



China

Choose certainty.  
Add value.

**ORIGINAL**

**Test Report No. 70.405.10.012808.01**

**Dated 2011-01-26**

**Applicant:** TV Products (HK) Ltd  
Unit2708, 27/F., Greenfield Tower Concordia Plaza, No.1 Science Museum Road, Tsimshatsui, Kowloon, Hong Kong

**Test item(s):** 1 pair of sandal shoes, black  
**Identification/Model No(s):** MJ-2899-BLK  
**Receipt Date of Sample:** Received on 2010-12-22 and 2011-01-10 and 2011-01-17 and 2011-01-24  
**Date of Testing:** From 2010-12-23 to 2011-01-26

**Sample submitted:** The sample(s) was (were) submitted by applicant and identified.

**Test Specification:**

Banned AZO dyes in accordance to REACH regulation (EC) No. 1907/2006 and Amendment No. 552/2009 Annex XVII Item 43 (formerly known as 2002/61/EC)  
Total Cadmium Content in accordance to REACH regulation (EC) No. 1907/2006 and Amendment No. 552/2009 Annex XVII Item 23 (formerly known as 91/338/EEC)  
Extractable Heavy Metal  
Formaldehyde Content Test  
Dimethyl Fumarate (CAS No.624-49-7) in accordance with 2010/153/EU  
Odor Test  
Polycyclic Aromatic Hydrocarbons (PAHs)  
Pentachlorophenol (PCP), Tetrachlorophenol (TeCP)  
Carcinogenic and Allergenous Disperse Dye Content Test  
Phthalates  
pH Value  
Organotin Compounds (TBT, MBT, DBT)

**Test Result**

Pass  
Pass  
Pass  
Pass  
Pass  
Pass  
Pass  
Pass  
Pass  
Pass  
Pass

Jiangsu TUV Product Service Ltd. Shanghai Branch

**Engineer:**

  
Thomas Xiao  
Softlines Department

**Manager:**

  
Elyn Yao  
Softlines Department

Note: (1) General Terms & Conditions as mentioned overleaf,(2)The results relate only to the items tested,(3)The test report shall not be reproduced except in full without the written approval of the laboratory.

Laboratory:  
Jiangsu TUV Product Service Limited  
Shanghai Branch

Phone: +86 21 6141 0123  
Fax: +86 21 6140 8600  
E-mail: softlines@tuv-sud.cn  
www.tuv-sud.cn/softlines

Regd. Office:  
Jiangsu TUV Product Service Limited  
Shanghai Branch  
No.88 Heng Tong Road Shanghai 200 070  
P.R. China



China

Choose certainty.  
Add value.

**ORIGINAL**

**Test Report No. 70.405.10.012808.01**

**Dated 2011-01-26**

Description of the test subject:

Sample	Description
001	Black PU fabric with white and grey printing
002	Black PU fabric with grey embroidery thread
003	Black metal ring
004	Black velcro upper
005	Black tape heel upper
006	Black fabric insole lining
007	Black fabric pining
008	White label with black printing
009	Dark grey EVA inter lining
010	Black EVA outsole
011	Black RB outsole
012	Transparent label with golden printing



Laboratory:  
Jiangsu TÜV Product Service Limited  
Shanghai Branch

Phone: +86 21 6141 0123  
Fax: +86 21 6140 8600  
E-mail: softlines@tuv-sud.cn  
www.tuv-sud.cn/softlines

Regd. Office:  
Jiangsu TÜV Product Service Limited  
Shanghai Branch  
No.88 Heng Tong Road Shanghai 200070  
P.R. China



China

Choose certainty.  
Add value.

