

# **TEST REPORT**

**Technical Report:** (5213)361-1262 January 3, 2014

Date Received: December 27, 2013 Page 1 of 6

Dominic Chan

Lancer Group Far East Ltd.

Rm. 35, 11/Fl., 19~21 Shing Yip St.,

Shing Yip Ind. Bldg, Kwun Tong, Kowloon, HK

Sample Description: Sample(s) received is/are stated to be:

Printed fabric

Color: White Style No(s): Evolution NX Series White

Order No.: / PO No.: /

Model No.: / Batch No.: /

Age Grade: / Product End Use: Textile printing

Vendor: / Retest No.: /
Manufacturer: Lancer Group International Supplier Reference: /

Manufacturer:Lancer Group InternationalSupplier Reference:/Buyer:Lancer Group InternationalCountry of Origin:CanadaTest Period:December 27, 2013 – January 3, 2014Country of Destination:Canada

Fiber Content: /
Care Instruction: /

#### SUMMARY OF TEST RESULTS

TEST REQUESTED	CONCLUSION	REMARK
Total Lead Content	PASS	
Phthalates Content	PASS	
Solvent Residues Content	PASS	
Polynuclear Aromatic Hydrocarbons (PAHs) Content	PASS	
Extractable Heavy Metals Content	PASS	

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### REMARK

If there are questions or concerns on this report, please contact:

(852) 2331 0330

analytical-enquiry@hk.bureauveritas.com

BUREAU VERITAS HONG KONG LTD.

DR. ALEX HUI

MANAGER, CHEMICAL AND ANALYTICAL SERVICES



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# **Photo of the Submitted Sample**



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### **TEST RESULT**

### **Total Lead Content**

**Test Method** : Acid digestion and analyzed by Atomic Absorption Spectrophotometer (AAS) or

Inductively Coupled Argon Plasma Spectrometer (ICP).

**Tested Item(s)**: 1 White coating (pattern on swatch)

90 mg/kg	Maximum Limit:	Class I – IV:
		90 mg/kg

Parameter	Unit	Result					
-	-						
Lead (Pb)	mg/kg	ND	-	-			
Conclusion	-	PASS	=	=			

Note:

ND = Not detected

">" = More than

mg/kg = milligram per kilogram Detection Limit (mg/kg): 10

### **Phthalates Content**

**Test Method** : Solvent extraction and analysis by Gas Chromatograph Mass Spectrometer (GC-MS)

or Liquid Chromatograph Mass Spectrometer (LC-MS).

**Tested Item(s)**: 1 White coating (pattern on swatch)

Maximum Limit:		BBP, DBP, DEHP, DNOP, DINP, DIDP, DIBP, DIHP, DHNUP, DHP, DMEP and DPP: 0.1 % (Sum)
Waxiiiuiii Liiiii:	Class II - IV	BBP, DBP, DEHP, DIBP, DIHP, DHNUP, DHP, DMEP and DPP: 0.1 % (Sum)

Togtod Itom(a)	Class	Result			Conclusion
Tested Item(s)	Class	Detected Analyte(s)	Conc.	Unit	Conclusion
1	II	ND	ND	%	PASS

Note:

ND = Not detected ">" = More than

% = percent

Detection Limit (%):Each 0.005; Sum 0.015

## Remark:

- The list of phthalates is summarized in table of Appendix.

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### **TEST RESULT**

### **Solvent Residues Content**

**Test Method**: Analyzed by Gas Chromatograph Mass Spectrometer (GC-MS).

**Tested Item(s)** : 2 White fabric with white print (swatch)

Maximum Limit:	Class I – IV:
Maximum Limit:	NMP, DMAc and DMF: 0.1% (Each)

Toolod Home(a)	Test	Result	Constraion		
Tested Item(s) Method		Detected Analyte(s)	Conc.	Unit	Conclusion
2	II	ND	ND	%	PASS

Note:

ND = Not detected

">" = More than

Conc. = Concentration

% = percent

Detection Limit (%): Each 0.01

### Remark:

- The list of solvent residues is summarized in table of Appendix.

