

25. March 2010  
GG/WeO/s

## Test Report No. 10.0.74384

(=08.RA.57057 ZV2)

**Applicant** : Shenzhen Top Microfibre Products Co., Ltd.  
No. 125, 126, 127, 128 Bldg. Longsha Industrial District, Nanling  
Buj, Shenzhen  
China

**Date of order** : 27/01/2010

**Reference no. or contact person** : Ms Yang Hai Li  
Tel: 0086-75528729986  
Fax:0086-75528728863

**Receipt of order** : 27/01/2010

**Receipt of material** : 08/02/2010  
03/03/2010 retest samples E1  
15/ and 18/03/2010 retest samples NU1

**Receipt of further information** : 27/01/2010 payment in advance

**Details of order** : Renewal of the certificate for textile products with the label  
“Confidence in textiles – passed for harmful substances according  
to Oeko-Tex® Standard 100”

**Test no. of first certification (master no.)** : 08.RA.57057

*This test report comprises 14 pages*

The test results relate only to the test samples submitted. This test report must only be reproduced in full and not in extract form. Use of the test report in advertising or the publication of free interpretations of the test results is only allowed with the express permission of Forschungsinstitut Hohenstein. Remaining test material will usually be destroyed after 3 months. Our terms of business shall apply, [www.hohenstein.de/pdf/agb\\_e.pdf](http://www.hohenstein.de/pdf/agb_e.pdf)

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For technical reasons, the Institute will allocate a new test number to each order for the renewal of a certificate.

The renewed certificate will always be issued under the master number indicated in the first certification. The master number in brackets will be suffixed to the current test number of this expertise and will serve to identify the relevant product. The additional designation "ZV" with a number indicates the number of times the certificate has been renewed.

The application for renewal of the certificate was submitted using the relevant forms issued for this purpose.

The applicant enclosed the declaration of conformity.

The originals of all necessary documents have been signed with a legally binding signature.

The orderer confirmed that no biological active product is used.

Further the orderer confirmed that no flame retardant product is used.

A copy of the valid Oeko-Tex® certificate for the products in use was enclosed with the application (SHAM 031261).

The application was made for the following article group:

Bed sets (bedcovers, bedspreads/sheets, pillow case), cushions cover, bath towels, hair towels, bathrobes, bath-skirts, clothing (T-shirt and pants), slippers, bags, sleeping masks, ponchos, cushions, plaids, quilts, sofa cover, doormats, gloves, kitchen towels, table cloth, table runners, placemats, napkins, chair-covers, aprons, cleaning cloths, mop pads, cleaner cloth, curtains produced from disperse dyed or printed fabric (woven and knitted) fabric made of 100% polyester or PES/PA; including accessories (dyed polyester sewing and embroidery thread, white elastic tape, nylon zipper, printed label in color white, black, yellow and green).

The four product categories specified in Oeko-Tex® Standard 100 are described as follows:

Product-class	Definition
I	<b>Products for babies</b> Products for babies in context with this standard are all articles, basic materials and accessories, which are provided for the production of articles for babies and children up to 36 months with the exception of leather clothing.
II	<b>Products with direct contact to skin</b> Skin contact articles are those which are worn with a large part of their surface in direct contact with the skin (e.g. blouses, shirts, underwear etc.).
III	<b>Products without direct contact to skin</b> No skin contact articles are those which are worn with only a little part of their surface in direct contact with the skin (e.g. Stuffings, linings etc.).

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Product-class	Definition
IV	<p><b>Decoration material</b>            Decoration material in context with this standard are all articles including initial products and accessories which are used for decoration such as table clothes, wall coverings, furnishing fabrics and curtains, upholstery fabrics, floor coverings and mattresses.</p>

According to the information provided by the orderer and to the specified area of use, product class I is applicable.

The test material named below was submitted for testing.