ORIGINAL

Test Report No. 70.405.10.012808.01

Dated 2011-01-26

## Test Results

## 1 Azo-Dyes Test

Client's specification, adoption of the azo dye test methods in accordance with EN 14362-1:2003, EN 14362-2: 2003 or EN ISO 17234-1:2010. The presence of 4-aminoazobenzene is determined by (§64 LFGB) B 82.02-9 (2006). [Reporting Limit: 5.0 mg/kg]

List of Aromatic Amines		
No.	Forbidden Amine	Result [mg/kg]
		001+002
01	4-aminobiphenyl	ND
02	Benzidine	ND
03	4-chloro-o-toluidine	ND
04	2-naphthylamine	ND
05	o-aminoazotoluene	ND
06	5-nitro-o-toluidine	ND
07	4-chloroaniline	ND
08	2,4-diaminoanisole	ND
09	4,4'-diaminodiphenylmethane	ND
10	3,3'-dichlorobenzidine	ND
11	3,3'-dimethoxybenzidine	ND
12	3,3'-dimethylbenzidine	ND
13	4,4'-methylenedi-o-toluidine	ND
14	p-cresidine	ND
15	4,4'-methylene-bis-(2-chloro-aniline)	ND
16	4,4'-oxydianiline	ND
17	4,4'-thiodianiline	ND
18	o-toluidine	ND
19	2,4-toluenediamine	ND
20	2,4,5-trimethylaniline	ND
21	2-methoxyaniline	ND
22	2,4-xylidine	ND
23	2,6-xylidine	ND
24	4-aminoazobenzene *	ND
<b>Method</b>		EN 14362-1
<b>Client's Requirement (Not applicable to composite testing)</b>		30 mg/kg
<b>Conclusion</b>		Pass



China

Choose certainty.  
Add value.

ORIGINAL

Test Report No. 70.405.10.012808.01

Dated 2011-01-26

## 1 Azo-Dyes Test

Client's specification, adoption of the azo dye test methods in accordance with EN 14362-1:2003, EN 14362-2: 2003 or EN ISO 17234-1:2010. The presence of 4-aminoazobenzene is determined by (§64 LFGB) B 82.02-9 (2006). [Reporting Limit: 5.0 mg/kg]

List of Aromatic Amines			
No.	Forbidden Amine	Result [mg/kg]	
		004	
01	4-aminobiphenyl	ND	ND
02	Benzidine	ND	ND
03	4-chloro-o-toluidine	ND	ND
04	2-naphthylamine	ND	ND
05	o-aminoazotoluene	ND	ND
06	5-nitro-o-toluidine	ND	ND
07	4-chloroaniline	ND	ND
08	2,4-diaminoanisole	ND	ND
09	4,4'-diaminodiphenylmethane	ND	ND
10	3,3'-dichlorobenzidine	ND	ND
11	3,3'-dimethoxybenzidine	ND	ND
12	3,3'-dimethylbenzidine	ND	ND
13	4,4'-methylenedi-o-toluidine	ND	ND
14	p-cresidine	ND	ND
15	4,4'-methylene-bis-(2-chloro-aniline)	ND	ND
16	4,4'-oxydianiline	ND	ND
17	4,4'-thiodianiline	ND	ND
18	o-toluidine	ND	ND
19	2,4-toluenediamine	ND	ND
20	2,4,5-trimethylaniline	ND	ND
21	2-methoxyaniline	ND	ND
22	2,4-xylidine	ND	ND
23	2,6-xylidine	ND	ND
24	4-aminoazobenzene *	ND	ND
<b>Method</b>		EN 14362-1	EN 14362-2
<b>Client's Requirement (Not applicable to composite testing)</b>		30 mg/kg	30 mg/kg
<b>Conclusion</b>		Pass	Pass

Laboratory:  
Jiangsu TUV Product Service Limited  
Shanghai Branch

Phone: +86 21 6141 0123  
Fax: +86 21 6140 8600  
E-mail: softlines@tuv-sud.cn  
www.tuv-sud.cn/softlines

Regd. Office:  
Jiangsu TUV Product Service Limited  
Shanghai Branch  
No.88 Heng Tong Road Shanghai 200 070  
P.R. China



China

Choose certainty.  
Add value.

