



# TEST REPORT

Test Report # 18W-004315 Date of Report Issue: July 25, 2018  
 Date of Sample Received: June 22, 2018 Pages: Page 1 of 34

## CLIENT INFORMATION:

Company: Spector & Co.  
 Address: -



## SAMPLE INFORMATION:

Description: Drawstring backpack with reflective trim and top load laptop  
 Assortment: BLACK  
 Model/style No.: ATHLEISURE DRAWSTRING BACKPACK  
 SKU No.: BG112  
 Factory/Supplier: USW034  
 Quantity Submitted: 2  
 Country of Distribution: Canada & USA  
 Country of Origin: China  
 Testing Period: 06/22/2018-07/25/2018

## OVERALL RESULT:

**PASS with information**

Refer to page 2 for test result summary and appropriate notes.

HANGZHOU ASIAINSPECTION  
 TESTING TECHNOLOGY CO., LTD

*Kevin Lee*

Kevin Lee  
 Technical Manager



HANGZHOU ASIAINSPECTION TESTING TECHNOLOGY CO., LTD ♦ Email: Labtesting@asiainspection.com ♦ Tel: (86) 571-8999 7158  
 ♦ 5/F A2 Building ♦ No. 1213 Huoju South Road ♦ Puyan Street ♦ Binjiang District ♦ Hangzhou ♦ China

*The test result(s) and conclusion(s) in this report relate to the sample(s) tested as described herein.  
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# TEST REPORT

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## TEST RESULTS SUMMARY:

At the request of the client, the following tests were conducted:

CONCLUSION	TEST(S) CONDUCTED
PASS	California Proposition 65, Total Lead in Substrate Materials
PASS	Canadian Consumer Products Containing Lead (Contact with Mouth) Regulation SOR/2010-273 as Amended by SOR/2016-171, Total Lead in Accessible Substrates
PASS	California Proposition 65, Total Cadmium in Substrate Materials
PASS	California Proposition 65, Phthalates (DBP, BBP, DEHP, DINP, DIDP, DnHP)
PASS	CPSC 16 CFR 1307 Prohibition of Children’s Toys and Child Care Articles Containing Specified Phthalates(DBP, BBP, DEHP, DINP, DHEXP / DnHP, DCHP, DIBP, DPENP)
PASS	Client’s Requirement, Phthalates content
PASS	19 CFR 134.11, Country of Origin
PASS	Uniform Packaging and Labeling Regulation
PASS	Marking of Imported Goods Order, (C.R.C., c.535), Country of Origin
PASS	Charter of French Language, (R.S.Q., c.C-11), Province of Quebec Labeling
PASS	Consumer Packaging and Labeling Act (R.S., 1985, c. C-38)
PASS	Textile Labeling Act and Textile Labelling and Advertising Regulations- Labeling Review
PASS	Color Fastness to Crocking
PASS	Color Fastness to Water
PASS	Color Fastness to Light
Refer to Detailed Results	Dimensions
Refer to Detailed Results	The capacity in liters for bag
Refer to Detailed Results	Article Weight
PASS	Defects
PASS	Workmanship
PASS	SOR/2016-194 and Method F01 Flammability of Textile Products
Refer to Detailed Results	Fabric Weight Per Unit Area
PASS	Tensile Strength
PASS	Tearing Strength





# TEST REPORT

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PASS	Bursting Strength
PASS	Seam Strength
PASS	Abrasion Resistance
PASS	Pilling Resistance
PASS	Zipper Strength
PASS	Zipper Operability
PASS	Water Repellency-Spray Test
PASS	Water Resistance –Rain Test
Refer to Detailed Results	Fiber Content
PASS	Client’s Requirement for Static Load Test





**DETAILED RESULTS:**

**California Proposition 65, Total Lead in Substrate Materials**

Test Method: CPSC-CH-E1001-08.3 (Metal), CPSC-CH-E1002-08.3 (Non-Metal)  
Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	1	2+3	4	---	---	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Total Lead (Pb)	44	35	ND	---	---	<b>100</b>
<b>Conclusion</b>	PASS	PASS	PASS	---	---	

*Note:*

mg/kg =Milligrams per kilogram

LT = Less than

ND = Not detected (Reporting Limit =15 mg/kg)

Composite results are based on specimen of least mass resulting in highest potential concentration.

