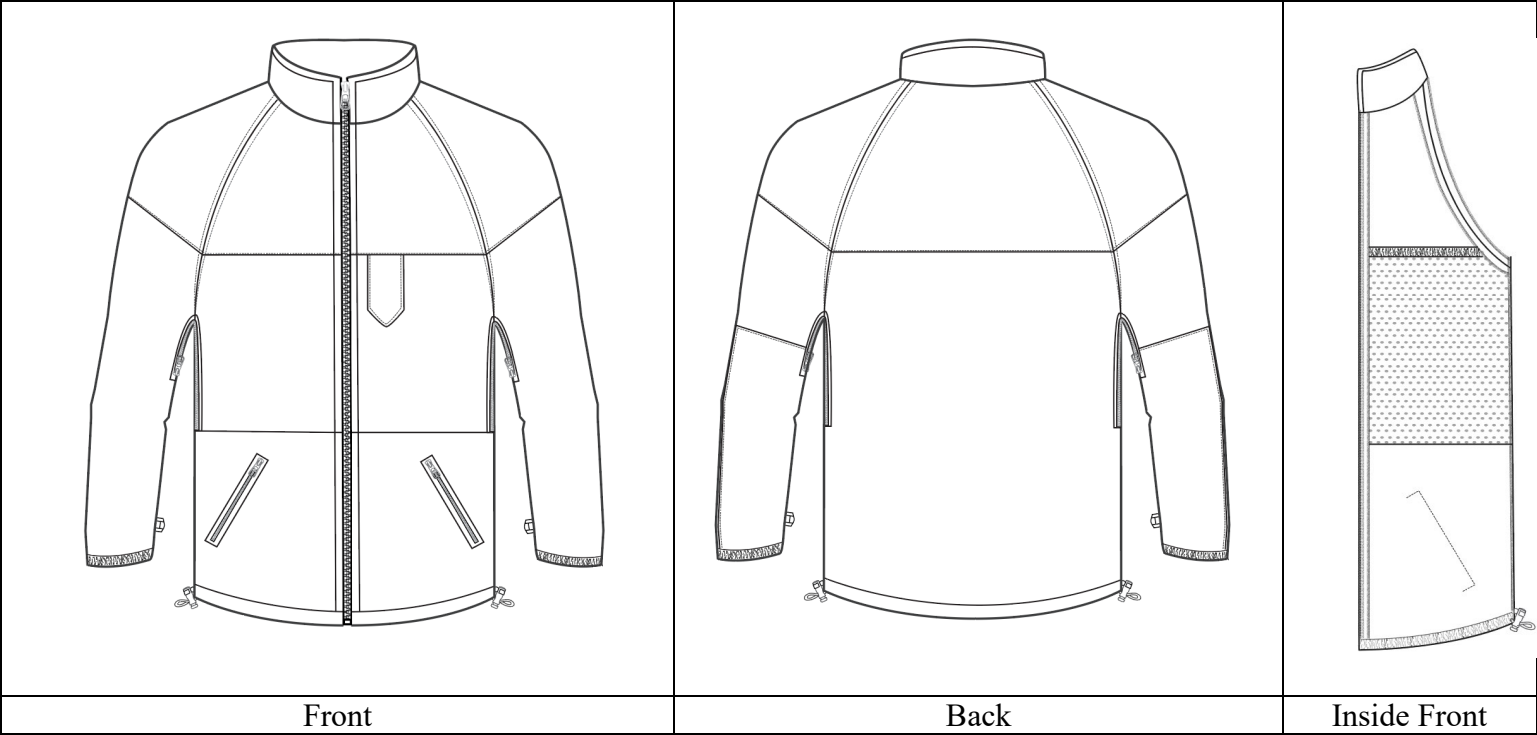
| <b>PERFORMANCE PROPERTIES</b>  | <b>TEST METHODS</b>   | <b>REQUIREMENTS</b>   |
|--|---|---|
| <b>Physical Properties</b>   |   |   |
| Fabric Weight  | ASTM D3776  | 6.0 – 9.5 oz/sq.yd  |
| Yarn Denier/Size   | ASTM D1907  | Report results  |
| Fiber Analysis   | AATCC 20/20A<br>ASTM D629   | Report results<br>-Blends: ±3.0%<br>-Single Fiber: No tolerance   |
| Fabric Construction  |   |   |
| Knit   | Visual  | Report results  |
| After napping/shearing   | Visual  | Report results  |
| <b>General Properties</b>  |   |   |
| Construction and Workmanship /<br>Fabric Defects                     | Visual<br>ASTM D3990  | Shall provide good and even overall construction with no major defects, No unraveling, or monofilament yarns. |
| Evenness of Color on Fabric  | Visual  | Uniform and even color within sample  |
| Thickness at 0.6 psi (maximum)                                       | ASTM D1777  | 0.12 inch   |
| Finish   | <u>1/</u>   |   |
| <b>Dimensional Performance Characteristics</b>                       |   |   |
| Dimensional Change (5 cycles),<br>(maximum)<br>Wales<br>Course       | AATCC 135, 3, IV, Aii <u>2/</u>   | 5.0%<br>5.0%  |
| <b>Strength / Durability Properties</b>                              |   |   |
| Stretch Recovery   | ASTM 2594   | Report results  |
| Resistance to Random Tumble Pilling<br>(minimum)<br>After 30 minutes | ASTM D3512  | 3.5 on the rating scale   |
| Bursting Strength (minimum)  | ASTM D3786<br>or<br>ASTM D3787  | 50 psi<br>50 pounds   |
| Air Permeability   | ASTM D737   | 30 - 100 ft³/min/ft²  |
| Appearance after 5 laundering cycles<br>(pilling)                    | AATCC 135, 3, IV, Aii and<br>ASTM D3512, Scale Small<br>Pills <u>3/</u> | Slight pilling, SS-3.5 rating or better   |
| <b>Water Repellence/Resistance Performance Characteristics</b>       |   |   |
| Water Repellency: Spray Test<br>Initial<br>After 1x laundering       | AATCC 22<br>AATCC 135, 3, IV, Aii and<br>AATCC 22                       | Report results<br>Report results  |

