

Test Report No.: 68.431.19.03097.01

Dated: 2019-08-06



Applicant : Spector & Co

Address : /

Sample Description : ALUMINIUM PENCIL

Product Type / End Use : WRITING INSTRUMENT

Item No. : G3138

Style No. : ALI

Supplier : USC043

Country of Origin : China

Exported to : Canada & U.S.A.

Test Sample Receipt Date, Location : 2019-06-17, 2019-08-02, Shenzhen

Test Period, Location : From 2019-06-17 to 2019-08-06, Shenzhen

Test Result(s) : Refer to Section 3



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	Pass*
8.	US California Proposition 65 - Phthalates Content	Pass*
9.	U.S. CFR Title 16 Part 1307 - Phthalates Content	Pass
10.	Tungsten 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

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1. Description of the Test Sample:

Sample Description	ALUMINIUM PENCIL
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2. List of Materials as identified by the Laboratory:

T. No.	Sample No.	Colour and Description	Photograph
T1	001	Silver coating (Pen body)	
T2	002	Silvery metal (Pen body)	
T3	003	Silvery metal (Top & end)	
T4	004	Silvery metal (Clip)	
T5	005	Silvery metal (Tip)	
T6	006	Transparent plastic (Tube inner body)	
T7	007	Black plastic (End of tube inner body)	
T8	008	Black graphite	
T9	009	Bright black plastic (End)	
T10	010	Shiny blue plated silvery metal (Pen body)	
T11	011	Shiny red plated silvery metal (Pen body)	
T12	012	Shiny green plated silvery metal (Pen body)	
T13	013	Black plated silvery metal (Pen body)	

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 002	Sample 003	Sample 004	
Cadmium	N.D.	N.D.	N.D.	<75
Conclusion	Pass	Pass	Pass	-

Test item	Results [mg/kg]			Client's Specification [mg/kg]
	Sample 005	Sample 006+007+009	Sample 008	
Cadmium	N.D.	N.D.	N.D.	<75
Conclusion	Pass	Pass	Pass	-

Test item	Results [mg/kg]			Client's Specification [mg/kg]
	Sample 010	Sample 011	Sample 012	
Cadmium	N.D.	N.D.	N.D.	<75
Conclusion	Pass	Pass	Pass	-

Test item	Results [mg/kg]	Client's Specification [mg/kg]
	Sample 013	
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



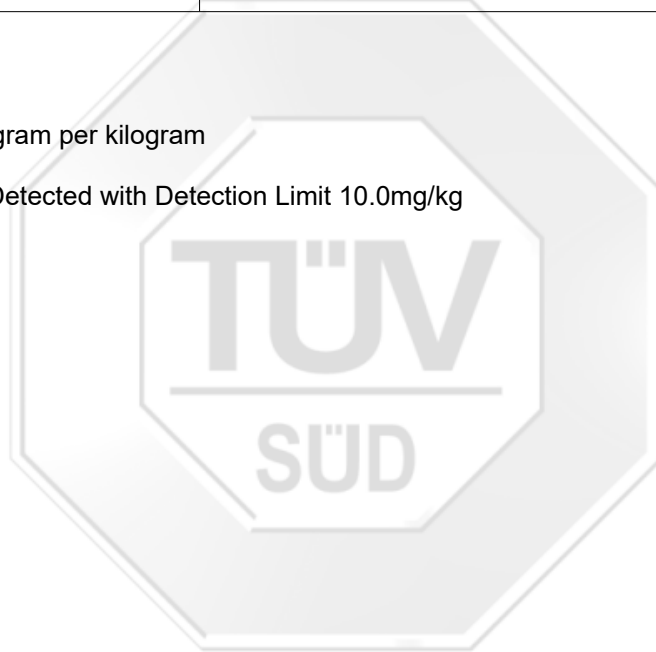
3.2 US California Proposition 65 - Total Cadmium Content Test - Paint and Similar Surface-Coating Materials

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 001	
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



3.3 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 002	Sample 003	Sample 004	
Lead	N.D.	N.D.	N.D.	<100
Conclusion	Pass	Pass	Pass	-

Test Item	Results [mg/kg]			Client's Specification [mg/kg]
	Sample 005	Sample 006+007+009	Sample 008	
Lead	32.5	N.D.	N.D.	<100
Conclusion	Pass	Pass	Pass	-