*Remark:*

The specification is quoted from client's requirement.





**DETAILED RESULTS:**

**Canadian Consumer Products Containing Lead (Contact with Mouth) Regulation SOR/2010-273 as Amended by SOR/2016-171, Total Lead in Accessible Substrates**

Test Method: CPSC-CH-E1001-08.3 (Metal), CPSC-CH-E1002-08.3 (Non-Metal)

Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	1	2+3	4	---	---	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Total Lead (Pb)	44	35	ND	---	---	90
<b>Conclusion</b>	PASS	PASS	PASS	---	---	

*Note:*

mg/kg = Milligrams per kilogram

LT = Less than

ND = Not detected (Reporting Limit = 15 mg/kg)

Composite results are based on specimen of least mass resulting in highest potential concentration.





**DETAILED RESULTS:**

**California Proposition 65, Total Cadmium in Substrate Materials**

Test Method: ASTM F963-17 Clause 8.3.1  
Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	1	2+3	4	---	---	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Total Cadmium (Cd)	ND	ND	ND	---	---	<b>75</b>
<b>Conclusion</b>	PASS	PASS	PASS	---	---	

*Note:*

mg/kg =Milligrams per kilogram

LT = Less than

ND = Not detected (Reporting Limit = 15 mg/kg)

Composite results are based on specimen of least mass resulting in highest potential concentration.

*Remark:*

The specification is quoted from client’s requirement.



**DETAILED RESULTS:****California Proposition 65, Phthalates (DBP, BBP, DEHP, DINP, DIDP, DnHP)**

Test Method: CPSC-CH-C1001-09.3  
 Analytical Method: Gas Chromatography with Mass Spectrometry

Specimen No.	2+3	4	---	---	Limit ( mg/kg)
Test Item CAS No.	Result ( mg/kg)	Result ( mg/kg)	Result ( mg/kg)	Result ( mg/kg)	
Dibutyl phthalate (DBP) 84-74-2	ND	ND	---	---	1000
Benzyl butyl phthalate (BBP) 85-68-7	ND	ND	---	---	1000
Di-(2-ethylhexyl) phthalate (DEHP) 117-81-7	ND	ND	---	---	1000
Diisononyl phthalate (DINP) 28553-12-0 68515-48-0	ND	ND	---	---	1000
Diisodecyl phthalate (DIDP) 26761-40-0 68515-49-1	ND	ND	---	---	1000
Di-n-hexyl phthalate (DnHP) 84-75-3	ND	ND	---	---	1000
<b>Conclusion</b>	PASS	PASS	---	---	

**Note:**

mg/kg (Milligrams per kilogram) = 0.0001 % m/m (Percent by mass)

LT = Less than

ND = Not detected (Reporting Limit = 150 mg/kg)

Composite results are based on specimen of least mass resulting in highest potential concentration.

**Remark:**

The specification is quoted from client's requirement.



**DETAILED RESULTS:****CPSC 16 CFR 1307 Prohibition of Children's Toys and Child Care Articles Containing Specified Phthalates (DBP, BBP, DEHP, DINP, DHEXP / DnHP, DCHP, DIBP, DPENP)**