### Polynuclear Aromatic Hydrocarbons (PAHs) Content

**Test Method** : ZEK 01.4-08

**Tested Item(s)**: 1 White coating (pattern on swatch)

Maximum Limit:	Class I	Benzo (a) pyrene: 0.5 mg/kg All listed PAHs: 5 mg/kg (Sum)
Maximum Limit.	Class	Benzo (a) pyrene: 1 mg/kg
	II - IV	All listed PAHs: 10 mg/kg (Sum)

Togtod Home(a)	Class	Result			Complusion
Tested Item(s)	Class	Detected Analyte(s)	Conc.	Unit	Conclusion
1	II	Naphthalene	0.732	mg/kg	PASS

Note:

ND = Not detected

">" = More than

Conc. = Concentration

mg/kg = milligram per kilogram

Detection Limit (mg/kg): Each (1-Methylpyrene, Cyclopenta[c,d]pyrene, Dibenzo[a,l]pyrene, Dibenzo[a,e]pyrene, Dibenzo[a,i]pyrene & Dibenzo[a,h]pyrene) 1.0; Each (Others) 0.2; Sum 1.0

### Remark:

- The list of polynuclear aromatic hydrocarbons is summarized in table of Appendix.

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# **TEST RESULT**

### **Extractable Heavy Metals Content**

Test Method : Artificial perspiration solution extraction according to ISO 105 E04:1996 and

analyzed by ultraviolet-visible (UV-Vis) spectrophotometer.

**Tested Item(s)**: 2 White fabric with white print (swatch)

		Element (mg/kg)
	Class I	Cr VI
		0.5
Maximum Limit:	Class	Element (mg/kg)
	II & III	Cr VI
	II & III	0.5
		Element (mg/kg)
	Class IV	Cr VI
		0.5

-	Unit	Result				
Tested Item(s)	-	2	•	-		
Class	-	II	-	-		
Parameter	-	-	-	-		
Chromium VI (CrVI)	mg/kg	ND	-	-		
Conclusion	-	PASS	-	-		

Note:

ND = Not detected mg/kg = milligram per kilogram Detection Limit (mg/kg): 0.5 ">" = More than

**END** 

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# **APPENDIX**

List o	of Phthalates:				
No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.
1	Butyl benzyl phthalate (BBP)	85-68-7	7	Di-isobutyl phthalate (DIBP)	84-69-5
2	Dibutyl phthalate (DBP)	84-74-2	8	Di-n-hexyl phthalate (DHP)	84-75-3
3	Di-2-ethylhexyl phthalate (DEHP)	117-81-7	9	1,2-benzenedicarboxylic acid, di- C7-11 branched alkyl ester and linear alkyl ester (DHNUP)	68515-42-4
4	Di-n-octyl phthalate (DNOP)	117-84-0	10	1,2-benzenedicarboxylic acid, di- C6-8-branched alkyl ester, C7-rich (DIHP)	71888-89-6
5	Di-iso-nonyl phthalate (DINP)	28553-12-0	11	Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8
6	Di-iso-decyl phthalate (DIDP)	26761-40-0	12	Di-pentylphthalate (n-, iso-, or mixed)	131-18-0, 605-50-5, 776297-69-9

List o	List of Polynuclear Aromatic Hydrocarbons:						
No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.		
1	Naphthalene	91-20-3	13	Dibenzo (a,h) anthracene	53-70-3		
2	Acenaphthylene	208-96-8	14	Benzo (g,h,i) perylene	191-24-2		
3	Acenaphthene	83-32-9	15	Benzo (b) fluoranthene	205-99-2		
4	Fluorene	86-73-7	16	Benzo (k) fluoranthene	207-08-9		
5	Phenanthrene	85-01-8	17	Benzo (e) pyrene	192-97-2		
6	Antracene	120-12-7	18	Benzo (j) fluoranthene	205-83-2		
7	Fluoranthene	206-44-0	19	Cyclopenta (c,d) pyrene	27208-37-3		
8	Pyrene	129-00-0	20	Dibenzo (a,e) pyrene	192-65-4		
9	Benzo (a) anthracene	56-55-3	21	Dibenzo (a,h) pyrene	189-64-0		
10	Chrysene	218-01-9	22	Dibenzo (a,i) pyrene	189-55-9		
11	Benzo (a) pyrene	50-32-8	23	Dibenzo (a,l) pyrene	191-30-0		
12	Indeno (1,2,3-cd) pyrene	193-39-5	24	1-Methylpyrene	2381-21-7		

List of Solvent Residues:						
No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.	
1	1-Methyl-2-pyrrolidone	872-50-4	3	Dimethylformamide	68-12-2	
2	N,N-Dimethylacetamide	27-19-5	-	-	-	



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Printed fabric

Color: White Style No(s): Evolution NX Series Base

Order No.: / PO No.: / Model No.: / Batch No.: /

Age Grade: / Product End Use: Textile printing

Age Grade: / Product End Use: Textile print
Vendor: / Retest No.: /

Manufacturer: Lancer Group International Supplier Reference: /

Buyer: Lancer Group International Country of Origin: Canada
Test Period: December 27, 2013 – January 3, 2014 Country of Destination: Canada