Serial no.	Description of article or material	Additional information					Material composition
		Quality	Article no.	Colour No.	Design	Colour	
1	knitted fleece fabric	dyed					PES/PA
2	knitted fleece fabric	dyed					PES/PA
3	knitted fleece fabric	dyed					PES/PA
4	knitted fleece fabric	dyed					PES/PA
5	knitted fleece fabric	dyed					PES/PA
6	knitted fleece fabric	dyed					PES/PA
7	knitted fabric	dyed					100% PES
8	knitted fabric	dyed					100% PES
9	knitted fabric	dyed					100% PES
10	knitted fabric	dyed					100% PES
11	knitted fabric	dyed					100% PES
12	knitted fabric	dyed					100% PES
13	woven fabric	dyed					PES/PA
14	woven fabric	dyed					PES/PA
15	woven fabric	dyed					PES/PA
16	woven fabric	dyed					PES/PA
17	woven fabric	dyed					PES/PA
18	woven fabric	dyed					PES/PA

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Serial no.	Description of article or material	Additional information				Material composition	
		Quality	Article no.	Colour No.	Design		Colour
19	knitted fabric	printed				black, white,red	100% PES
20	knitted fabric	printed				yellow, blue,green	100% PES
21	woven fabric	printed				black, white,red	PES/PA
22	woven fabric	printed				yellow, blue,green	PES/PA
23	knitted fleece fabric	printed				black, white,red	PES/PA
24	knitted fleece fabric	printed				yellow, blue,green	PES/PA
25	woven fabric					black, white,red	100% PES
26	woven fabric					yellow, blue,green	100% PES
27	sewing thread					black	100% PES
28	sewing thread					white	100% PES
29	sewing thread					red	100% PES
30	sewing thread					yellow	100% PES
31	sewing thread					blue	100% PES
32	sewing thread					green	100% PES
33	embroidery thread					black	100% PES
34	embroidery thread					white	100% PES
35	embroidery thread					red	100% PES
36	embroidery thread					yellow	100% PES
37	embroidery thread					blue	100% PES
38	embroidery thread					green	100% PES
39	elastic tape					white	PES/Rubber
40	printed label					white,yellow,green and black	100% PES

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Serial no.	Description of article or material	Additional information					Material composition
		Quality	Article no.	Colour No.	Design	Colour	
41	zipper (certified by Oeko-Tex100 certificate SHAM 031261)						

Serial no.	Description of article or material	Additional information					Material composition
		Quality	Article no.	Colour No.	Design	Colour	
1 NU1	knitted fleece fabric	dyed					PES/PA
5 E1	knitted fleece fabric	dyed					PES/PA
35 NU1	embroidery thread						100% PES

Serial no.	Description of article or material	Additional information					Material composition
		Quality	Article no.	Colour No.	Design	Colour	
21 NU1	woven fabric	printed				black, white, red	PES/PA

Serial no.	Description of article or material	Additional information					Material composition
		Quality	Article no.	Colour No.	Design	Colour	
1 NU1	knitted fleece fabric	dyed				black	PES/PA

If only parts of certain articles were included in the tests, only these parts are named in the list of materials.

After being informed about the results by advanced notice the orderer sent improved samples from the same finishing quality (NU) resp. improved samples from a comparable finishing quality (E).

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## Test Result/s

Tests were carried out in accordance with Oeko-Tex® Standard 100.

The test results are given in the charts below.

Note: n.d. = not detectable (below quantification limit)

sample	pH			
1 knitted fleece fabric black	7,0			
5 knitted fleece fabric blue	7,6			
9 knitted fabric red	6,4			
10 knitted fabric yellow	6,9			
11 knitted fabric blue	7,0			
15 woven fabric red	6,8			
17 woven fabric blue	6,8			
19 knitted fabric black, white,red	6,8			
22 woven fabric yellow, blue,green	6,8			
24 knitted fleece fabric yellow, blue,green	6,8			
26 woven fabric yellow, blue,green	6,4			
<b>limit values acc. to Oeko-Tex® Standard 100</b>	product class I 4,0 – 7,5	product class II 4,0 – 7,5	product class III 4,0 – 9,0	product class IV 4,0 – 9,0

sample	pH			
5E1 knitted fleece fabric blue	6,1			
<b>limit values acc. to Oeko-Tex® Standard 100</b>	product class I 4,0 – 7,5	product class II 4,0 – 7,5	product class III 4,0 – 9,0	product class IV 4,0 – 9,0

sample	formaldehyde in mg/kg (ppm)
2 knitted fleece fabric white	n.d.
4 knitted fleece fabric yellow	n.d.

