

**Test Report No.: 68.431.21.02262.01R1**

**Dated: 2021-07-08**



**Applicant** : Spector & Co

**Address** : /

**Sample Description** : BALLPOINT PEN

**Product Type / End Use** : WRITING INSTRUMENT

**Item No.** : G1201

**Style No.** : MILO

**Supplier** : USY007

**Country of Origin** : China

**Country of Destination** : Canada & U.S.A.

**Test Sample Receipt Date, Location** : 2021-04-13, 2021-04-27, Shenzhen

**Test Period, Location** : From 2021-04-13 to 2021-05-07, Shenzhen

**Test Result(s)** : Refer to Section 3

**Laboratory:**  
TÜV SÜD Certification and Testing (China)  
Co., Ltd. Shenzhen Branch  
Building 12&13, Zhiheng Wisdomland  
Business Park,  
Nantou Checkpoint Road 2, 518052, P. R.  
China

Phone : +86 755 8828 6998  
Fax: +86 755 8828 5299  
E-mail: toys\_hardline@tuv sud.com  
Web : <http://www.tuvsud.cn>

Regd. Office:  
TÜV SÜD Certification and Testing (China)  
Co., Ltd. Shenzhen Branch  
Building 12&13, Zhiheng Wisdomland  
Business Park,  
Nantou Checkpoint Road 2, 518052, P. R.  
China



**Purpose Of Examination / Conclusion:**

No.	Test Item(s)	Conclusion
1.	US California Proposition 65 - Total Cadmium Content Test - Substrate Materials	Pass*
2.	US California Proposition 65 - Total Cadmium Content Test - Paint and Similar Surface-Coating Materials	Pass*
3.	US California Proposition 65 - Total Lead Content Test - Substrate Materials	Pass*
4.	US California Proposition 65 - Total Lead Content Test - Paint and Similar Surface-Coating Materials	Pass*
5.	Canadian Consumer Products Containing Lead Regulations SOR/2018-83 - Total Lead Content Test	Pass
6.	Canadian Surface Coating Materials Regulations SOR/2016-193 – Total Lead Content Test	Pass
7.	Phthalates Content (11P)	Pass*
8.	US California Proposition 65 - Phthalates Content (6P)	Pass*
9.	U.S. CFR Title 16 Part 1307 - Toys and Childcare Articles - Phthalates Content (8P)	Pass
10.	Tungsten Content Test	Report As Is
11.	Canadian Surface Coating Materials Regulations SOR/2016-193 - Total Mercury Content Test	Pass
12.	Nickel Content Test	Report As Is

**Remarks:**

- (1) The results relate only to the items tested.
- (2) Samples are tested as received.
- (3) "\*" denotes the conclusion was drawn according to the client's specification.
- (4) The test item and samples were specified by the client.
- (5) "Pass" means the measured result is within a limit, even when extended by expanded uncertainty. "Fail" means the measured result is beyond a limit, even when extended by expanded uncertainty. "Inconclusive" means the measured result can be within or beyond a limit when extended by expanded uncertainty. The confidence level of the expanded uncertainty for "pass", "Fail" and "Inconclusive" is 95%.
- (6) This report supersedes previous report 68.431.21.02262.01 issued on 2021-05-08. As per client request, item no. shown on page 1 was changed to G1201.

TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch  
 TÜV SÜD Group

Prepared by:

Reviewed by:

**Laboratory:**  
 TÜV SÜD Certification and Testing (China)  
 Co., Ltd. Shenzhen Branch  
 Building 12&13, Zhiheng Wisdomland  
 Business Park,  
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*Cara*



