



MINIMUM SAMPLE SIZE	<input type="checkbox"/> Textiles / Mock Panels: send 3 20.5x20.5 inch panels (52x52 cm) or 2 m ² of material	<i>NOTE: Samples for manikin testing must fit the manikin. See page 3 for manikin dimensions.</i>	<input type="checkbox"/> Return Sample	Send Reports by: <input type="checkbox"/> Email Only <input type="checkbox"/> Fax Only <input type="checkbox"/> Email & Fax
	<input type="checkbox"/> Finished Products: send one sample of entire product (see test for more details)		<i>(Sample remainder will be returned; shipping & handling charges apply)</i>	
	<input type="checkbox"/> Loose fillings: Minimum 200 grams			

APPLICANT		PAYER (if different from Applicant)	
Contact		Contact	
Company		Company	
Address		Address	
Telephone	FAX	Telephone	FAX
Email(s)		Email(s)	
Send Report To: <input type="checkbox"/> Applicant <input type="checkbox"/> Payer <input type="checkbox"/> Other _____		Send Invoice To: <input type="checkbox"/> Applicant <input type="checkbox"/> Payer	

SAMPLE IDENTIFICATION / DESCRIPTION	SPECIAL INSTRUCTIONS

RUSH SERVICE	* PLEASE SIGN BELOW
<input type="checkbox"/> Normal 10-15 business days <i>(Notice: Normal turn-around times may be delayed without notice if sample volumes are high.)</i> Rush Services are only available on the following tests: ASTM D 1518, ASTM F 1868 Part A & Option D & IDFL 51 (ASTM D 1518 - Modified) <input type="checkbox"/> Same Day* <input type="checkbox"/> 1-Day* <input type="checkbox"/> 2-Day <input type="checkbox"/> 3-Day <input type="checkbox"/> 5-Day <i>(Notice: Rush turn-around times may be delayed or unavailable if sample volumes are high. **Please call prior to submission to make special arrangements.)</i>	We request testing as indicated and agree to IDFL Terms and Conditions available at www.idfl.com _____ Authorized Signature (required) Date

Fabrics, Battings, and Mock-up Panels	
ASTM D 1518 – Hot plate: insulation (clo) <input type="checkbox"/> <u>Option 1</u> : Still air condition with box hood over plate. <input type="checkbox"/> <u>Option 2</u> : 1.0 m/s air velocity over the plate. ASTM F 1868 – Hot plate: insulation (clo) <input type="checkbox"/> <u>Part A</u> : 1.0 m/s air velocity over the plate <i>(same as option 2 above).</i> <input type="checkbox"/> <u>Option B</u> : Isothermal Evaporative Resistance <input type="checkbox"/> <u>Option C</u> : Total Heat Loss <input type="checkbox"/> <u>Option D</u> : Insulation Value (Clo) <input type="checkbox"/> <u>Option E</u> : Permeability Index <input type="checkbox"/> ISO 11092 (Dry) – Textiles-Determination of Physiological Properties-Measurement of Thermal and Water-Vapour Resistance (clo) <i>(not appropriate for thick materials)</i> <input type="checkbox"/> ISO 11092 (Wet) – Evaporative Resistance of Textiles <input type="checkbox"/> BS 4745 – Thermal Resistance of Textiles	Sample Notes: <ul style="list-style-type: none"> Fabric or Battings: <ul style="list-style-type: none"> 3 specimens of 20.5 x 20.5 inches square. Layer components in the orientation they would be placed on the body. Mock-ups: 3 specimens of 20.5 x 20.5 inches square; larger samples may be cut down to size. Send samples unwrinkled, no creases. Send samples uncompressed for best results. If only ONE specimen can be provided, it will be tested 3x.



Loose Fillings

IDFL 51 (ASTM D1518 -Modified) - Hot plate: insulation (clo)

- Option 1-A: Still air condition with box hood over plate. (Loose filling is placed in a mesh frame of fixed volume)
Use fill density: ___ g/m^2, ___ g/m^3 or ___ g/cm^3
Use expected IDFB Steam fill power density: ___ in^3/30g
Test fill power to use as fill density: (fill power is extra cost)

Choose Standard: (IDFL Recommends IDFB Steam)

- IDFB steam EN 12130 (TD) China Oven
China steam(QB) Japan Down Power Korea Steam
Other

Card sample before testing (for synthetics only)

Sample Notes:

- For this test, fill density can be given as mass per unit volume or area.
Fill density may also be given in the form of an equivalent fill power.
The mesh frame size is 18.5x18.5x0.75 inches internal

Sleeping Bags

ASTM F1720 - Dry manikin: insulation (clo) plus temperature ratings (which are not part of the standard)

- Option 1: Bag only: Tested using nude manikin.
Option 2: Bag System: Tested using auxiliary products. Tested with clothing, pads, bivy sacs, etc.
Choose One:
I will provide auxiliary products. Describe all items:
Pad:
Garments:
Bivy:
I want to use lab's auxiliary products (1.5 inch self-inflating pad, thermal underwear, and socks)
Additional Option: Test according to my provided military specifications.

ISO 23537 (replaced EN 13537 in April 2017) - Dry manikin: insulation (clo) and ISO temperature ratings

Bag is tested with lab provided thermal underwear, socks, face mask for bags with hood, a 1.5 inch self-inflating foam pad on a board.