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sample	formaldehyde in mg/kg (ppm)			
	product class I n.d.	product class II 75	product class III 300	product class IV 300
6 knitted fleece fabric green	n.d.			
8 knitted fabric white	n.d.			
10 knitted fabric yellow	n.d.			
12 knitted fabric green	n.d.			
14 woven fabric white	n.d.			
18 woven fabric green	n.d.			
20 knitted fabric yellow, blue,green	n.d.			
23 knitted fleece fabric black, white,red	n.d.			
25 woven fabric black, white,red	n.d.			
29 sewing thread red	n.d.			
38 embroidery thread green	n.d.			
39 elastic tape white	n.d.			
<b>limit values acc. to Oeko-Tex® Standard 100</b>	product class I n.d.	product class II 75	product class III 300	product class IV 300

Note:

According to Japanese Law 112 "n.d." corresponds with an absorption unit < 0,05 respectively < 16 ppm.

sample	extractable heavy metals in mg/kg (ppm)									
	Sb antimony	As arsenic	Pb lead	Cd cadmium	Cr chromium	Co cobalt	Cu copper	Ni nickel	Hg mercury	
1 knitted fleece fabric black	< 4	< 0,05	< 0,05	< 0,05	< 0,1	< 0,1	< 4	< 0,1	< 0,01	
5 knitted fleece fabric blue	< 4	< 0,05	< 0,05	< 0,05	< 0,1	< 0,1	< 4	< 0,1	< 0,01	
12 knitted fabric green	< 4	< 0,05	< 0,05	< 0,05	< 0,1	< 0,1	< 4	< 0,1	< 0,01	
19 knitted fabric black, white,red	< 4	< 0,05	< 0,05	< 0,05	< 0,1	< 0,1	< 4	< 0,1	< 0,01	
22 woven fabric yellow, blue,green	< 4	< 0,05	< 0,05	< 0,05	< 0,1	< 0,1	< 4	0,11	< 0,01	
27 sewing thread black	< 4	< 0,05	< 0,05	< 0,05	< 0,1	< 0,1	< 4	< 0,1	< 0,01	
37 embroidery thread blue	< 4	< 0,05	< 0,05	< 0,05	< 0,1	< 0,1	< 4	< 0,1	< 0,01	

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sample	extractable heavy metals in mg/kg (ppm)								
	Sb antimony	As arsenic	Pb lead	Cd cadmium	Cr chromium	Co cobalt	Cu copper	Ni nickel	Hg mercury
39 elastic tape white	< 4	< 0,05	< 0,05	< 0,05	0,46	< 0,1	< 4	< 0,1	< 0,01
<b>limit values acc. to Oeko-Tex® Standard 100</b>									
product class I	30	0,2	0,2	0,1	1,0	1,0	25,0 <sup>1</sup>	1,0	0,02
product class II	30	1,0	1,0 <sup>1</sup>	0,1	2,0	4,0	50,0 <sup>1</sup>	4,0	0,02
product class III	30	1,0	1,0 <sup>1</sup>	0,1	2,0	4,0	50,0 <sup>1</sup>	4,0	0,02
product class IV	--	1,0	1,0 <sup>1</sup>	0,1	2,0	4,0	50,0 <sup>1</sup>	4,0	0,02

Notes:

<sup>1</sup> No requirement for accessories made from inorganic materials  
 A Test after mechanical ageing (EN 12472)

sample	phenols in mg/kg (ppm)		
	pentachlorophenol (PCP)	tetrachlorophenols (TeCP) 2,3,5,6- / 2,3,4,6- / 2,3,4,5-	o-phenylphenol (OPP)
1 knitted fleece fabric black	0,09	sum 0,07 2,3,5,6-Tetrachlorophenol 2,3,4,6-Tetrachlorophenol	n.d.
<b>limit values acc. to Oeko-Tex® Standard 100</b>			
product class I	0,05	sum 0,05	50
product class II - IV	0,50	sum 0,50	100

sample	phenols in mg/kg (ppm)		
	pentachlorophenol (PCP)	tetrachlorophenols (TeCP) 2,3,5,6- / 2,3,4,6- / 2,3,4,5-	o-phenylphenol (OPP)
1NU1 knitted fleece fabric black	0,01	n.d.	n.d.
<b>limit values acc. to Oeko-Tex® Standard 100</b>			
product class I	0,05	sum 0,05	50
product class II - IV	0,50	sum 0,50	100

