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Client number	Person for queries	Our reference	Date
-	Yim, Jade	20161228-028 Regular Service	1/10/2017

REPORT No. 16.0.00976/Rev.1

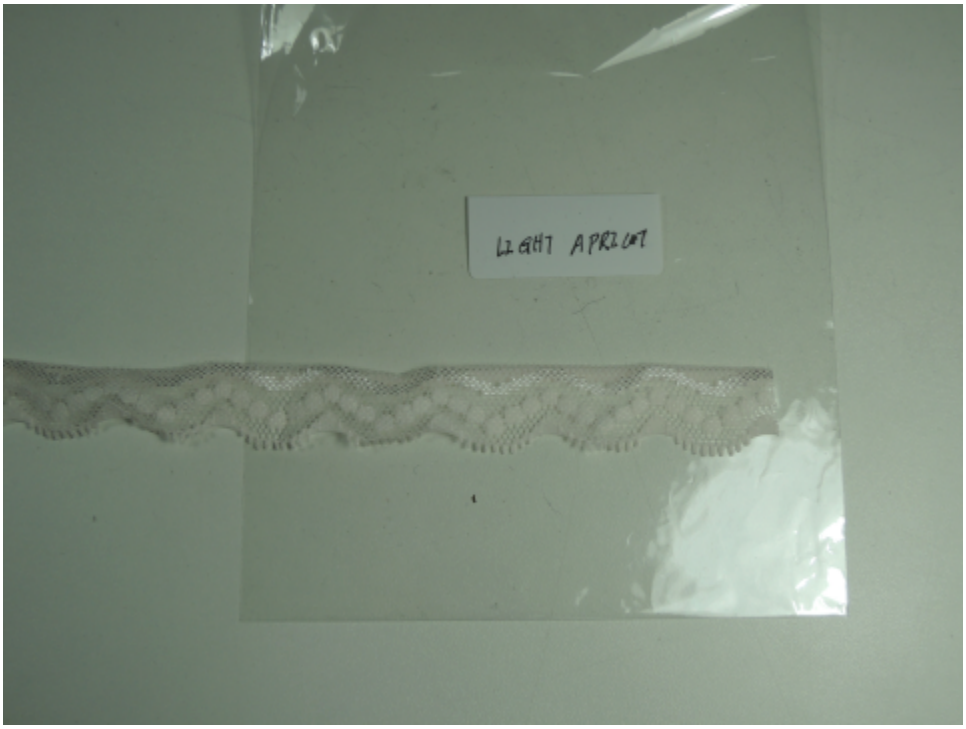
This report replaces the original report no. 16.0.00976 dated 1/4/2017

Client:	Ningbo Widen Textile Co., Ltd
Contact person:	Ms Wang Sandra Phone: +86 0574 82815751 Fax: +86 0573 82815753
Receipt of material / sample:	12/28/2016
Order no. / supplier	LIDL/ 283981/ 283982/ 283983
Test material / specimen:	Lace in 1 style
Test period:	12/28/2016 to 1/4/2017
Aim of test(s):	Determination of fibre composition Determination of banned Azo-colourants Determination of allergenic and carcinogenic colourants Determination of polycyclic aromatic hydrocarbons (PAH) Determination of tin organic compounds Determination of chlorinated benzenes and toluenes

The report comprises 14 pages.

The following material was submitted for the tests:

Sample		Material composition according to information	Note
1	Lace Light apricot		



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RESULT

Determination of the fibre composition

The quantitative determination was carried out under consideration of the European Textile Labelling Regulation (Regulation (EU) No 1007/2011).

Test result:

Sample		Fibre composition	Quantitative analysis
1	Lace Light apricot	89,2% Polyamide 10,8% Elastane	C

Requirement according to client: Not provided

Quantitative analysis	
C	DIN 54 221:1975[A] (hydrochloric acid method) range of variation:quantum of insoluble component max. 30 %: max. ± 0,5 % absolute more than 30 %: max. ± 1 % absolute

Determination of banned azo colourants[A]

(as well as for free available, below listed, carcinogenic aryl amines, detectable at utilisation of the official test methods)

Corresponding to the Ordinance on Commodities (Bedarfsgegenständeverordnung) be in force the directive 2002/61/EEC respectively the ordinance (EC) no 1907/2006 of 18 December 2006 (REACh) the use of certain azo colourants is banned, which can release by reductive cleavage of their azo group(s) one or more of certain listed aromatic and cancerogenic amines.

