

Test Report No.: 68.431.21.01996.01

Dated: 2021-06-09



Applicant : Spector & Co

Address : /

Sample Description : Ballpoint Pen

Item No. : EC112

Style No. : Aqua

Supplier : USN006

Country of Origin : China

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

Test Sample Receipt Date, Location : 2021-03-25, 2021-05-11, 2021-06-02, Shenzhen

Test Period, Location : From 2021-03-29 to 2021-06-08, Shenzhen

Test Result(s) : Refer to Section 3

Laboratory:

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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%.

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

Prepared by:

Reviewed by:

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Cara



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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	Translucent orange plastic (Pen)	
T2	002	Translucent red plastic (Pen)	
T3	003	Translucent black plastic (Pen)	
T4	004	Translucent green plastic (Pen)	
T5	005	Translucent light blue plastic (Pen)	
T6	006	Translucent dark blue plastic (Pen)	
T7	007	Transparent plastic (Pen)	
T8	008	White coating (Pen)	
T9	009	Green coating (Pen)	
T10	010	White plastic (Parts)	
T11	011	Silvery metal (Spring)	
T12	012	Silvery metal (Tip of refill)	
T13	013	Silvery metal (Ball of refill)	
T14	014	White plastic (Refill)	
T15	015	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 004+005+006	Sample 007+010	
Cadmium	N.D.	N.D.	N.D.	<75
Conclusion	Pass	Pass	Pass	-

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

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

Note:

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



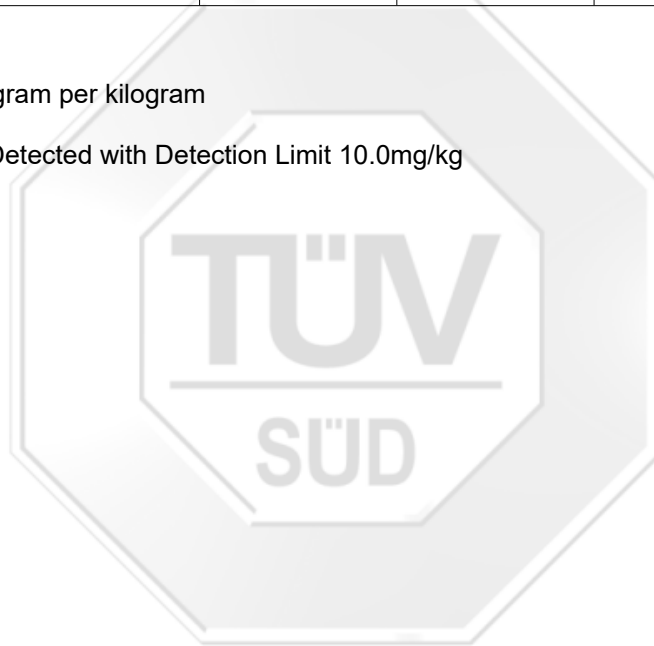
3.2 US California Proposition 65 - Total Cadmium Content Test - Paint and Similar Surface-Coating Materials

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 008	Sample 009	Sample 015	
Cadmium	N.D.	N.D.	N.D.	<75
Conclusion	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 004+005+006	Sample 007+010	
Lead	N.D.	N.D.	N.D.	<100
Conclusion	Pass	Pass	Pass	-

Test Item	Results [mg/kg]			Client's Specification [mg/kg]
	Sample 011	Sample 012*	Sample 013	
Lead	33.8	24.9	N.D.	<100
Conclusion	Pass	Pass	Pass	-

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

Note:

- "mg/kg" denotes milligram per kilogram
- "<" denotes less than
- "N.D." denotes Not Detected with Detection Limit 10.0mg/kg
- "*" denotes sample was received on 2021-06-02 after improved by the client.