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sample	<b>forbidden AZO-colorants cleavable arylamines of MAK-list III (category 1 or 2) in mg/kg (ppm)</b>
composite sample 1 knitted fleece fabric black 3 knitted fleece fabric red 4 knitted fleece fabric yellow	n.d.
composite sample 11 knitted fabric blue 12 knitted fabric green	n.d.
composite sample 21 woven fabric black, white,red 26 woven fabric yellow, blue,green	n.d.
composite sample 27 sewing thread black 29 sewing thread red 30 sewing thread yellow	n.d.
composite sample 37 embroidery thread blue 38 embroidery thread green	n.d.
composite sample 40 printed label white,yellow,green and black	n.d.
<b>limit value acc. to Oeko-Tex® Standard 100</b>	<b>product class I – IV n.d.</b>

sample	<b>allergenic colorants in mg/kg (ppm)</b>
composite sample 1 knitted fleece fabric black 3 knitted fleece fabric red 4 knitted fleece fabric yellow	n.d.
composite sample 11 knitted fabric blue 12 knitted fabric green	n.d.
composite sample 27 sewing thread black 29 sewing thread red 30 sewing thread yellow	n.d.

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sample	allergenic colorants in mg/kg (ppm)
composite sample 40 printed label white,yellow,green and black	n.d.
<b>limit value acc. to Oeko-Tex® Standard 100</b>	<b>product class I - IV n.d.</b>

sample	chlorinated benzenes and toluenes in mg/kg (ppm)
7 knitted fabric black	n.d.
35 embroidery thread red	<b>sum 3,17</b> 1,2-dichlorobenzene 1,49 pentachlorobenzene 1,68
40 printed label white,yellow,green and black	n.d.
<b>limit value acc. to Oeko-Tex® Standard 100</b>	<b>product class I – IV sum 1,0</b>

sample	chlorinated benzenes and toluenes in mg/kg (ppm)
35NU1 embroidery thread red	sum 0,24 pentachlorobenzene 0,24
<b>limit value acc. to Oeko-Tex® Standard 100</b>	<b>product class I – IV sum 1,0</b>

sample	colour fastness					
	to water		to perspiration		to dry rubbing <sup>1</sup>	
			alkaline	acid		
1 knitted fleece fabric black	PES 5	4-5	PA			
3 knitted fleece fabric red	PES 4-5	4-5	PA			
5 knitted fleece fabric blue	PES 5		PA 5			
6 knitted fleece fabric green						
7 knitted fabric black	PES 4-5	CO	5			

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sample	colour fastness					to dry rubbing <sup>1</sup>
	to water		to perspiration			
			alkaline	acid		
8 knitted fabric white						
10 knitted fabric yellow	PES 4-5	CO		5		
12 knitted fabric green	PES 4-5	CO		5		
13 woven fabric black						
15 woven fabric red	PES 4-5	4-5		PA		
17 woven fabric blue	PES 5			PA 5		
18 woven fabric green						
19 knitted fabric black, white,red						
20 knitted fabric yellow, blue,green	PES 5	CO		5		
22 woven fabric yellow, blue,green						
23 knitted fleece fabric black, white,red	PES 4-5			PA 4		
27 sewing thread black	PES 4-5	CO 4-5				
29 sewing thread red	PES 4-5	CO 4-5				
31 sewing thread blue	PES 5	CO		5		
34 embroidery thread white	PES 5	CO		5		
38 embroidery thread green	PES 5	CO		5		

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sample	colour fastness					
	to water		to perspiration			to dry rubbing <sup>1</sup>
	PES	CO	alkaline	acid		
40 printed label white,yellow,green and black	5	5				
<b>limit values acc. to Oeko-Tex® Standard 100 product class I - IV</b>	<b>3</b>		<b>3-4</b>		<b>3-4</b>	<b>4 (3<sup>2</sup>)</b>

Notes:

<sup>1</sup> No requirements for "wash-out" articles.

<sup>2</sup> For pigment, vat or sulphurous colorants a minimum grade of colour fastness to rubbing of 3 is acceptable.