ORIGINAL

Test Report No. 70.405.10.012808.01

Dated 2011-01-26

## 1 Azo-Dyes Test

Client's specification, adoption of the azo dye test methods in accordance with EN 14362-1:2003, EN 14362-2: 2003 or EN ISO 17234-1:2010. The presence of 4-aminoazobenzene is determined by (§64 LFGB) B 82.02-9 (2006). [Reporting Limit: 5.0 mg/kg]

List of Aromatic Amines			
No.	Forbidden Amine	Result [mg/kg]	
		005+006+007	
01	4-aminobiphenyl	ND	ND
02	Benzidine	ND	ND
03	4-chloro-o-toluidine	ND	ND
04	2-naphthylamine	ND	ND
05	o-aminoazotoluene	ND	ND
06	5-nitro-o-toluidine	ND	ND
07	4-chloroaniline	ND	ND
08	2,4-diaminoanisole	ND	ND
09	4,4'-diaminodiphenylmethane	ND	ND
10	3,3'-dichlorobenzidine	ND	ND
11	3,3'-dimethoxybenzidine	ND	ND
12	3,3'-dimethylbenzidine	ND	ND
13	4,4'-methylenedi-o-toluidine	ND	ND
14	p-cresidine	ND	ND
15	4,4'-methylene-bis-(2-chloro-aniline)	ND	ND
16	4,4'-oxydianiline	ND	ND
17	4,4'-thiodianiline	ND	ND
18	o-toluidine	ND	ND
19	2,4-toluenediamine	ND	ND
20	2,4,5-trimethylaniline	ND	ND
21	2-methoxyaniline	ND	ND
22	2,4-xylidine	ND	ND
23	2,6-xylidine	ND	ND
24	4-aminoazobenzene *	ND	ND
<b>Method</b>		EN 14362-1	EN 14362-2
<b>Client's Requirement (Not applicable to composite testing)</b>		30 mg/kg	30 mg/kg
<b>Conclusion</b>		Pass	Pass



China

Choose certainty.  
Add value.

**ORIGINAL**

**Test Report No. 70.405.10.012808.01**

**Dated 2011-01-26**

- Note:
1. Pass denotes Less than or equal to 30 mg/kg
  2. Fail denotes More than 30 mg/kg
  3. Detected denotes No conclusion, see \*
  4. "ND" denotes not detected or "<" denotes less than
  5. "mg/kg" denotes milligram per kilogram

\* Azo colorants that are able to form 4-aminoazobenzene, as generated under the current testing condition stated in EN 14362-1 & EN 14362-2 are aniline and 1, 4-phenylenediamine. The presence of 4-aminoazobenzene is now determined by (§64 LFGB) B 82.02-9 (2006).

Interpretation of test results:

- (1) In the case of the measured value per amine component  $\leq 30$  mg/kg and according to the analysis carried out, the azo colourants banned under the Annex XVII of Regulation (EC) No. 1906/2006, REACH are not detected in the article submitted.
- (2) In the case of the measured value per amine component  $> 30$  mg/kg, the analysis result suggests that the submitted article was manufactured or treated with the azo colourants banned under Annex XVII of Regulation (EC) No. 1906/2006, REACH
- (3) In the case of the measured value per amine component being between 25 and 35 mg/kg, it is remarked that due to the inherent uncertainty of the detection method, the value represent a border line case.
- (4) For a polyester blend sample, two test methods (EN 14362-1: 2003 and EN 14362-2: 2003) will be performed. If the results from any one of the test methods or both test methods show any forbidden amine content greater than 30 mg/kg, the azo colorants banned under Annex XVII of Regulation (EC) No. 1906/2006, REACH will be considered as detected.

Laboratory:  
Jiangsu TÜV Product Service Limited  
Shanghai Branch

Phone: +86 21 6141 0123  
Fax: +86 21 6140 8600  
E-mail: softlines@tuv-sud.cn  
www.tuv-sud.cn/softlines

Regd. Office:  
Jiangsu TÜV Product Service Limited  
Shanghai Branch  
No.88 Heng Tong Road Shanghai 200 070  
P.R. China



China

Choose certainty.  
Add value.