*Ken*

<Cara Xiang>  
<Senior Project Coordinator>

<Ken Chen>  
<Project Manager>

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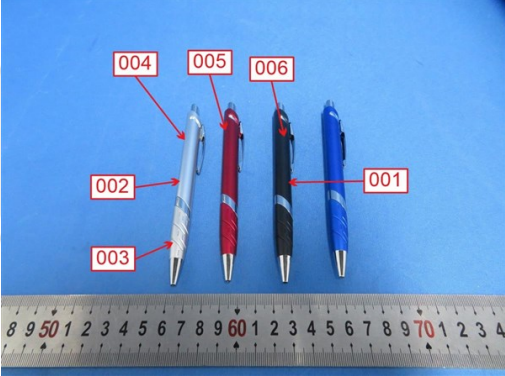
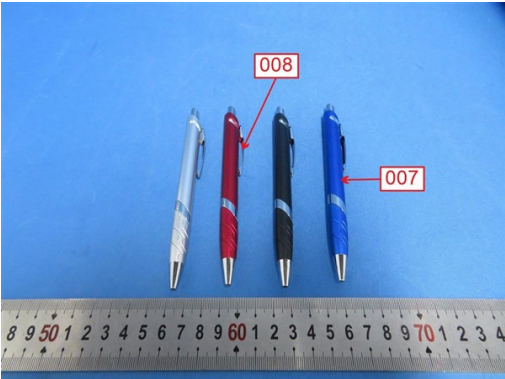
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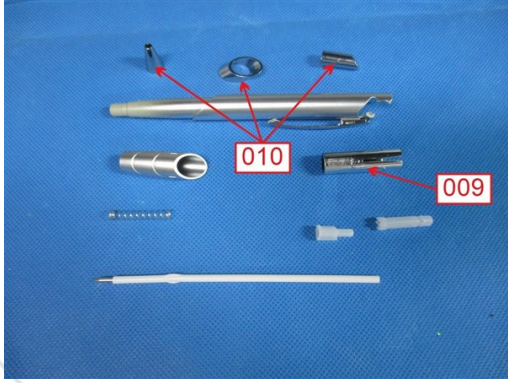
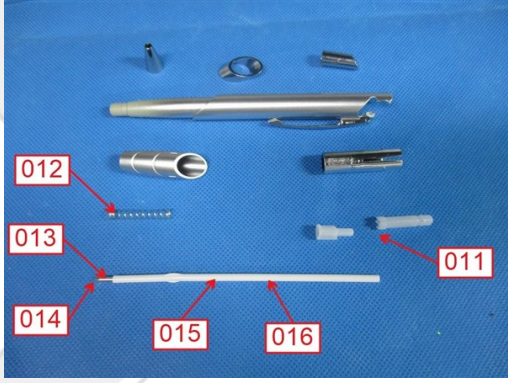
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1. Description of the Test Sample:

Sample Description	BALLPOINT PEN
	

2. List of Materials as identified by the Laboratory:

T. No.	Sample No.	Colour and Description	Photograph
T1	001	Black plastic (Black / red pen)	
T2	002	Dark grey plastic (Silvery / blue pen)	
T3	003	Black plastic (Pen)	
T4	004	Silvery coating (Pen)	
T5	005	Red coating (Pen)	
T6	006	Black coating (Pen)	
T7	007	Blue coating (Pen)	
T8	008	Silvery metal (Clip)	

T. No.	Sample No.	Colour and Description	Photograph
T9	009	Bright silvery coating (Pen)	
T10	010	Silvery plated translucent white plastic (Top of pen, ring & end of pen)	
T11	011	White plastic (Parts)	
T12	012	Silvery metal (Spring)	
T13	013	Silvery metal (Tip of refill)	
T14	014	Silvery metal (Ball of refill)	
T15	015	White plastic (Refill)	
T16	016	Blue ink (Ink)	



**3. Test Result**

**3.1 US California Proposition 65 - Total Cadmium Content Test - Substrate Materials**

Test method: Acid digestion/Microwave Digestion, analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES). [Reporting Limit: 10.0mg/kg]

Test item	Results [mg/kg]			Client's Specification [mg/kg]
	Sample 001+002+003	Sample 008	Sample 010	
Cadmium	N.D.	N.D.	N.D.	<75
<b>Conclusion</b>	Pass	Pass	Pass	-

Test item	Results [mg/kg]			Client's Specification [mg/kg]
	Sample 011+015	Sample 012	Sample 013	
Cadmium	N.D.	N.D.	N.D.	<75
<b>Conclusion</b>	Pass	Pass	Pass	-

Test item	Results [mg/kg]	Client's Specification [mg/kg]
	Sample 014	
Cadmium	N.D.	<75
<b>Conclusion</b>	Pass	-

Note:

- "mg/kg" denotes milligram per kilogram
- "<" denotes less than
- "N.D." denotes Not Detected with Detection Limit 10.0mg/kg