No.	CAS number	Index number	EC number	Chemical name
1	92-67-1	612-072-00-6	202-177-1	Biphenyl-4-ylamine 4-Aminodiphenyl 4-Aminobiphenyl Xenylamine
2	92-87-5	612-042-00-2	202-199-1	Benzidine
3	95-69-2		202-441-6	4-chloro-o-toluidine
4	91-59-8	612-022-00-3	202-080-4	2-naphthylamine
5[x]	97-56-3	611-006-00-3	202-591-2	o-aminoazotoluene 4-Amino-2',3-dimethylazobenzene 4-o-Tolylazo-o-toluidine
6[x]	99-55-8		202-765-8	2-Amino-4-nitrotoluene 5-Nitro-o-toluidine
7	106-47-8	612-137-00-9	203-401-0	4-Chloroaniline p-Chloroaniline
8	615-05-4		210-406-1	2,4-Diaminoanisole 4-Methoxy-m-phenylenediamine
9	101-77-9	612-051-00-1	202-974-4	4,4'-Methylenedianiline 4,4'-Diaminodiphenylmethane 4,4'-Diaminobiphenylmethane
10	91-94-1	612-068-00-4	202-109-0	3,3'-Dichlorobenzidine 3,3'-Dichlorobiphenyl-4,4'-ylene-diamine
11	119-90-4	612-036-00-X	204-355-4	3,3'-Dimethoxybenzidine o-Dianisidine
12	119-93-7	612-041-00-7	204-358-0	3,3'-Dimethylbenzidine 4,4'-Bi-o-toluidine
13	838-88-0	612-085-00-7	212-658-8	3,3'-Dimethyl-4,4'-diaminodiphenyl-methane 4,4'-Methylenedi-o-toluidine
14	120-71-8		204-419-1	6-Methoxy-m-toluidine p-Cresidine

No.	CAS number	Index number	EC number	Chemical name
15	101-14-4	612-078-00-9	202-918-9	4,4'-Methylene-bis-(2-chloro-aniline) 2,2'-Dichloro-4,4'-methylene-di-aniline
16	101-80-4		202-977-0	4,4'-Oxydianiline
17	139-65-1		205-370-9	4,4'-Thiodianiline
18	95-53-4	612-091-00-X	202-429-0	o-Toluidine 2-Aminotoluene
19	95-80-7	612-099-00-3	202-453-1	2,4-Toluylenediamine 4-Methyl-m-phenylenediamine
20	137-17-7		205-282-0	2,4,5-Trimethylaniline
21	90-04-0	612-035-00-4	201-963-1	o-Anisidine 2-Methoxyaniline
22[xx]	60-09-3	611-008-00-4	200-453-6	4-Aminoazobenzene
23	95-68-1			2,4-Xylidine
24	87-62-7			2,6-Xylidine

x The CAS-numbers 97-56-3 (No. 5) and 99-55-8 (No. 6) are detected further reduced to CAS-numbers 95-53-4 (No. 18) and 95-80-7 (No. 19).

xx Azo colourants that are able to form 4-aminoazobenzene, generate under the condition of some below mentioned methods aniline and 1,4-phenylenediamine. For the detection of 4-aminoazobenzene therefore additional testing methods are carried out if necessary.

The tests were carried out

- according to the official method § 64 LFGB B 82.02-2:2013-01 (DIN EN 14362-1:2012-04) [A]
- according to the official method § 64 LFGB B 82.02-15:2013-01 (DIN EN 14362-3:2012-09) [A];if necessary
- at coloured leather according to the official method § 35 LMBG 82.02-3(V):2004-06; (DIN ISO/TS 17234) respectively DIN EN ISO 17234-1:2010-06 and DIN EN ISO 17234-2:2011-06 [A]
- regarding 4-aminoazobenzene: According to the official method (§ 64 LFGB B 82.02-9, edition September 2006) under consideration of the amendment § 64 LFGB B 82.02-9, amendment April 2008 [A]

Listed amines released by the reductive cleavage were detected and quantified by means of high performance liquid chromatography using a diode array detector (LC/DAD). Positive results were verified by means of gas chromatography with a mass specific detector (GC/MS).

Note: If necessary several test methods were carried out.