Evaluation of colour fastness (in accordance with the fastness scale prescribed under ISO 105):

5 = best result, 1 = worst result

CO = cotton, WO = wool, CV = viscose, SE = silk, PES = polyester, PA = polyamide,  
 PAN = polyacrylonitrile (acrylic), CTA = triacetate, CA = acetate

sample	colour fastness to saliva and perspiration
1 knitted fleece fabric black	fast
4 knitted fleece fabric yellow	fast
5 knitted fleece fabric blue	fast
7 knitted fabric black	fast
9 knitted fabric red	fast
11 knitted fabric blue	fast
13 woven fabric black	fast
16 woven fabric yellow	fast
18 woven fabric green	fast
19 knitted fabric black, white,red	fast
20 knitted fabric yellow, blue,green	fast
21 woven fabric black, white,red	<b>not fast</b>
22 woven fabric yellow, blue,green	fast
23 knitted fleece fabric black, white,red	fast

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sample	colour fastness to saliva and perspiration
24 knitted fleece fabric yellow, blue,green	fast
25 woven fabric black, white,red	fast
26 woven fabric yellow, blue,green	fast
30 sewing thread yellow	fast
31 sewing thread blue	fast
32 sewing thread green	fast
33 embroidery thread black	fast
35 embroidery thread red	fast
40 printed label white,yellow,green and black	fast
<b>limit value acc. to Oeko-Tex® Standard 100</b>	<b>product class I fast</b>

sample	colour fastness to saliva and perspiration
21NU1 woven fabric black, white,red	fast
<b>limit value acc. to Oeko-Tex® Standard 100</b>	<b>product class I fast</b>

sample	organo tin compounds in mg/kg (ppm)		
	TBT	TPhT	DBT
5 knitted fleece fabric blue	n.d.	n.d.	n.d.
39 elastic tape white	n.d.	n.d.	n.d.
<b>limit values acc. to Oeko-Tex® Standard 100</b>			
<b>product class I</b>	<b>0,5</b>	<b>0,5</b>	<b>1,0</b>
<b>product class II - IV</b>	<b>1,0</b>	<b>1,0</b>	<b>2,0</b>

sample	odour test
1 - 40	n.d.
<b>limit value acc. to Oeko-Tex® Standard 100</b>	<b>product class I – IV no abnormal odour</b>

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## Conclusion

The material for which the certification was applied fulfils the specific requirements for product class I of Oeko-Tex® Standard 100.

It is representative of the article group for which an application for certification was made.

The certification of the following article group is approved:

Bed sets (bedcovers, bedspreads/sheets, pillow case), cushions cover, bath towels, hair towels, bathrobes, bath-skirts, clothing (T-shirt and pants), slippers, bags, sleeping masks, ponchos, cushions, plaids, quilts, sofa cover, doormats, gloves, kitchen towels, table cloth, table runners, placemats, napkins, chair-covers, aprons, cleaning cloths, mop pads, cleaner cloth, curtains produced from disperse dyed or printed fabric (woven and knitted) fabric made of 100% polyester or PES/PA; including accessories (dyed polyester sewing and embroidery thread, white elastic tape, nylon zipper, printed label in color white, black, yellow and green).

Each holder of certificate has signed for the quality of his articles on his own responsibility. This is in accordance with the given declaration of conformity. He is committed to ensure this by suitable and sufficient spot checks. This commitment includes the quality of bought materials, too. In the case of delegating parts of this quality assurance to others the certifying body must be fully acquainted (see point 4 "Conformity declaration").

Oeko-Tex® is authorized to carry out spot checks in order to inspect the certified goods. The certificate holder will receive a separate test report with the results of these inspections.

If the spot checks reveal a deviation from the limit values, additional tests will have to be carried out. The relevant costs will be charged to the certificate holder.

The applicant is responsible for checking the validity of the certificates issued to his suppliers.

If the term of validity of these certificates expires within the term of validity of the applicant's certificate, he is obliged to request updated or extended certificates from his suppliers.

Copies of updated certificates from suppliers should be presented as proof and for documentation purposes under the test number of the applicant's certificate.

The actual version of Oeko-Tex® Standard 100 is edition 01/2010. It can be downloaded directly from the Oeko-Tex® Homepage (<http://www.oeko-tex.com>).

Managing Director

Prof. Dr. Stefan Mecheels



Head of Test Centre  
Oeko-Tex® Standard 100

Dipl.-Ing. (FH) Elisabeth Weisheit