**3.2 US California Proposition 65 - Total Cadmium Content Test - Paint and Similar Surface-Coating Materials**

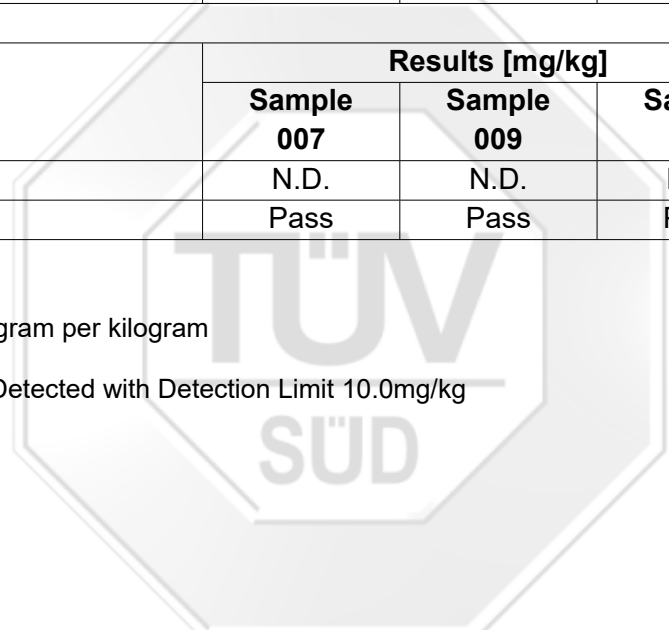
Test method: Microwave Digestion, analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES). [Reporting Limit: 10.0mg/kg]

Test Item	Results [mg/kg]			Client's Specification [mg/kg]
	Sample 004	Sample 005	Sample 006	
Cadmium	N.D.	N.D.	N.D.	<75
<b>Conclusion</b>	Pass	Pass	Pass	-

Test Item	Results [mg/kg]			Client's Specification [mg/kg]
	Sample 007	Sample 009	Sample 016	
Cadmium	N.D.	N.D.	N.D.	<75
<b>Conclusion</b>	Pass	Pass	Pass	-

Note:

- "mg/kg" denotes milligram per kilogram
- "<" denotes less than
- "N.D." denotes Not Detected with Detection Limit 10.0mg/kg





**3.3 US California Proposition 65 - Total Lead Content Test - Substrate Materials**

Test method: Acid digestion or Microwave Digestion, analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES). [Reporting Limit: 10.0mg/kg]

Test Item	Results [mg/kg]			Client's Specification [mg/kg]
	Sample 001+002+003	Sample 008	Sample 010	
Lead	N.D.	N.D.	N.D.	<100
<b>Conclusion</b>	Pass	Pass	Pass	-

Test Item	Results [mg/kg]			Client's Specification [mg/kg]
	Sample 011+015	Sample 012	Sample 013	
Lead	N.D.	N.D.	46.1	<100
<b>Conclusion</b>	Pass	Pass	Pass	-

Test Item	Results [mg/kg]	Client's Specification [mg/kg]
	Sample 014	
Lead	N.D.	<100
<b>Conclusion</b>	Pass	-

Note:

- "mg/kg" denotes milligram per kilogram
- "<" denotes less than
- "N.D." denotes Not Detected with Detection Limit 10.0mg/kg





**3.4 US California Proposition 65 - Total Lead Content Test - Paint and Similar Surface-Coating Materials**

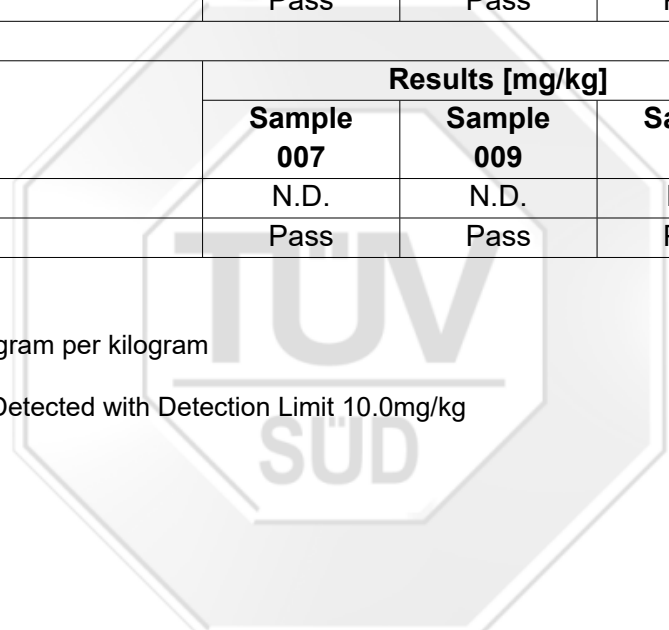
Test method: Microwave Digestion, analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES). [Reporting Limit: 10.0mg/kg]