Test Method: CPSC-CH-C1001-09.3(Modified), In-House Method

Analytical Method: Gas Chromatography with Mass Spectrometry

Specimen No.	2+3	4	---	---	Limit (mg/kg)
Test Item CAS No.	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Dibutyl phthalate (DBP) 84-74-2	ND	ND	---	---	1000
Benzyl butyl phthalate (BBP) 85-68-7	ND	ND	---	---	1000
Di-(2-ethylhexyl) phthalate (DEHP) 117-81-7	ND	ND	---	---	1000
Diisononyl phthalate (DINP) 28553-12-0 68515-48-0	ND	ND	---	---	1000
Di-n-hexyl phthalate (DHEXP / DnHP) 84-75-3	ND	ND	---	---	1000
Dicyclohexyl phthalate (DCHP) 84-61-7	ND	ND	---	---	1000
Diisobutyl phthalate (DIBP) 84-69-5	ND	ND	---	---	1000
Di-n-pentyl phthalate (DPENP) 131-18-0	ND	ND	---	---	1000
<b>Conclusion</b>	PASS	PASS	---	---	

**Note:**

mg/kg = Milligrams per kilogram

LT = Less than

ND = Not detected (Reporting Limit = 150 mg/kg)

Composite results are based on specimen of least mass resulting in highest potential concentration.





**DETAILED RESULTS:****Client's Requirement, Phthalates content**

Test Method: CPSC-CH-C1001-09.3  
 Analytical Method: Gas Chromatography with Mass Spectrometry

Specimen No.		2+3	4	---	---	Limit ( mg/kg)
Test Item	CAS No.	Result ( mg/kg)	Result ( mg/kg)	Result ( mg/kg)	Result ( mg/kg)	
Dibutyl phthalate (DBP)	84-74-2	ND	ND	---	---	1000
Benzyl butyl phthalate (BBP)	85-68-7	ND	ND	---	---	1000
Di-(2-ethylhexyl) phthalate (DEHP)	117-81-7	ND	ND	---	---	1000
Diisononyl phthalate (DINP)	28553-12-0 68515-48-0	ND	ND	---	---	1000
Diisodecyl phthalate (DIDP)	26761-40-0 68515-49-1	ND	ND	---	---	1000
Di-n-hexyl phthalate (DHEXP / DnHP)	84-75-3	ND	ND	---	---	1000
Di-n-octyl phthalate (DNOP)	117-84-0	ND	ND	---	---	1000
Diethyl phthalate (DEP)	84-66-2	ND	ND	---	---	1000
Diisobutyl phthalate (DIBP)	84-69-5	ND	ND	---	---	1000
Dicyclohexyl phthalate (DCHP)	84-61-7	ND	ND	---	---	1000
Di-n-pentyl phthalate (DPENP/DnPP)	131-18-0	ND	ND	---	---	1000
<b>Conclusion</b>		PASS	PASS	---	---	

**Note:**

mg/kg (Milligrams per kilogram) = 0.0001 % m/m (Percent by mass)

LT = Less than

ND = Not detected (Reporting Limit = 150 mg/kg)

Composite results are based on specimen of least mass resulting in highest potential concentration.

**Remark:**

The specification is quoted from client's requirement.

HANGZHOU ASIAINSPECTION TESTING TECHNOLOGY CO., LTD ♦ Email: Labtesting@asiainspection.com ♦ Tel: (86) 571-8999 7158  
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**DETAILED RESULTS:**

**19 CFR 134.11, Country of Origin**

Specimen No.	5	
Test	Observation	Conclusion
Country of Origin	Present on label	PASS

**Uniform Packaging and Labeling Regulation**

Specimen No.	5	
Test	Observation	Conclusion
Declaration of Identity	The packaging contains the declaration of identity	PASS
Declaration of Responsibility	The packaging contains the declaration of responsibility	PASS





**DETAILED RESULTS:**

**Marking of Imported Goods Order, (C.R.C., c.535), Country of Origin**

Specimen No.	5	
Section	Requirement	Conclusion
2	Present on label	PASS

**Charter of French Language, (R.S.Q., c.C-11), Province of Quebec Labeling**

Specimen No.	5	
Clause	Test	Conclusion
c.C-11	French Labeling	PASS

**Consumer Packaging and Labeling Act (R.S., 1985, c. C-38)**

Specimen No.	5	
Section	Requirement	Conclusion
10	Place of Manufacture	PASS





**DETAILED RESULTS:**

**Textile Labeling Act and Textile Labelling and Advertising Regulations- Labeling Review**

Test Method: R.S.C., 1985, c. T-10& C.R.C., c. 1551, Visual Check.