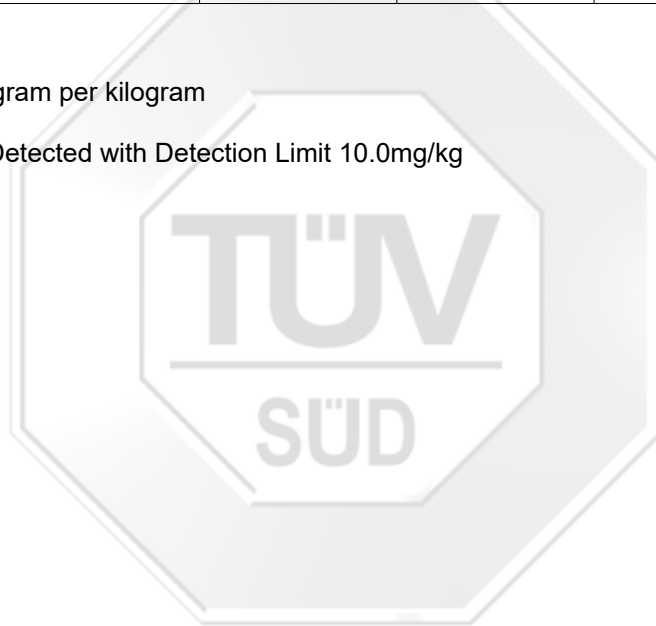
3.4 US California Proposition 65 - Total Lead Content Test - Paint and Similar Surface-Coating Materials

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 008	Sample 009	Sample 015	
Lead	N.D.	N.D.	N.D.	<90
Conclusion	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+005+006	Sample 007+010
Lead	N.D.	N.D.	N.D.
Limit	<90		
Conclusion	Pass	Pass	Pass

Analyte	Result [mg/kg]		
	Sample 008	Sample 009	Sample 011
Lead	N.D.	N.D.	33.8
Limit	<90		
Conclusion	Pass	Pass	Pass

Analyte	Result [mg/kg]		
	Sample 012*	Sample 013	Sample 014
Lead	24.9	N.D.	N.D.
Limit	<90		
Conclusion	Pass	Pass	Pass

Analyte	Result [mg/kg]
	Sample 015
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
 4. "*" denotes sample was received on 2021-06-02 after improved by the client.



3.6 Total Lead Content Test

Surface Coating Materials Regulations SOR/2016-193

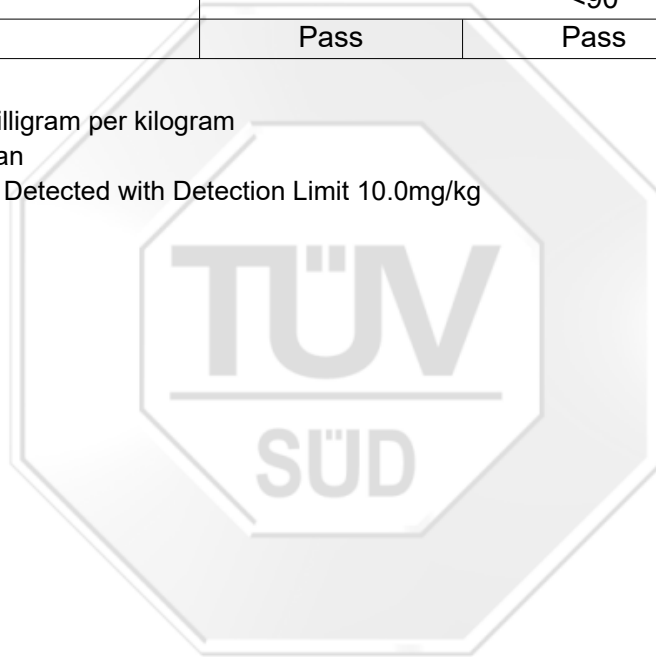
Microwave Digestion, analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES). [Reporting Limit: 10.0mg/kg]

Analyte	Result [mg/kg]		
	Sample 008	Sample 009	Sample 015
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



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+010	
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
Conclusion		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 008	Sample 009	Sample 014	
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
Conclusion		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 015	
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
Conclusion		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+010	
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
Conclusion		Pass	Pass	Pass	-