Test Item	Results [mg/kg]			Client's Specification [mg/kg]
	Sample 004	Sample 005	Sample 006	
Lead	N.D.	N.D.	N.D.	<90
<b>Conclusion</b>	Pass	Pass	Pass	-

Test Item	Results [mg/kg]			Client's Specification [mg/kg]
	Sample 007	Sample 009	Sample 016	
Lead	N.D.	N.D.	N.D.	<90
<b>Conclusion</b>	Pass	Pass	Pass	-

Note:

- "mg/kg" denotes milligram per kilogram
- "<" denotes less than
- "N.D." denotes Not Detected with Detection Limit 10.0mg/kg



**3.5 Total Lead Content Test**

Consumer Products Containing Lead Regulations SOR/2018-83

Acid digestion / Microwave Digestion, analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES). [Reporting Limit: 10.0mg/kg]

Analyte	Result [mg/kg]		
	Sample 001+002+003	Sample 004	Sample 005
Lead	N.D.	N.D.	N.D.
Limit	<90		
Conclusion	Pass	Pass	Pass

Analyte	Result [mg/kg]		
	Sample 006	Sample 007	Sample 008
Lead	N.D.	N.D.	N.D.
Limit	<90		
Conclusion	Pass	Pass	Pass

Analyte	Result [mg/kg]		
	Sample 009	Sample 010	Sample 011+015
Lead	N.D.	N.D.	N.D.
Limit	<90		
Conclusion	Pass	Pass	Pass

Analyte	Result [mg/kg]		
	Sample 012	Sample 013	Sample 014
Lead	N.D.	46.1	N.D.
Limit	<90		
Conclusion	Pass	Pass	Pass

Analyte	Result [mg/kg]
	Sample 016
Lead	N.D.
Limit	<90
Conclusion	Pass

Note 1. "mg/kg" denotes milligram per kilogram

2. "<" denotes less than

3. "N.D." denotes Not Detected with Detection Limit 10.0mg/kg

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China



**3.6 Total Lead Content Test**

Surface Coating Materials Regulations SOR/2016-193

Microwave Digestion, analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES). [Reporting Limit: 10.0mg/kg]

Analyte	Result [mg/kg]		
	Sample 004	Sample 005	Sample 006
Lead	N.D.	N.D.	N.D.
Limit	<90		
Conclusion	Pass	Pass	Pass

Analyte	Result [mg/kg]		
	Sample 007	Sample 009	Sample 016
Lead	N.D.	N.D.	N.D.
Limit	<90		
Conclusion	Pass	Pass	Pass

Note 1. "mg/kg" denotes milligram per kilogram

2. "<" denotes less than

3. "N.D." denotes Not Detected with Detection Limit 10.0mg/kg

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China

### 3.7 Phthalates Content (11P)

Test method: In-house method, solvent extracted and analyzed by Gas Chromatography and Mass Spectrometry (GC-MS). [Reporting limit: 0.005%]

Test Items	CAS No.	Results [%]			Client's Specification [%]
		Sample 001+002 +003	Sample 004+005 +006	Sample 007	
Di-(2-ethylhexyl)-phthalat (DEHP)	117-81-7	N.D.	N.D.	N.D.	<0.1
Dibutylbenzylphthalat (DBP)	84-74-2	N.D.	N.D.	N.D.	<0.1
Diethyl phthalate (DEP)	84-66-2	N.D.	N.D.	N.D.	<0.1
Butylbenzylphthalat (BBP)	85-68-7	N.D.	N.D.	N.D.	<0.1
Di-iso-butylphthalat (DIBP)	84-69-5	N.D.	N.D.	N.D.	<0.1
Di-isononyl phthalate (DINP)	28553-12-0 , 68515-48-0	N.D.	N.D.	N.D.	<0.1
Di-isodecylphthalat (DIDP)	26761-40-0 , 68515-49-1	N.D.	N.D.	N.D.	<0.1
Di-n-octylphthalat (DNOP)	117-84-0	N.D.	N.D.	N.D.	<0.1
Di-n-hexyl phthalate (DnHP)	84-75-3	N.D.	N.D.	N.D.	<0.1
Dicyclohexyl phthalate (DCHP)	84-61-7	N.D.	N.D.	N.D.	<0.1
Di-n-pentylphthalat (DNPP)	131-18-0	N.D.	N.D.	N.D.	<0.1
<b>Conclusion</b>		Pass	Pass	Pass	-