Specimen No.		5
Test Parameters	Observation	Result
<b>1. Fibre Content</b>		
Every fibre which is present in an amount of 5 percent or more by mass must be declared on the label using its generic name. Exceptions apply where the article contains unknown or undetermined fibres. Additional requirements apply when reclaimed fibres are present. And if the textile article contains trimming or findings other labelling requirements or alternatives exist.	Comply with the requirement	Pass
Every fibre which is present in an amount of less than 5 percent by mass must be declared on the label using its generic name or the term, "other fibre". Special exceptions to this requirement exist for elastic yarns, reinforcement yarns and ornamentation.	N/A	N/A
In conjunction with the generic name, the amount of each fibre must be declared on the label as a percentage of the total fibre mass of the article or its components	Comply with the requirement	Pass
If the textile article consists of parts or sections differing in fibre content, each part or section must be declared on the label in a sectional disclosure. Sectional disclosures are also required for paddings or fillings, such as those used in pillows for beds or those added for warmth, linings and interlinings, as well as for carpets, fabric supported foams and pile, coated or impregnated fabrics.	N/A	N/A
<b>2. Bilingual Requirement</b>		
All fibre content information on the label must be bilingual, except in areas where only one official language is used in consumer transactions	Comply with the requirement	Pass
<b>3. Dealer Identity</b>		
The dealer identity (business name and address) must be displayed on the label. Alternatively, a dealer in Canada may use a CA identification number.	Comply with the requirement	Pass



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Specimen No.		5
Test Parameters	Observation	Result
4. Country Of Origin		
If the article or any fabric or fibre therein is imported, Country of origin must be displayed on the label.	Comply with the requirement	Pass
5. Form And Application Of Labels		
The form of a label must ensure that the information contained on the label is factual, legible and accessible to the prospective consumer at the time of purchase.	Comply with the requirement	Pass
Depending on the type of article being labelled, either a permanent or non-permanent label must be applied to a consumer textile article. Special requirements exist for prepackaged articles and labelling alternatives exist for home-crafted articles. Exceptions to this requirement exist for custom-made articles, such as a tailored suit or a carpet cut to the customer's specification.	Comply with the requirement	Pass
Conclusion		PASS



**DETAILED RESULTS:****Color Fastness to Crocking**

Test Method: AATCC 8-2016

Specimen No.	5-Shell	5-Lining	5-Back mesh	Client's requirement (Grade)
Items	Result (Grade)	Result (Grade)	Result (Grade)	
Dry staining	4.5	4.5	4.5	Min. 4.0
Wet staining	4.5	4.5	4.5	Min. 2.5
Conclusion	PASS	PASS	PASS	-

Specimen No.	5-Tape	Client's requirement (Grade)
Items	Result (Grade)	
Dry staining	4.0	Min. 4.0
Wet staining	4.5	Min. 2.5
Conclusion	PASS	-

Remark: Grey Scale rating is based on the 5-step scale of 1 to 5, where 1 is bad and 5 is good.