Fiber Content: /
Care Instruction: /

#### SUMMARY OF TEST RESULTS

TEST REQUESTED	CONCLUSION	REMARK
Total Lead Content	PASS	
Phthalates Content	PASS	
Solvent Residues Content	PASS	
Polynuclear Aromatic Hydrocarbons (PAHs) Content	PASS	
Extractable Heavy Metals Content	PASS	

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### REMARK

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# **Photo of the Submitted Sample**



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### **TEST RESULT**

### **Total Lead Content**

Test Method : Acid digestion and analyzed by Atomic Absorption Spectrophotometer (AAS) or

Inductively Coupled Argon Plasma Spectrometer (ICP).

**Tested Item(s)**: 1 White coating (pattern on swatch)

70 Hig/kg	Maximum Limit:	Class I – IV: 90 mg/kg
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Parameter	Unit	Result					
-	-	1	=	=			
Lead (Pb)	mg/kg	ND	-	-			
Conclusion	-	PASS	=	=			

Note:

ND = Not detected

">" = More than

mg/kg = milligram per kilogram Detection Limit (mg/kg): 10

### **Phthalates Content**

**Test Method** : Solvent extraction and analysis by Gas Chromatograph Mass Spectrometer (GC-MS)

or Liquid Chromatograph Mass Spectrometer (LC-MS).

**Tested Item(s)**: 1 White coating (pattern on swatch)

Maximum Limit:	Class I	BBP, DBP, DEHP, DNOP, DINP, DIDP, DIBP, DIHP, DHNUP, DHP, DMEP and DPP: 0.1 % (Sum)
Waximum Limit:	Class II - IV	BBP, DBP, DEHP, DIBP, DIHP, DHNUP, DHP, DMEP and DPP: 0.1 % (Sum)

Tooks d Idams(s)	Class	Result		Result		Conclusion
Tested Item(s)	Class	Detected Analyte(s)	Conc.	Unit	Conclusion	
1	II	ND	ND	%	PASS	

Note:

ND = Not detected ">" = More than

% = percent

Detection Limit (%):Each 0.005; Sum 0.015

## Remark:

- The list of phthalates is summarized in table of Appendix.

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### **TEST RESULT**

## **Solvent Residues Content**

**Test Method**: Analyzed by Gas Chromatograph Mass Spectrometer (GC-MS).

**Tested Item(s)**: 2 White fabric with white print (swatch)

Maximum Limit: Class I – IV:
NMP, DMAc and DMF: 0.1% (Each)

Tooks d Idams(a)	Test	Result			Construion
Tested Item(s)	Method	Detected Analyte(s)	Conc.	Unit	Conclusion
2	II	ND	ND	%	PASS

Note:

ND = Not detected

">" = More than

Conc. = Concentration

% = percent

Detection Limit (%): Each 0.01

### Remark:

- The list of solvent residues is summarized in table of Appendix.

### Polynuclear Aromatic Hydrocarbons (PAHs) Content

**Test Method** : ZEK 01.4-08

**Tested Item(s)**: 1 White coating (pattern on swatch)

Maximum Limit:	Class I	Benzo (a) pyrene: 0.5 mg/kg All listed PAHs: 5 mg/kg (Sum)
	Class	Benzo (a) pyrene: 1 mg/kg
	II - IV	All listed PAHs: 10 mg/kg (Sum)

Tooted Hermin	Class	Result			Canalasian
Tested Item(s)	Class	Detected Analyte(s)	Conc.	Unit	Conclusion
1	TT	Naphthalene	1.20	ma/ka	PASS
1	11	Sum of all listed PAHs	1.20	mg/kg	FASS

Note:

ND = Not detected

">" = More than

Conc. = Concentration

mg/kg = milligram per kilogram

Detection Limit (mg/kg): Each (1-Methylpyrene, Cyclopenta[c,d]pyrene, Dibenzo[a,l]pyrene, Dibenzo[a,e]pyrene, Dibenzo[a,i]pyrene & Dibenzo[a,h]pyrene) 1.0; Each (Others) 0.2; Sum 1.0

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Maximum Limit:		Element (mg/kg)
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		0.5
	Class	Element (mg/kg)
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	II & III	0.5
		Element (mg/kg)
	Class IV	Cr VI
		0.5

-	Unit	Result			
Tested Item(s)	-	2	•	=	
Class	-	II	-	-	
Parameter	-	-	-	-	
Chromium VI (CrVI)	mg/kg	ND	-	-	
Conclusion	-	PASS	-	-	

Note:

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