- Note 1. “%” denotes percentage by weight  
 2. “<” denotes less than  
 3. “N.D.” denotes Not Detected with Detection Limit 0.005%

### 3.7 Phthalates Content (11P)

Test method: In-house method, solvent extracted and analyzed by Gas Chromatography and Mass Spectrometry (GC-MS). [Reporting limit: 0.005%]

Test Items	CAS No.	Results [%]			Client's Specification [%]
		Sample 009	Sample 010	Sample 011+015	
Di-(2-ethylhexyl)-phthalat (DEHP)	117-81-7	0.009	N.D.	N.D.	<0.1
Dibutylbenzylphthalat (DBP)	84-74-2	0.009	N.D.	N.D.	<0.1
Diethyl phthalate (DEP)	84-66-2	N.D.	N.D.	N.D.	<0.1
Butylbenzylphthalat (BBP)	85-68-7	N.D.	N.D.	N.D.	<0.1
Di-iso-butylphthalat (DIBP)	84-69-5	N.D.	N.D.	N.D.	<0.1
Di-isononyl phthalate (DINP)	28553-12-0 , 68515-48-0	0.009	N.D.	N.D.	<0.1
Di-isodecylphthalat (DIDP)	26761-40-0 , 68515-49-1	N.D.	N.D.	N.D.	<0.1
Di-n-octylphthalat (DNOP)	117-84-0	N.D.	N.D.	N.D.	<0.1
Di-n-hexyl phthalate (DnHP)	84-75-3	N.D.	N.D.	N.D.	<0.1
Dicyclohexyl phthalate (DCHP)	84-61-7	N.D.	N.D.	N.D.	<0.1
Di-n-pentylphthalat (DNPP)	131-18-0	N.D.	N.D.	N.D.	<0.1
<b>Conclusion</b>		Pass	Pass	Pass	-

Note 1. “%” denotes percentage by weight

2. “<” denotes less than

3. “N.D.” denotes Not Detected with Detection Limit 0.005%

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### 3.7 Phthalates Content (11P)

Test method: In-house method, solvent extracted and analyzed by Gas Chromatography and Mass Spectrometry (GC-MS). [Reporting limit: 0.005%]

Test Items	CAS No.	Results [%]	Client's Specification [%]
		Sample 016	
Di-(2-ethylhexyl)-phthalat (DEHP)	117-81-7	N.D.	<0.1
Dibutylbenzylphthalat (DBP)	84-74-2	N.D.	<0.1
Diethyl phthalate (DEP)	84-66-2	N.D.	<0.1
Butylbenzylphthalat (BBP)	85-68-7	N.D.	<0.1
Di-iso-butylphthalat (DIBP)	84-69-5	N.D.	<0.1
Di-isononyl phthalate (DINP)	28553-12-0 , 68515-48-0	N.D.	<0.1
Di-isodecylphthalat (DIDP)	26761-40-0 , 68515-49-1	N.D.	<0.1
Di-n-octylphthalat (DNOP)	117-84-0	N.D.	<0.1
Di-n-hexyl phthalate (DnHP)	84-75-3	N.D.	<0.1
Dicyclohexyl phthalate (DCHP)	84-61-7	N.D.	<0.1
Di-n-pentylphthalat (DNPP)	131-18-0	N.D.	<0.1
<b>Conclusion</b>		Pass	-

- Note 1. "%" denotes percentage by weight  
 2. "<" denotes less than  
 3. "N.D." denotes Not Detected with Detection Limit 0.005%

### 3.8 US California Proposition 65 - Phthalates Content (6P)

Test method: In-house method, solvent extracted and analyzed by Gas Chromatography and Mass Spectrometry (GC-MS). [Reporting limit: 0.005%]

Test Items	CAS No.	Results [%]			Client's Specification [%]
		Sample 001+002+003	Sample 004+005+006	Sample 007	
Dibutyl phthalate, (DBP)	84-74-2	N.D.	N.D.	N.D.	<0.1
Bis (2-ethylhexyl) phthalate, (DEHP)	117-81-7	N.D.	N.D.	N.D.	<0.1
Benzyl butyl phthalate, (BBP)	85-68-7	N.D.	N.D.	N.D.	<0.1
Di-isodecyl phthalate, (DIDP)	26761-40-0 , 68515-49-1	N.D.	N.D.	N.D.	<0.1
Di-n-hexyl phthalate (DNHP)	84-75-3	N.D.	N.D.	N.D.	<0.1
Di-isononyl phthalate, (DINP)	28553-12-0 , 68515-48-0	N.D.	N.D.	N.D.	<0.1
<b>Conclusion</b>		Pass	Pass	Pass	-