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Test result:

Sample		Detected cancerogenic aryl amine(s) in mg/kg (ppm)
1	Lace Light apricot	n.d.

Abbreviations used:

n.d. = According to the analysis as carried out, azo colourants, which can release one or more of certain listed amines (see table) by cleavage of their azo group(s) were not detected in the commodity submitted.

Determination of allergenic and carcinogenic colourants[A]

The test was performed according to DIN 54 231 and after a suitable handling of the sample on colourant extracts in comparison with reference substances. The analyses was carried out by means of high performance liquid chromatography using a diode array detector (LC/DAD) as well as a mass detector (LC/MS); if necessary positive results were verified by means of thin layer chromatography (TLC).

The following colourants were included in the test:

Allergenic Disperse Colourants				
Colourant		**C.I.-no.**	**Colourant**	**C.I.-no.**
C.I. Disperse Blue 1	1)	C.I. 64500	C.I. Disperse Yellow 9	C.I. 10375
C.I. Disperse Blue 3		C.I. 61505	C.I. Disperse Yellow 39	
C.I. Disperse Blue 7		C.I. 62500	C.I. Disperse Yellow 49	
C.I. Disperse Blue 26		C.I. 63305	C.I. Disperse Orange 1	C.I. 11080
C.I. Disperse Blue 35			C.I. Disperse Orange 3	C.I. 11005
C.I. Disperse Blue 102			C.I. Disperse Orange 37	
C.I. Disperse Blue 106			C.I. Disperse Orange 76 = 37	
C.I. Disperse Blue 124			C.I. Disperse Red 1	C.I. 11110
C.I. Disperse Brown 1			C.I. Disperse Red 11	C.I. 62015
C.I. Disperse Yellow 1		C.I. 10345	C.I. Disperse Red 17	C.I. 11210
C.I. Disperse Yellow 3		C.I. 11855		

1) also classified as carcinogenic

Carcinogenic Colourants			
Colourant	**C.I.-no.**	**Colourant**	**C.I.-no.**
C.I. Acid Red 26	C.I. 16150	C.I. Direct Red 28	C.I. 22120
C.I. Basic Red 9	C.I. 42500	C.I. Disperse Blue 1	C.I. 64500
C.I. Basic Violet 14	C.I. 42510	C.I. Disperse Orange 11	C.I. 60700
C.I. Direct Black 38	C.I. 30235	C.I. Disperse Yellow 3	C.I. 11855
C.I. Direct Blue 6	C.I. 22610	C.I. Solvent Yellow 1	C.I. 11000
C.I. Solvent Yellow 2	C.I. 11020	C.I. Solvent Yellow 3	C.I. 11160
C.I. Solvent Yellow 14	C.I. 12055	C.I. Basic Violet 1	C.I. 42535
C.I. Direct Brown 95	C.I. 30145	C.I. Direct Blue 15	C.I. 24400
C.I. Direct Blue 218	C.I. 24401	C.I. Acid Red 114	C.I. 23635
C.I. Acid Violet 49	C.I. 42640	C.I. Basic Blue 26	
C.I. Basic Green 4		C.I. Basic Violet 3	

In the test were included **additional** the following reglemented colourants:

Regulated Colourants			
Colourant	**C.I.-no.**	**Colourant**	**C.I.-no.**
C.I. Disperse Orange 149		C.I. Disperse Yellow 23	C.I. 26070

Test result:

Sample		**Detected Colourants in mg/l**
1	Lace Light apricot	n.d.

Limit value: 5 mg/l in extract

Note:

n.d. = None of the colourants in question were detected.

Determination of polycyclic aromatic hydrocarbons (PAH)[A]

An aliquot part of the sample was extracted with a suitable organic solvent. After a properly work up the separation and quantitative determination was carried out by means of gas chromatography with mass selective detector (GC/MS) or high performance liquid chromatography using a diode array detector (LC/DAD).

The following polycyclic aromatic hydrocarbons were included in the test:

"EPA-PAH's":

Substance	Substance
Naphthalene	Benzo(a)anthracene
Acenaphthylene	Chrysene
Acenaphthene	Benzo(b)fluoranthene
Fluorene	Benzo(a)pyrene
Phenanthrene	Dibenzo(a,h)anthracene
Anthracene	Benzo(g,h,i)-perylene
Fluoranthene	Indeno(1,2,3-c,d)pyrene
Pyrene	Benzo(k)fluoranthene

Additional were tested:

Substance	Substance
Benzo(j)fluoranthene	Dibenzo(a,i)pyrene
Cyclopenta(c,d)pyrene	Dibenzo(a,l)pyrene
Dibenzo(a,e)pyrene	Benzo(e)pyrene
Dibenzo(a,h)pyrene	1-Methylpyrene

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Test result:

Sample		Detected PAH-substances in mg/kg	Sum in mg/kg
1	Lace Light apricot	n.d.	n.d.