ORIGINAL

Test Report No. 70.405.10.012808.01

Dated 2011-01-26

**2 Total Cadmium Content Test**  
EN 1122: 2001

Test item(s)	Result [mg/kg]		Client's Requirement
	009+010+011	012	
Cadmium (Cd)	ND	ND	100 mg/kg

- Remark:
1. mg/kg = milligram per kilogram
  2. ND= Not detected (Less than Detect limit)
  3. Detected Limited = 5mg/kg
  4. The limit is not applicable to a composite sample

**3 Extractable Heavy Metal**

Heavy metals are extracted by Acid perspiration solution according to ISO 105 E04; analysis is performed by ICP-OES, Hg, As analyzer by AFS spectrophotometer.

Test item(s)	Results [mg/kg]		Client's Requirement
	006	008	
Antimony (Sb)	0.8	<0.2	30.0 mg/kg
Arsenic (As)	<0.2	<0.2	0.2 mg/kg
Lead (Pb)	<0.2	<0.2	0.8 mg/kg
Cadmium (Cd)	<0.02	<0.02	0.1 mg/kg
Chromium (Cr) Total	<0.1	<0.1	2.0 mg/kg
Cobalt (Co)	<0.1	<0.1	4.0 mg/kg
Copper (Cu)	<0.2	<0.2	50.0 mg/kg
Nickel (Ni)	<0.1	<0.1	4.0 mg/kg
Mercury (Hg)	<0.01	<0.01	0.02 mg/kg

- Remark:
1. "mg/kg" denotes milligram per kilogram
  2. "<" denotes Less than
  3. "ND" denotes Not Detected
  4. The limit is not applicable to a composite sample



China

Choose certainty.  
Add value.

ORIGINAL

Test Report No. 70.405.10.012808.01

Dated 2011-01-26

## 4 Formaldehyde Content Test

EN ISO 14184-1:1998

Test item(s)	Result [mg/kg]				Client's Requirement
	001+002	004	005+006	007+008	
Formaldehyde	ND	ND	ND	25	150mg/kg

- Remark:
1. "mg/kg" denotes milligram per kilogram
  2. "ND" denotes not detected
  3. Detected Limited =20mg/kg
  4. The limit is not applicable to a composite sample

## 5 Dimethylfumarate (DMFu) Content Test

In house method, extraction with organic solvent and determination by GC-MS

Test item(s)	Result [mg/kg]		Client's Requirement
	001+002	006	
Dimethylfumarate (DMFu)	<0.1	<0.1	0.1mg/kg

- Remark:
1. mg/kg = milligram per kilogram
  2. Detect Limit = 0.1mg/kg
  3. ND = Not Detected (Less than Detect limit)
  4. The limit is not applicable to a composite sample

## 6 Odour Test

Client's specification test with reference to SNV 195651

Test item(s)	Result (Score)	Limit (Score)
Whole Shoe	1.7	≤3

- Remark:
1. "≤" denotes less than or equal to
- Note:
- 1 = Odourless
  - 2 = Weak odour
  - 3 = Tolerable odour
  - 4 = Annoying odour
  - 5 = Intolerable odour





China

Test Report No. 70.405.10.012808.01

Dated 2011-01-26

Choose certainty.  
Add value.

ORIGINAL

## 7 Polycyclic Aromatic Hydrocarbons (PAHs) Test

With Reference to ZEK 01.02-08 and amendment, extraction with toluene and GC-MS analysis.