Test Choices: (Choice B or C is required by ISO 23537)

- Option A: 3 replications of the test is performed in a row (1 hour apart) on 1 bag sample. (fasted method)
Option B: 3 independent replications on 1 bag sample (bag is taken off the manikin between tests)
Option C: 3 independent replications on 3 identical bag samples of the same type

Additional Options:

- Report clo value results for all 13 manikin zones
Report Sleeping Bag weight

Sample Notes:

- Send bags that will fit the manikin (see Sleeping Bag Manikin Measurements on page 4).
Children's bags cannot be tested with these methods. Please Contact us for children bag options.

Bedding

ASTM F1720 Modified - Dry manikin: insulation (clo) Modification to Option 2: Thermal manikin on a mattress in an environmental chamber.

Describe items to be used in bedding system and indicate whether you are sending them or whether the lab's auxiliary products should be used:

- Use Lab's auxiliary products
Use Below items

Mattress:
Pad:
Sheets:
Clothing:
Pillow:
Other:

BS 5335-1 - Synthetic Filled Duvets (TOG) (Provide: Minimum finished size: 135cm x 200cm)

BS 5335-2 - Down/Feather Filled Duvets (TOG) (Provide: Minimum finished size: 135cm x 200cm)

BS 8510 (2009) - Clause 7.2.1 - Children's sleep bags (Grobags) Tog Test portion only (Provide: Minimum 1 baby sleeping bag)



Clothing and Jackets

Cold weather protective clothing:

Adults*-

ASTM F2732- Dry manikin: insulation (clo) and temperature ratings insulation values & temperature ratings at low activity (2 MET) and high activity (4 MET)

- Use ASTM F 2732 base ensemble (long-sleeve knit shirt, jeans, socks, athletic shoes, fleece gloves, fleece hat)
Use another base ensemble:

Please list garments and provide them:

Children*-

ASTM F1291- Dry manikin: insulation (clo) values plus temperature ratings based on different activity levels and children's ages.

- Using base ensemble. (long-sleeve knit shirt, jeans, socks, athletic shoes, fleece gloves, fleece hat)
Use another base ensemble:

Please list garments below and provide them:

*ATTENTION: Garments with hoods will need to be cut so that they can fit around the hook in the manikin's head. Choose option:

- Test jackets with hoods up (hoods will be cut and pinned back together).
Test jackets with hoods down or detached.

Note: Insulation values will be higher (and temperature ratings lower) if the hood is covering the head.

Clothing Systems:

- ASTM F1291 - Dry manikin: insulation (clo)
ISO 15831 - Physiological Effects- Dry manikin: insulation (clo)
Using Adult manikin
Using Child manikin (boy's size 8)

ASTM F2370 - Sweating manikin: evaporative resistance (m^2 Pa/W) -Available on Adults only

Additional Options:

- Report clo value results for all manikin zones covered by the test garment (i.e., jacket).
Report clo value results for certain body parts only (e.g. torso covered by vest)

List parts:

ISEA 201 - Determine the temperature rating for comfort - Work clothing

Cleaning method and level
Durability class

Sample Notes:

- Send garments that fit the manikins (see Clothing Manikin Measurements dimensions on page 4)
Provide a list of garments that are worn with the test garment and indicate whether you will be providing them or the lab should provide them.
If each ensemble is different, list all garments in each ensemble under sample identification section; number the ensembles.
Provide dressing details (which layers are tucked into which layers, etc.)

Table with 3 columns: Gloves, Footwear, Headwear. Each column contains specific testing standards and options.

Other Testing Options:

- Test sample BEFORE and AFTER Laundering (no.) of cycles
Perform Test ONLY AFTER Laundering (no.) of cycles

Mark Care Laundering Instructions:

- Follow the Care label attached to product.
Use Other Care Instructions:
Machine Wash: Normal Cycle Gentle Cycle Water Temperature: c°
Tumble Dry Heat Setting: c° Air Dry Hang Dry
Dry Clean Only
Additional Instructions:



Sleeping Bag Manikin Measurements

Measurement Location	Measurement	
	cm	in
Arm length from shoulder tip to wrist	58.4	23
Chest circumference at fullest part	91.4	36
Waist circumference	73.7	29
Full hip circumference	91.4	36
Circumference of torso and arms at shoulders (51 in. from feet)	122.6	48.25
Circumference of torso and arms at elbow level (40 in. from feet)	122.6	48.25
Circumference of torso and arms at hand level (30 in. from feet)	123.2	48.5
Width at knees (19 in. from feet)	30.5	12
Width at feet	29.2	11.5
Height	176.0	69.3

Clothing Manikin Measurements

Adult Male - Measurement Location	cm	in
Chest circumference at arm pit level	90.8	35.75
Natural waist circumference	75.6	29.75
Hip circumference (widest point)	92.7	36.5
Arm length from shoulder tip to wrist	61	24
Front length from neck base to natural waist	43.2	17
Back shoulder width from shoulder tip to shoulder tip	44.4	17.5
Inseam length to top of shoe (from crotch to ankle)	78.7	31
Foot length (taken on bottom of foot) Men's shoe and boot size 12	26.7	10.5
Height	177.2	69.75

Child (Boy's size 8) - Measurement Location	cm	in
Chest circumference at arm pit level	66.0	26
Natural waist circumference	62.2	24.5
Hip circumference (widest point)	71.1	28
Inseam length to top of shoe (from crotch to ankle)	59.7	23.5
Foot length (taken on bottom of foot) Kid's shoe size 3.5 and boot size 4	19.8	7.8
Height	129.5	51