**DETAILED RESULTS:****Color Fastness to Water**

Test Method: AATCC 107-2013

Specimen No.	5-Shell	5-Lining	5-Back mesh	Client's requirement (Grade)
Items	Result (Grade)	Result (Grade)	Result (Grade)	
Change in shade	4.5	4.5	4.5	Min. 4.0
Staining on multi-fiber stripe				
-Acetate	4.5	4.5	4.5	Min. 3.5
-Cotton	4.5	4.5	4.5	Min. 3.5
-Nylon	3.5	4.5	4.5	Min. 3.5
-Polyester	4.0	4.5	4.5	Min. 3.5
-Acrylic	4.5	4.5	4.5	Min. 3.5
-Wool	4.5	4.5	4.5	Min. 3.5
Conclusion	PASS	PASS	PASS	-

Specimen No.	5-Tape	Client's requirement (Grade)
Items	Result (Grade)	
Change in shade	4.5	Min. 4.0
Staining on multi-fiber stripe		
-Acetate	4.0	Min. 3.5
-Cotton	4.5	Min. 3.5
-Nylon	4.5	Min. 3.5
-Polyester	4.5	Min. 3.5
-Acrylic	4.5	Min. 3.5
-Wool	4.5	Min. 3.5
Conclusion	PASS	-

Remark: Grey scale rating is based on the 5-step of 1 to 5, where 1 is bad and 5 is good.





**DETAILED RESULTS:**

**Color Fastness to Light**

Test Method: AATCC 16.3-2014; Option 3; Xenon Arc Lamp.

Specimen No.	5-Shell	Client's requirement (Grade)
Items	Result (Grade)	
After 20 AFU Change in shade	4.5	Min. 4.0
Conclusion	PASS	-

Remarks: Grey scale rating is based on the 5-step of 1 to 5, where 1 is bad and 5 is good.





**DETAILED RESULTS:****Dimensions**

Test Method: IHTM, Standard Measure;

Specimen No.	5	Client's requirement
Items	Result (inch)	
Length	11	N/A
Width	6 <sup>3</sup> / <sub>4</sub>	
Height	18 <sup>3</sup> / <sub>8</sub>	
Conclusion	Information only	-

**The capacity in liters for bag**

Test Method: IHTM, Standard Measure;

Specimen No.	5	Client's requirement
Items	Result (liter)	
Capacity	13.6	N/A
Conclusion	Information only	-



**DETAILED RESULTS:****Article Weight**

Test Method: IHTM 010

Specimen No.	5	Client's requirement
Items	Result	
(g/piece)	451	N/A
Conclusion	Information only	-

**Defects**

Test Method: ASTM D3990 - 12(2016); Visual Examination

Specimen No.	5	Requirement
Item	Result	
Observation	No major defect	Visual examination to verify noticeable defects (such as missing components, obvious knitting /weaving defects, improper functioning component).
Conclusion	PASS	





**DETAILED RESULTS:**

**Workmanship**

Test Method: IHTM; Visual Examination

Specimen No.	5	Requirement
Item	Result	
Observation	No major poor workmanship	<p>Visual examination to verify noticeable poor Workmanship (such as:</p> <p>Poor sewing: Broken seam Missing stitches or Skipped / Uneven /wave stitches or stitched holes on visible area. Insecure back stitches / Uneven stitch tension / Needle chewing Misaligned seam.</p> <p>Poor riveting metal eyelet or other metal parts</p> <p>Dirty / Glue/ Scratch / Wrinkle / Pen Mark / Oil Stain / Water Stain</p> <p>The inside hiding thread expose.</p> <p>Poor electro-plating or spraying on handle metal plate Obvious Scratched mark on extendable handle or metal plate</p> <p>Fabric , webbing band or strap getting discoloration</p>
Conclusion	PASS	-





DETAILED RESULTS:

SOR/2016-194 and Method F01 Flammability of Textile Products

Test Method: CAN/CGSB-4.2 No.27.5-2008

Specimen No.	5-Shell				Client's requirement	
Preliminary Tests	<u>Fabric Surface</u>	Smooth	<u>Test Specimen Direction</u>			Face Length
Items	Result					
	<u>As Received</u>		<u>After Dry-cleaning and Laundering*</u>			
	<u>Flame Spread (sec.)</u>	<u>Burn Code</u>	<u>Flame Spread (sec.)</u>	<u>Burn Code</u>		
(1)	-	DNI	-	DNI	>3.5s	
(2)	-	DNI	-	DNI		
(3)	-	DNI	-	DNI		
(4)	-	DNI	-	DNI		
(5)	-	DNI	-	DNI		
(6)	-	DNI	-	DNI		
(7)	-	DNI	-	DNI		
(8)	-	DNI	-	DNI		
(9)	-	DNI	-	DNI		
(10)	-	DNI	-	DNI		
Conclusion	PASS					