Test Items	CAS No.	Results [%]			Client's Specification [%]
		Sample 009	Sample 010	Sample 011+015	
Dibutyl phthalate, (DBP)	84-74-2	0.009	N.D.	N.D.	<0.1
Bis (2-ethylhexyl) phthalate, (DEHP)	117-81-7	0.009	N.D.	N.D.	<0.1
Benzyl butyl phthalate, (BBP)	85-68-7	N.D.	N.D.	N.D.	<0.1
Di-isodecyl phthalate, (DIDP)	26761-40-0 , 68515-49-1	N.D.	N.D.	N.D.	<0.1
Di-n-hexyl phthalate (DNHP)	84-75-3	N.D.	N.D.	N.D.	<0.1
Di-isononyl phthalate, (DINP)	28553-12-0 , 68515-48-0	0.009	N.D.	N.D.	<0.1
<b>Conclusion</b>		Pass	Pass	Pass	-

Note 1. "%" denotes percentage by weight

2. "<" denotes less than

3. "N.D." denotes Not Detected with Detection Limit 0.005%

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**3.8 US California Proposition 65 - Phthalates Content (6P)**

Test method: In-house method, solvent extracted and analyzed by Gas Chromatography and Mass Spectrometry (GC-MS). [Reporting limit: 0.005%]

Test Items	CAS No.	Results [%]	Client's Specification [%]
		Sample 016	
Dibutyl phthalate, (DBP)	84-74-2	N.D.	<0.1
Bis (2-ethylhexyl) phthalate, (DEHP)	117-81-7	N.D.	<0.1
Benzyl butyl phthalate, (BBP)	85-68-7	N.D.	<0.1
Di-isodecyl phthalate, (DIDP)	26761-40-0 , 68515-49-1	N.D.	<0.1
Di-n-hexyl phthalate (DNHP)	84-75-3	N.D.	<0.1
Di-isononyl phthalate, (DINP)	28553-12-0 , 68515-48-0	N.D.	<0.1
<b>Conclusion</b>		Pass	-

Note 1. “%” denotes percentage by weight

2. “<” denotes less than

3. “N.D.” denotes Not Detected with Detection Limit 0.005%

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**3.9 U.S. CFR Title 16 Part 1307 - Toys and Childcare Articles - Phthalates Content (8P)**  
 CPSC-CH-C1001-09.4 – Standard Operating Procedure for Determination of Phthalates  
 [Reporting Limit = 0.005%]

Phthalates	CAS No.	Results [%]			Limit [%]
		Sample 001+002 +003	Sample 004+005 +006	Sample 007	
Dibutyl phthalate, (DBP)	84-74-2	N.D.	N.D.	N.D.	<0.1
Benzyl butyl phthalate, (BBP)	85-68-7	N.D.	N.D.	N.D.	<0.1
Bis (2-ethylhexyl) phthalate, (DEHP)	117-81-7	N.D.	N.D.	N.D.	<0.1
Diisobutylphthalate, (DIBP)	84-69-5	N.D.	N.D.	N.D.	<0.1
Di-n-hexyl phthalate (DHEXP)	84-75-3	N.D.	N.D.	N.D.	<0.1
Dicyclohexyl phthalate (DCHP)	84-61-7	N.D.	N.D.	N.D.	<0.1
Di-isononyl phthalate, (DINP)	28553-12-0 , 68515-48-0	N.D.	N.D.	N.D.	<0.1
Di-n-pentyl phthalates (DPENP)	131-18-0	N.D.	N.D.	N.D.	<0.1
<b>Conclusion</b>		Pass	Pass	Pass	-

Note 1. “%” denotes percentage by weight

2. “<” denotes less than

3. “N.D.” denotes Not Detected with Detection Limit 0.005%

**Laboratory:**

TÜV SÜD Certification and Testing (China)  
 Co., Ltd. Shenzhen Branch  
 Building 12&13, Zhiheng Wisdomland  
 Business Park,  
 Nantou Checkpoint Road 2, 518052, P. R.  
 China