Test Item	Results [mg/kg]			Client's Specification [mg/kg]
	Sample 010	Sample 011	Sample 012	
Lead	11.2	N.D.	N.D.	<100
Conclusion	Pass	Pass	Pass	-

Test Item	Results [mg/kg]	Client's Specification [mg/kg]
	Sample 013	
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



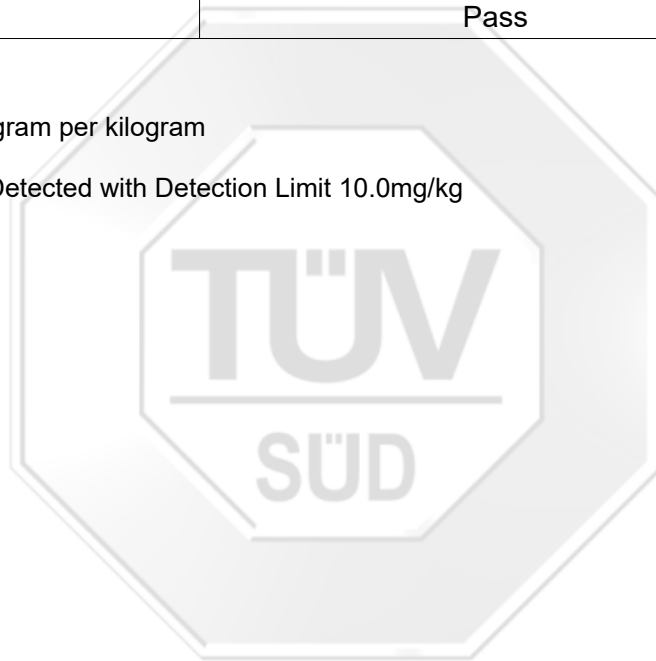
3.4 US California Proposition 65 - Total Lead Content Test - Paint and Similar Surface-Coating Materials

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 001	
Lead	N.D.	<90
Conclusion	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

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	Sample 002	Sample 003
Lead	N.D.	N.D.	N.D.
Limit	<90		
Conclusion	Pass	Pass	Pass

Analyte	Result [mg/kg]		
	Sample 004	Sample 005	Sample 006+007+009
Lead	N.D.	32.5	N.D.
Limit	<90		
Conclusion	Pass	Pass	Pass

Analyte	Result [mg/kg]		
	Sample 008	Sample 010	Sample 011
Lead	N.D.	N.D.	N.D.
Limit	<90		
Conclusion	Pass	Pass	Pass

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



3.6 Total Lead

Surface Coating Materials Regulations SOR/2016-193

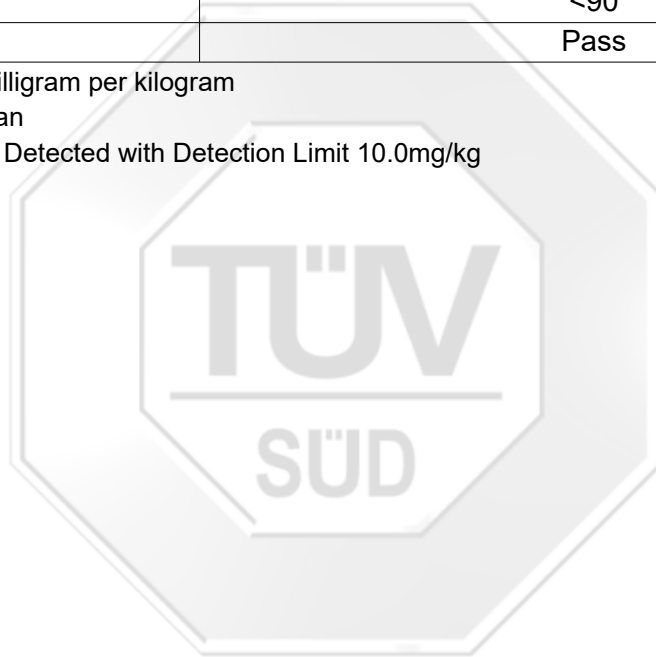
Microwave Digestion, analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES). [Reporting Limit: 10.0mg/kg]

Analyte	Result [mg/kg]
	Sample 001
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