\* Dry-cleaning / Laundering procedure is according to CAN/CGSB-4.2 No.30.3-94 & CAN/CGSB-4.2 No.58-2004; Machine wash at 50°C and tumble dry on the normal setting.

**Burn Code Description:**

DNI = Did not ignite;





**DETAILED RESULTS:**

**SOR/2016-194 and Method F01 Flammability of Textile Products**

Test Method: CAN/CGSB-4.2 No.27.5-2008

Specimen No.	5-Lining				Face Length
Preliminary Tests	<u>Fabric Surface</u>	Smooth	<u>Test Specimen Direction</u>		
Items	Result				Client's requirement
	<u>As Received</u>		<u>After Dry-cleaning and Laundering*</u>		
	<u>Flame Spread (sec.)</u>	<u>Burn Code</u>	<u>Flame Spread (sec.)</u>	<u>Burn Code</u>	
(1)	12.3	BB	11.2	BB	>3.5s
(2)	12.7	BB	12.0	BB	
(3)	13.0	BB	11.0	BB	
(4)	12.5	BB	12.7	BB	
(5)	12.9	BB	12.9	BB	
(Avg.)	12.7	BB	12.0	BB	
Conclusion	PASS				

\* Dry-cleaning / Laundering procedure is according to CAN/CGSB-4.2 No.30.3-94 & CAN/CGSB-4.2 No.58-2004; Machine wash at 50°C and tumble dry on the normal setting.

**Burn Code Description:**

BB = Base burns;





**DETAILED RESULTS:**

**SOR/2016-194 and Method F01 Flammability of Textile Products**

Test Method: CAN/CGSB-4.2 No.27.5-2008

Specimen No.	5-Back mesh				Client's requirement	
Preliminary Tests	<u>Fabric Surface</u>	Smooth	<u>Test Specimen Direction</u>			Face Length
Items	Result					
	<u>As Received</u>		<u>After Dry-cleaning and Laundering*</u>			
	<u>Flame Spread (sec.)</u>	<u>Burn Code</u>	<u>Flame Spread (sec.)</u>	<u>Burn Code</u>		
(1)	-	IBE	-	IBE	>3.5s	
(2)	-	IBE	-	IBE		
(3)	-	IBE	-	IBE		
(4)	-	IBE	-	IBE		
(5)	-	IBE	-	IBE		
(6)	-	IBE	-	IBE		
(7)	-	IBE	-	IBE		
(8)	-	IBE	-	IBE		
(9)	-	IBE	-	IBE		
(10)	-	IBE	-	IBE		
Conclusion	PASS					

\* Dry-cleaning / Laundering procedure is according to CAN/CGSB-4.2 No.30.3-94 & CAN/CGSB-4.2 No.58-2004; Machine wash at 50°C and tumble dry on the normal setting.

**Burn Code Description:**

IBE = Ignited but extinguished;





DETAILED RESULTS:

SOR/2016-194 and Method F01 Flammability of Textile Products

Test Method: CAN/CGSB-4.2 No.27.5-2008

Specimen No.	5-Inner mesh				Client's requirement	
Preliminary Tests	<u>Fabric Surface</u>	Smooth	<u>Test Specimen Direction</u>			Face Length
Items	Result					
	<u>As Received</u>		<u>After Dry-cleaning and Laundering*</u>			
	<u>Flame Spread (sec.)</u>	<u>Burn Code</u>	<u>Flame Spread (sec.)</u>	<u>Burn Code</u>		
(1)	-	IBE	-	IBE	>3.5s	
(2)	-	IBE	-	IBE		
(3)	-	IBE	-	IBE		
(4)	-	IBE	-	IBE		
(5)	-	IBE	-	IBE		
(6)	-	IBE	-	IBE		
(7)	-	IBE	-	IBE		
(8)	-	IBE	-	IBE		
(9)	-	IBE	-	IBE		
(10)	-	IBE	-	IBE		
Conclusion	PASS					