Phone : +86 755 8828 6998  
 Fax: +86 755 8828 5299  
 E-mail: toys\_hardline@tuvsud.com  
 Web : http://www.tuvsud.cn

Regd. Office:  
 TÜV SÜD Certification and Testing (China)  
 Co., Ltd. Shenzhen Branch  
 Building 12&13, Zhiheng Wisdomland  
 Business Park,  
 Nantou Checkpoint Road 2, 518052, P. R.  
 China

**3.9 U.S. CFR Title 16 Part 1307 - Toys and Childcare Articles - Phthalates Content (8P)**  
 CPSC-CH-C1001-09.4 – Standard Operating Procedure for Determination of Phthalates  
 [Reporting Limit = 0.005%]

Phthalates	CAS No.	Results [%]			Limit [%]
		Sample 009	Sample 010	Sample 011+015	
Dibutyl phthalate, (DBP)	84-74-2	0.009	N.D.	N.D.	<0.1
Benzyl butyl phthalate, (BBP)	85-68-7	N.D.	N.D.	N.D.	<0.1
Bis (2-ethylhexyl) phthalate, (DEHP)	117-81-7	0.009	N.D.	N.D.	<0.1
Diisobutylphthalate, (DIBP)	84-69-5	N.D.	N.D.	N.D.	<0.1
Di-n-hexyl phthalate (DHEXP)	84-75-3	N.D.	N.D.	N.D.	<0.1
Dicyclohexyl phthalate (DCHP)	84-61-7	N.D.	N.D.	N.D.	<0.1
Di-isononyl phthalate, (DINP)	28553-12-0 , 68515-48-0	0.009	N.D.	N.D.	<0.1
Di-n-pentyl phthalates (DPENP)	131-18-0	N.D.	N.D.	N.D.	<0.1
<b>Conclusion</b>		Pass	Pass	Pass	-

- Note 1. “%” denotes percentage by weight  
 2. “<” denotes less than  
 3. “N.D.” denotes Not Detected with Detection Limit 0.005%

**3.9 U.S. CFR Title 16 Part 1307 - Toys and Childcare Articles - Phthalates Content (8P)**  
 CPSC-CH-C1001-09.4 – Standard Operating Procedure for Determination of Phthalates  
 [Reporting Limit = 0.005%]

Phthalates	CAS No.	Results [%]	Limit [%]
		Sample 016	
Dibutyl phthalate, (DBP)	84-74-2	N.D.	<0.1
Benzyl butyl phthalate, (BBP)	85-68-7	N.D.	<0.1
Bis (2-ethylhexyl) phthalate, (DEHP)	117-81-7	N.D.	<0.1
Diisobutylphthalate, (DIBP)	84-69-5	N.D.	<0.1
Di-n-hexyl phthalate (DHEXP)	84-75-3	N.D.	<0.1
Dicyclohexyl phthalate (DCHP)	84-61-7	N.D.	<0.1
Di-isononyl phthalate, (DINP)	28553-12-0 , 68515-48-0	N.D.	<0.1
Di-n-pentyl phthalates (DPENP)	131-18-0	N.D.	<0.1
<b>Conclusion</b>		Pass	-

- Note 1. “%” denotes percentage by weight  
 2. “<” denotes less than  
 3. “N.D.” denotes Not Detected with Detection Limit 0.005%



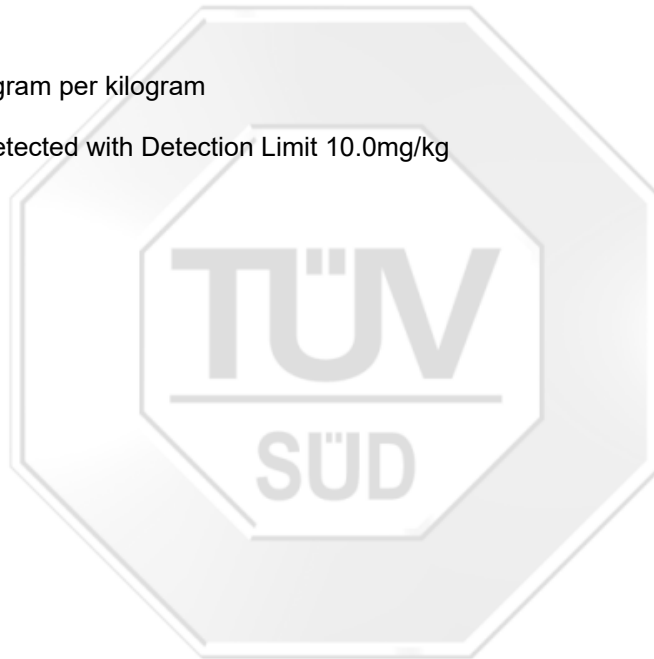
**3.10 Tungsten Content Test**

Test method: EPA 3050B:1996, analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES). [Reporting Limit: 10.0mg/kg]