Note:

Detection limit: < 0,2 mg/kg (ppm) = not detectable (n.d.)

Requirement: Sum: ≤ 10,0 mg/kg (ppm) for the PAH-substances

≤ 1,0 mg/kg (ppm) for Benzo(a)pyren, Benzo(e)pyrene, Benzo(a)anthracen, Chrysene, Benzo(b)fluoranthene, Benzo(j)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene

Determination of nonylphenol and certain alkylphenolethoxylates (APEO)[A]

An aliquot part of the sample was extracted by means of ultrasonic bath using methanole. After a properly work up the separation and quantitative determination was carried out by means of high performance liquid chromatography with mass selective detector (LC/MS).

The following substances were included in the test:

Substance	
NP	Nonylphenol
OP	Octylphenol
$NP(EO)_{1-20}$	Nonylphenol-(1-20)-ethoxylates
$OP(EO)_{1-20}$	Octylphenol-(1-20)-ethoxylates

Test result:

Sample		Detected substances in mg/kg (ppm)	Sum NP / OP in mg/kg (ppm)	Sum NP / OP / $NP(EO)_{1-20}$ / $OP(EO)_{1-20}$ in mg/kg (ppm)
1	Lace Light apricot	n.d.	n.d.	n.d.

Note:

Detection limit: 4,00 mg/kg (ppm) = not detectable (n.d.)

Requirement: < 10 mg/kg (ppm); sum NP / OP

< 100 mg/kg (ppm); sum NP / OP / $NP(EO)_{1-20}$ / $OP(EO)_{1-20}$

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Determination of tin organic compounds[A]

The determination for residues of the tin organic compounds mentioned below was carried out by extraction of the sample with ethanol/sodium diethyldithiocarbamate (NaDDC) followed by an alkylation with sodium tetraethylborate. The separation and quantitative determination was carried out by means of gas chromatography with mass selective detector (GC/MS).

The following substances were included in the test:

Substance			
MBT	Monobutyltin	MOT	Monooctyltin
DBT	Dibutyltin	DOT	Dioctyltin
TBT	Tributyltin	DPhT	Diphenyltin
TeBT	Tetrabutyltin	TPhT	Triphenyltin
MMT	Monomethyltin	TcyHT	Tricyclohexyltin
DMT	Dimethyltin	TOT	Trioctyltin
TMT	Trimethyltin	TPrT	Tripropyltin

Test result:

Sample		Detected organotin compounds in mg/kg (ppm) (single substances)
1	Lace Light apricot	n.d.

Note:

Detection limit:	≤ 0,05 mg/kg (ppm) = not detectable (n.d.)
Requirement:	≤ 0,05 mg/kg (ppm) for TBT, TPhT ≤ 1,00 mg/kg (ppm) for MBT, DBT, MOT, DOT, DPhT, TeBT, MMT, DMT, TMT, TcyHT, TOT, TPrT

Determination of chlorinated benzenes and toluenes

(According to list in STANDARD 100 by OEKO-TEX®)

The determiniatiom occured on a random basis.

The determination was carried out by extraction of the sample with a suitable organic solvent. The quantitative determination was carried out by means of gas chromatography with mass selective detector (GC/MS).

Test result:

Sample		Chlorinated benzenes and toluenes in mg/kg (ppm)	Sum in mg/kg (ppm)
1	Lace Light apricot	n.d.	n.d.

Note:

Requirement: Sum ≤ 1,00 mg/kg (ppm)

n.d. = chlorinated benzenes and toluenes (chloroaromates) not detectable.

CONCLUSION

The material passes all tested requirements

Remark: No conclusion on fibre composition.

Under consideration of the European Textile Labelling Regulation (Regulation (EU) No 1007/2011), the following sample(s) may be labelled as advised below:

Sample		Fibre composition
1	Lace Light apricot	89% Polyamide 11% Elastane

Managing Director

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Operations Manager

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