\* Dry-cleaning / Laundering procedure is according to CAN/CGSB-4.2 No.30.3-94 & CAN/CGSB-4.2 No.58-2004; Machine wash at 50°C and tumble dry on the normal setting.

**Burn Code Description:**

IBE = Ignited but extinguished;





**DETAILED RESULTS:**

**Fabric Weight Per Unit Area**

Test Method: ASTM D3776/D3776M-09a(R2013),Option C;

Specimen No.	5-Shell	5-Lining	5-Back Mesh	Client's requirement
Items	Result	Result	Result	
(g/m <sup>2</sup> )	222	76.7	221	N/A
(oz/yd <sup>2</sup> )	6.55	2.26	6.52	N/A
Conclusion	Information only	Information only	Information only	-

**Tensile Strength**

Test Method: ASTM D5034-09(Reapproved 2013); Instron CRE - 1" Grab

Specimen No.	5-Shell	Client's requirement (lbf)
Items	Result (lbf)	
Length	375.4	Min. 25
Width	226.3	Min. 25
Conclusion	PASS	-

Specimen No.	5-Lining	Client's requirement (lbf)
Items	Result (lbf)	
Warp	148.9	Min. 25
Weft	107.8	Min. 25
Conclusion	PASS	-







**DETAILED RESULTS:**

**Tearing Strength**

Test Method: ASTM D1424-09(R2013) Elmendorf

Specimen No.	5-Shell	Client's requirement (lbf)
Items	Result (lbf)	
Length yarns torn	10.7	Min. 1.5
Width yarns torn	8.2	Min. 1.5
Conclusion	PASS	-

Note: Length test - test in which the Length yarns are torn.

Width test - test in which the Width yarns are torn.

**Tearing Strength**

Test Method: ASTM D1424-09(R2013) Elmendorf

Specimen No.	5-Lining	Client's requirement (lbf)
Items	Result (lbf)	
Warp yarns torn	5.5	Min. 1.5
Weft yarns torn	5.4	Min. 1.5
Conclusion	PASS	-

Note: Warp test - test in which the warp yarns are torn.

Weft test - test in which the weft yarns are torn.





**DETAILED RESULTS:**

**Bursting Strength**

Test Method: ASTM D3786/D3786M-13; Mullen Bursting Tester

Specimen No.	5- Back Mesh	Client's requirement (P.S.I.)
Items	Result (P.S.I.)	
Bursting Strength	167.7	Min. 40
Conclusion	PASS	-

**Seam Strength**

Test Method: with reference to ASTM D 1683/D1683M-11a; Instron CRE

Specimen No.	5	Client's requirement (lbf)
Items	Result (lbf)	
Side seam-Front	81.0(S.T.B.)	Min. 25
Side seam-Back	72.9(S.T.B.)	Min. 25
Bottom seam-Middle	71.6(S.T.B.)	Min. 25
Bottom seam- Front	115.1(S.T.B.)	Min. 25
Bottom seam- Back	64.0(S.T.B.)	Min. 25
Conclusion	PASS	-

Remarks: S.T.B. = Sewing Thread Breaks.