Test Items	CAS No.	Results [%]			Client's Specification [%]
		Sample 008	Sample 009	Sample 014	
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
Conclusion		Pass	Pass	Pass	-

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

3.8 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 015	
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
Conclusion		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 001+002 +003	Sample 004+005 +006	Sample 007+010	
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
Conclusion		Pass	Pass	Pass	-

Note 1. “%” denotes percentage by weight

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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 008	Sample 009	Sample 014	
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
Conclusion		Pass	Pass	Pass	-

- Note 1. “%” denotes percentage by weight
 2. “<” denotes less than
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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 015	
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
Conclusion		Pass	-

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



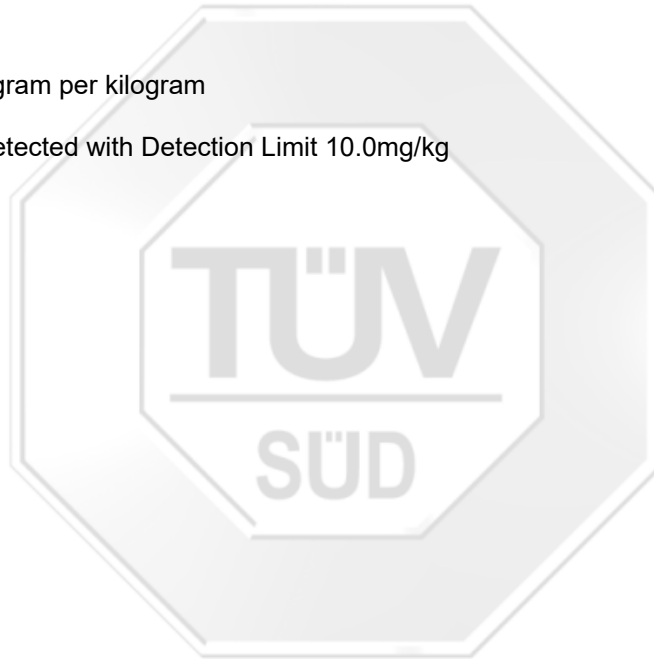
3.10 Tungsten Content Test

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 011	
Tungsten	N.D.	-
Conclusion	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

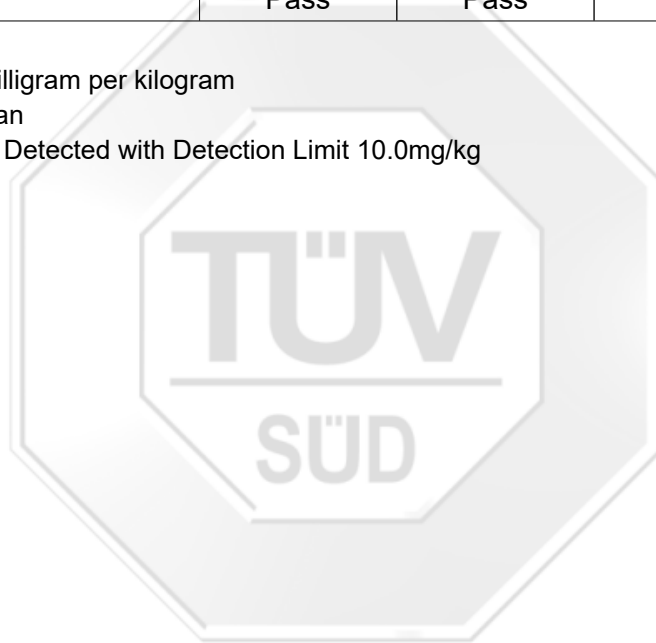
Microwave Digestion, analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES). [Reporting Limit: 10.0mg/kg]

Test Item	Results [mg/kg]			Limit [mg/kg]
	Sample 008	Sample 009	Sample 015	
Mercury	N.D.	N.D.	N.D.	<10
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





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 011	Sample 012	Sample 013	
Nickel	196.19	1042.11	1842.87	-
Conclusion	Report As Is	Report As Is	Report As Is	-

Note:

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