Test item(s)	Result [mg/kg]		
	001+002	009+010+011	012
Naphthalene	<0.10	0.22	4.84
Acenaphthylene	<0.10	<0.10	<0.10
Acenaphthene	<0.10	<0.10	<0.10
Fluorene	<0.10	<0.10	<0.10
Phenanthrene	0.53	<0.10	<0.10
Anthracene	<0.10	<0.10	<0.10
Fluoranthene	<0.10	<0.10	<0.10
Pyrene	4.91	4.23	<0.10
Benzo[a]anthracene	<0.10	<0.10	<0.10
Chrysene	<0.10	<0.10	<0.10
Benzo[b]fluoranthene	<0.10	<0.10	<0.10
Benzo[k]fluoranthene	<0.10	<0.10	<0.10
<b>Benzo[a]pyrene</b>	<0.10	<0.10	<0.10
Benzo[ghi]perylene	<0.10	<0.10	<0.10
Dibenzo[ah]anthracene	<0.10	<0.10	<0.10
Indeno[1,2,3-cd]pyrene	<0.10	<0.10	<0.10
<b>Sum of Detected PAHs</b>	5.44	4.55	4.84
<b>Client's Requirement</b>	Sum of 16 PAHs <200mg/kg; Benz(a)pyrene<20mg/kg		

- Remark:
1. Method detection limit=0.10 mg/kg
  2. "<" denotes less than
  3. The limit is not applicable to a composite sample

## 8 Pentachlorophenol (PCP), Sum of Tetrachlorophenols (TeCP) Content Test

With reference to §64 FGB 82.02-8 Solvent extraction with acetone, follow by derivatization and GC-ECD analysis [Reporting Limit = 0.5 mg/kg]

Test item(s)	Result [mg/kg]		Client's Requirement
	001+002+004	005+006+007	
Pentachlorophenol	<0.5	<0.5	1mg/kg
2,3,5,6-Tetrachlorophenol	<0.5	<0.5	5mg/kg
2,3,4,6-Tetrachlorophenol	<0.5	<0.5	
2,3,4,5-Tetrachlorophenol	<0.5	<0.5	

- Remark:
1. "mg/kg" denotes milligram per kilogram
  2. "<" denotes less than
  3. The limit is not applicable to a composite sample



China

Choose certainty.  
Add value.

ORIGINAL

Test Report No. 70.405.10.012808.01

Dated 2011-01-26

9 Carcinogenic and Allergenic Disperse Dye Content Test

Client's specification test with reference to DIN 54231:2005, determined by LC-MS  
[Reporting Limit = 1.00 mg/L in extract]

9.1 For Carcinogenic Dye Content Test

Test item(s)	Result [mg/L]	Dye detected	Client's Specification [mg/L]	Conclusion
001+002+004	ND	-	<5	Pass
005+006+007	ND	-	<5	Pass

9.2 For Allergenic Disperse Dye Content Test

Test item(s)	Result [mg/L]	Dye detected	Client's Specification [mg/L]	Conclusion
001+002+004	ND	-	<5	Pass
005+006+007	ND	-	<5	Pass

- Remark:
1. "<" denotes less than
  2. ND= Not detected (Less than Detect limit)
  3. "mg/L" denotes milligram per litre
  4. The limit is not applicable to a composite sample

Tested Dyestuffs:

**Carcinogenic Dyestuffs:**

C.I. Acid Red 26, C.I. Basic Red 9, C.I. Basic Violet 14, C.I. Disperse Blue 1\*, C.I. Disperse Yellow 3\*, C.I. Direct Black 38, C.I. Direct Blue 6, C.I. Direct Red 28, C.I. Disperse Orange 11, C.I. Disperse Yellow 23, C.I. Disperse Orange 149

**Allergenic Dyestuffs:**

C.I. Disperse Blue 1\*, C.I. Disperse Blue 3, C.I. Disperse Blue 7, C.I. Disperse Blue 26, C.I. Disperse Blue 35, C.I. Disperse Blue 102, C.I. Disperse Blue 106, C.I. Disperse Blue 124, C.I. Disperse Brown 1, C.I. Disperse Orange 1, C.I. Disperse Orange 3, C.I. Disperse Orange 37, C.I. Disperse Orange 76\*\*, C.I. Disperse Orange 59\*\*, C.I. Disperse Red 1, C.I. Disperse Red 11, C.I. Disperse Red 17, C.I. Disperse Yellow 1, C.I. Disperse Yellow 3\*, C.I. Disperse Yellow 9, C.I. Disperse Yellow 39, C.I. Disperse Yellow 49

\*: Both Allergenic and Carcinogenic; \*\*: equivalent to C.I. Disperse Orange 37



China

Test Report No. 70.405.10.012808.01

Dated 2011-01-26

Choose certainty.  
Add value.