**DETAILED RESULTS:**

**Abrasion Resistance**

Test Method: ASTM D4966-12<sup>E1</sup>, Option 1; Martindale Wear & Abrasion Tester; 12kPa Pressure

Specimen No.	5-Shell	5- Back Mesh	Client's requirement (rubs)
Items	Result (rubs)	Result (rubs)	
End point	>10000	>10000	10000
Conclusion	PASS	PASS	-

**Pilling Resistance**

Test Method: ASTM D3512/D3512M-16; After 30 min. tumbling in Random tumble Pilling Tester

Specimen No.	5-Shell	5-Mesh	Client's requirement
Items	Result	Result	
As received Rating	4.5	4.5	Min. 3.5
Conclusion	PASS	PASS	-

Remarks: Pilling Rating

- 5 No pilling
- 4 Slight pilling
- 3 Moderate pilling
- 2 Severe pilling
- 1 Very severe pilling



**DETAILED RESULTS:****Zipper Strength**

Test Method: ASTM D2061-07(R2013); type: LM

Specimen No.	5	
Items	Result	Client's requirement
Chain Crosswise Strength Test (lbf)	89.9(Elements break down)	Min. 75
Element Pull-Off Test (lbf)	20.5(Elements pull off)	Min. 10
Element Slippage Test (lbf)	15.9(Elements pull off)	Min. 9
Resistance to Pull-Off Slider Pull (lbf)	51.4(Puller Pull Out)	Min.35
Resistance to Twist of Pull and Slider Test Clockwise (lb. inch) Counter-Clockwise (lb. inch)	>6.0 >6.0	Min.4
Conclusion	PASS	

**Zipper Operability**

Test Method: ASTM D2062-03(R2014)

Specimen No.	5	
Items	Result	Client's requirement
Chain opening (lbf)	0.5	Max. 2
Chain closing (lbf)	0.6	Max. 2
Conclusion	PASS	

Remark: It is noted that a specific sampling plan is laid down per ASTM D2061-07(R2013) & ASTM D2062-03(R2014). The above results for Zipper Strength & Zipper Operability are drawn on the 10 of tested specimens, based on the request from the applicant.





**DETAILED RESULTS:**

**Water Repellency-Spray Test**

Test Method: AATCC 22-2014; Spray Test – Tested under controlled condition, water temperature: 27±1°C

Specimen No.	5-Shell			Client's requirement
Items	Result			
	Specimen 1#	Specimen 2#	Specimen 3#	
As received Rating	95	95	95	Min. 90
Conclusion	PASS			-

- Remarks: Spray Rating
- 100 No sticking or wetting of specimen face
  - 90 Slight random sticking or wetting of specimen face
  - 80 Wetting of specimen face at spray points
  - 70 Partial wetting of the specimen face beyond the spray points
  - 50 Complete wetting of the entire specimen face beyond the spray points
  - 0 Complete wetting of the entire face of the specimen

**Water Resistance –Rain Test**

Test Method: AATCC 35-2013; Rain Test-2ft head Pressure; 2-min impact

Specimen No.	5-Shell				Client's requirement
Items	Result				
	Specimen 1#	Specimen 2#	Specimen 3#	Average	
As received Weight of blotter gained (g)	0.1	0.1	0.1	0.1	Max 1.0g
Conclusion	PASS				-





**DETAILED RESULTS:**

**Fiber Content**

Test Method: AATCC 20-2013

Specimen No.	5-Shell		
Items	Client's requirement	Result	Conclusion
Nylon (%)	N/A	100	Information only

Specimen No.	5-Lining		
Items	Client's requirement	Result	Conclusion
Polyester (%)	N/A	100	Information only





**DETAILED RESULTS:**

**Client's Requirement for Static Load Test**

Test Item	Test Method	Requirement	Conclusion
Static Load test	Place the test load on the bag with 50lb for 2 hours.	No damage	PASS



**SPECIMEN DESCRIPTION:**

Specimen No.	Specimen Description	Location
1	Dull silver metal	Zipper head(main zipper)
2	Black plastic	Zipper teeth(main zipper)
3	Black plastic	Plastic buckle of strap
4	Black foam	Filler of strap
5	Drawstring backpack with reflective trim and top load laptop bag	Finished product







**SAMPLE PHOTO:**





**SAMPLE PHOTO:**



-End Report-