Test Item	Results [mg/kg]	Client's Specification [mg/kg]
	Sample 008	
Tungsten	N.D.	-
<b>Conclusion</b>	Report As Is	-

Note:

- "mg/kg" denotes milligram per kilogram
- "<" denotes less than
- "N.D." denotes Not Detected with Detection Limit 10.0mg/kg





**3.11 Total Mercury Content Test**

Surface Coating Materials Regulations SOR/2016-193

Microwave Digestion, analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES). [Reporting Limit: 10.0mg/kg]

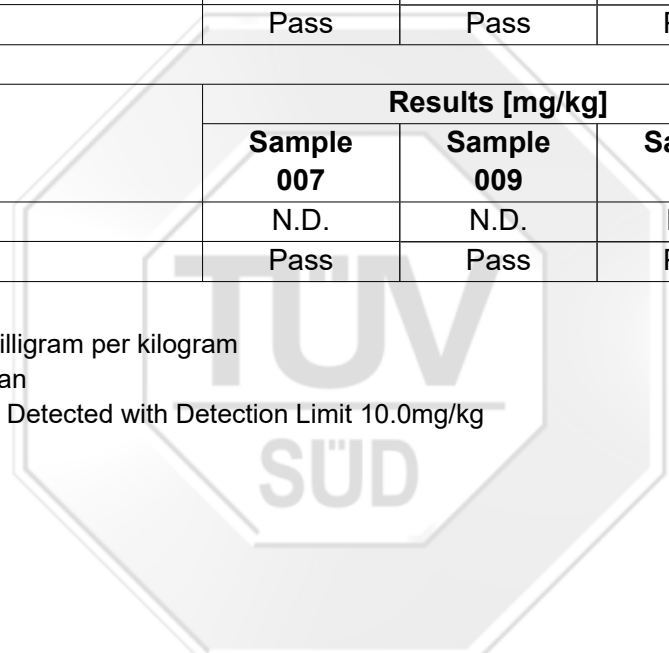
Test Item	Results [mg/kg]			Limit [mg/kg]
	Sample 004	Sample 005	Sample 006	
Mercury	N.D.	N.D.	N.D.	<10
<b>Conclusion</b>	Pass	Pass	Pass	-

Test Item	Results [mg/kg]			Limit [mg/kg]
	Sample 007	Sample 009	Sample 016	
Mercury	N.D.	N.D.	N.D.	<10
<b>Conclusion</b>	Pass	Pass	Pass	-

Note 1. "mg/kg" denotes milligram per kilogram

2. "<" denotes less than

3. "N.D." denotes Not Detected with Detection Limit 10.0mg/kg





**3.12 Nickel Content Test**

Test method: Acid digestion and analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES). [Reporting Limit: 5.0mg/kg]

Test Item	Results [mg/kg]			Client's Specification [mg/kg]
	Sample 008	Sample 012	Sample 013	
Nickel	32909.18	92.55	41.09	-
<b>Conclusion</b>	Report As Is	Report As Is	Report As Is	-

Test Item	Results [mg/kg]	Client's Specification [mg/kg]
	Sample 014	
Nickel	50280.37	-
<b>Conclusion</b>	Report As Is	-

Note:

- "mg/kg" denotes milligram per kilogram
- "<" denotes less than
- "N.D." denotes Not Detected with Detection Limit 5.0mg/kg

-- END OF TEST REPORT--

**Laboratory:**

TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch  
 Building 12&13, Zhiheng Wisdomland Business Park,  
 Nantou Checkpoint Road 2, 518052, P. R. China

Phone : +86 755 8828 6998  
 Fax: +86 755 8828 5299  
 E-mail: toys\_hardline@tuvsud.com  
 Web : http://www.tuvsud.cn

Regd. Office:  
 TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch  
 Building 12&13, Zhiheng Wisdomland Business Park,  
 Nantou Checkpoint Road 2, 518052, P. R. China