ORIGINAL

## 10 Phthalates Content Test

Solvent extraction and GC-MS analysis [Reporting Limit = 0.005%]

Test item(s)	Result [%]				Client's Requirement
	001	002	009+010+011	012	
Bis (2-ethylhexyl) phthalate, DEHP	ND	ND	ND	ND	ND
Dibutyl phthalate, DBP	ND	ND	ND	ND	
Benzyl butyl phthalate, BBP	ND	ND	ND	ND	
Di-isononyl phthalate, DINP	ND	ND	ND	ND	
Di-isodecyl phthalate, DIDP	ND	ND	ND	ND	
Di-n-octyl phthalate, DNOP	ND	ND	ND	ND	
Sum of DEHP, DBP, BBP, DINP, DIDP, DNOP	ND	ND	ND	ND	

- Remark:
1. % = weight by weight percentage
  2. ND = Not Detected (Less than Detect limit)
  3. The limit is not applicable to a composite sample

## 11 pH Value

EN ISO 3071:2005

Test Sample	Result	Client's Requirement
006	6.9	4.0-7.5
008	6.8	

## 12 Organotin Compounds Test

With reference to EN ISO 17353:2005, determined by GC- MS

Test item(s)	Result [mg/kg]			Client's Requirement
	001+002	004	005+006	
Tributyltin (TBT)	ND	ND	ND	0.5mg/kg
Monobutyltin (MBT)	ND	ND	ND	1.0mg/kg
Dibutyltin (DBT)	ND	ND	ND	1.0mg/kg

- Remark:
1. "mg/kg" denotes milligram per kilogram
  2. "<" denotes less than
  3. "ND" denotes Not Detected
  4. Method Detection limit = 0.025 mg/kg
  5. The limit is not applicable to a composite sample

Laboratory:  
Jiangsu TUV Product Service Limited  
Shanghai Branch

Phone: +86 21 6141 0123  
Fax: +86 21 6140 8600  
E-mail: softlines@tuv-sud.cn  
www.tuv-sud.cn/softlines

Regd. Office:  
Jiangsu TUV Product Service Limited  
Shanghai Branch  
No.88 Heng Tong Road Shanghai 200070  
P.R. China



China

Choose certainty.  
Add value.

**ORIGINAL**

**Test Report No. 70.405.10.012808.01**

**Dated 2011-01-26**

**12 Organotin Compounds Test**

With reference to EN ISO 17353:2005, determined by GC- MS

Test item(s)	Result [mg/kg]			Client's Requirement
	007+008	009+010+011	012	
Tributyltin (TBT)	ND	ND	ND	0.5mg/kg
Monobutyltin (MBT)	ND	ND	ND	1.0mg/kg
Dibutyltin (DBT)	0.071	ND	ND	1.0mg/kg

- Remark:
1. "mg/kg" denotes milligram per kilogram
  2. "<" denotes less than
  3. "ND" denotes Not Detected
  4. Method Detection limit = 0.025 mg/kg
  5. The limit is not applicable to a composite sample

Sample Photo:



-End of Report-

Laboratory:  
Jiangsu TÜV Product Service Limited  
Shanghai Branch

Phone: +86 21 6141 0123  
Fax: +86 21 6140 8600  
E-mail: softlines@tuv-sud.cn  
www.tuv-sud.cn/softlines

Regd. Office:  
Jiangsu TÜV Product Service Limited  
Shanghai Branch  
No.88 Heng Tong Road Shanghai 200 070  
P.R. China