**TABLE I. PERFORMANCE ATTRIBUTES (continued)**

| PERFORMANCE PROPERTIES  | TEST METHODS   | REQUIREMENTS                                 |
|---|--|--|
| <b>Thermal Properties</b>   |  |  |
| Thermal insulation (minimum)<br>Initial<br>After 5 launderings  | ISO 11092 or ASTM F1868<br>AATCC TM 135 3, IV, Aii<br>and ISO 11092 or ASTM<br>F1868   | 0.4 clo (intrinsic)<br>0.4 clo (intrinsic)   |
| <b>Colorfastness Properties (minimum)</b>   |  |  |
| Colorfastness to Laundering (3 cycles)<br>Color change<br>Staining  | AATCC 61, 2A<br><u>4</u> /<br><u>5</u> /   | Grade 4<br>Grade 3                           |
| Colorfastness to Light<br>(170 Kilojoules or 40 hrs.)   | AATCC 16.2 or 16.3 <u>5</u> /  | Grade 3-5                                    |
| Colorfastness to perspiration<br>Acid<br>Color Change<br>Staining<br><br>Alkaline<br>Color Change<br>Staining | AATCC 15<br><br><u>4</u> /<br><u>5</u> /<br><br><u>6</u> /<br><u>4</u> /<br><u>5</u> / | Grade 4<br>Grade 3<br><br>Grade 4<br>Grade 3 |
| Colorfastness to Crocking<br>Dry<br>Wet   | AATCC 8 <u>7</u> /   | Grade 4.0<br>Grade 3.0                       |
| Shade for<br>Black  | AATCC Procedure 9  | Black 3238                                   |

Notes:

- 1/ The finished cloth shall exhibit no dermatological or toxic effects to the users. The supplier is responsible for certification that the finished product is composed of materials, which have been safely used commercially or provide sufficient toxicity data to show compatibility with prolonged, direct skin contact.
- 2/ The test specimens shall be subjected to five (5) washing and drying cycles.
- 3/ The test method is cited for pilling rating scale purposes only.
- 4/ Rated using the AATCC EP1, Gray Scale for Color Change
- 5/ Rated using the AATCC EP2, Gray Scale for Staining
- 6/ Tested in accordance with AATCC TM15-1973
- 7/ Rated using the AATCC EP8, AATCC-9 Step Chromatic Transference Scale



**Figure 1. Parka Liner Jacket**