3.7 Phthalates Content

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	Sample 006+007+009	
Di-(2-ethylhexyl)-phthalat (DEHP)	117-81-7	N.D.	N.D.	<0.1
Dibutylbenzylphthalat (DBP)	84-74-2	N.D.	N.D.	<0.1
Diethyl phthalate (DEP)	84-66-2	N.D.	N.D.	<0.1
Butylbenzylphthalat (BBP)	85-68-7	N.D.	N.D.	<0.1
Di-iso-butylphthalat (DIBP)	84-69-5	N.D.	N.D.	<0.1
Di-isononyl phthalate (DINP)	28553-12-0 , 68515-48-0	N.D.	N.D.	<0.1
Di-isodecylphthalat (DIDP)	26761-40-0 , 68515-49-1	N.D.	N.D.	<0.1
Di-n-octylphthalat (DNOP)	117-84-0	N.D.	N.D.	<0.1
Di-n-hexyl phthalate (DnHP)	84-75-3	N.D.	N.D.	<0.1
Dicyclohexyl phthalate (DCHP)	84-61-7	N.D.	N.D.	<0.1
Di-n-pentylphthalat (DNPP)	131-18-0	N.D.	N.D.	<0.1
Conclusion		Pass	Pass	-

Note 1. “%” denotes percentage by weight

2. “<” denotes less than

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

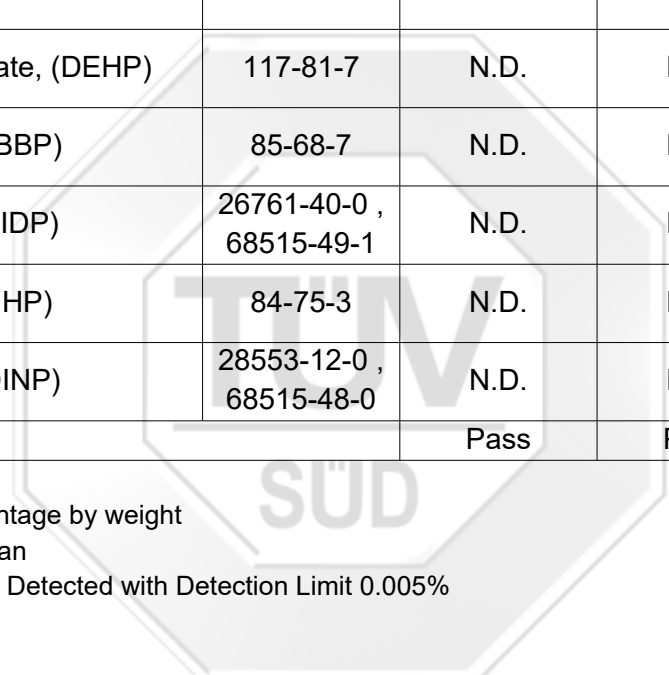


3.8 US California Proposition 65 - Phthalates Content

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	Sample 006+007+009	
Dibutyl phthalate, (DBP)	84-74-2	N.D.	N.D.	<0.1
Bis (2-ethylhexyl) phthalate, (DEHP)	117-81-7	N.D.	N.D.	<0.1
Benzyl butyl phthalate, (BBP)	85-68-7	N.D.	N.D.	<0.1
Di-isodecyl phthalate, (DIDP)	26761-40-0 , 68515-49-1	N.D.	N.D.	<0.1
Di-n-hexyl phthalate (DNHP)	84-75-3	N.D.	N.D.	<0.1
Di-isononyl phthalate, (DINP)	28553-12-0 , 68515-48-0	N.D.	N.D.	<0.1
Conclusion		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 - Phthalates Content

CPSC-CH-C1001-09.4 – Standard Operating Procedure for Determination of Phthalates
 [Reporting Limit = 0.005%]

Phthalates	CAS No.	Results [%]		Limit [%]
		Sample 001	Sample 006+007+009	
Dibutyl phthalate, (DBP)	84-74-2	N.D.	N.D.	<0.1
Benzyl butyl phthalate, (BBP)	85-68-7	N.D.	N.D.	<0.1
Bis (2-ethylhexyl) phthalate, (DEHP)	117-81-7	N.D.	N.D.	<0.1
Diisobutylphthalate, (DIBP)	84-69-5	N.D.	N.D.	<0.1
Di-n-hexyl phthalate (DHEXP)	84-75-3	N.D.	N.D.	<0.1
Dicyclohexyl phthalate (DCHP)	84-61-7	N.D.	N.D.	<0.1
Di-isononyl phthalate, (DINP)	28553-12-0 , 68515-48-0	N.D.	N.D.	<0.1
Di-n-pentyl phthalates (DPENP)	131-18-0	N.D.	N.D.	<0.1
Conclusion		Pass	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 002	
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

