

## Test Report

No. C190823061001

Date: Aug 30, 2019

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Applicant: Shenzhen Minew Technologies Co., Ltd.  
Applicant Address: 3rd Floor, I Building, Gangzhilong Science Park, Qinglong Road, Longhua District, Shenzhen City, China  
The following samples were submitted and identified on behalf of the clients as  
Sample Name: Electronic Shelf Labels  
Model: MTag42  
Model/Type reference: MTag11, MTag15, MTag21, MTag29, MTag42, MTag58, MTag75  
Trademark: N.A.  
Manufacturer: Shenzhen Minew Technologies Co., Ltd.  
Manufacturer Address: 3rd Floor, I Building, Gangzhilong Science Park, Qinglong Road, Longhua District, Shenzhen City, China  
CPST Internal Reference No.: C190823061  
Sample Received Date: Aug 23, 2019  
Number of Sample Received: 01 pcs  
Test Period: Aug 23, 2019 to Aug 30, 2019  
Test Method: Please refer to next pages  
Test Result: Please refer to next pages

Signed for and on behalf of  
Eurones Consumer Products Testing Service Co., Ltd



TESTED BY :

REVIEWED BY:

APPROVED BY:

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### CONCLUSION :

<u>TESTED SAMPLES</u>	<u>TEST ITEM</u>	<u>RESULT</u>
Electronic Shelf Labels	1. RoHS Directive 2011/65/EU Annex II amending Annex (EU)2015/863 and amending Annex (EU)2017/2102	
	— Lead, Cadmium, Mercury, Hexavalent Chromium, PBBs and PBDEs Content	<b>PASS</b>
	—Di-(2-ethylhexyl) phthalate(DEHP), Benzylbutyl phthalate(BBP), Dibutyl phthalate (DBP), Diisobutyl phthalate(DIBP) Content	<b>PASS</b>

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### 2. Test Item Description And Photo List

Sample No.	Description	Photograph
001	White silicone pad	
002	Silvery metal screw	
003	White plastic (shell)	
004	Colorless transparent plastic	
005	Gray coating	
006	White silicone gasket	
007	Colorless transparent plastic sheet	
008	Black printed white sticker	
009	Black foam	
010	Fuchsia coating	
011	Colorless transparent plastic sheet	
012	Brown glass	
013	Black plastic film	
014	White glue	
015	Brown FPC	
016	White plastic case	

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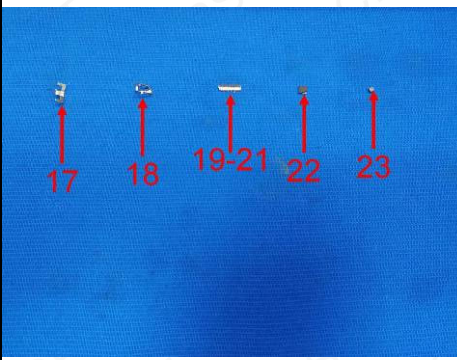
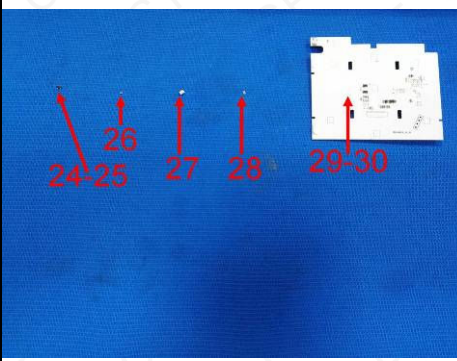


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Sample No.	Description	Photograph
017	Silvery metal plate	
018	Silvery metal plate	
019	Black plastic	
020	White plastic	
021	Gold metal pin	
022	Black ontology	
023	Black crystal	
024	Black ontology	
025	Silvery metal pin	
026	Gray capacitor	
027	White body	
028	Silvery metal patch	
029	White PCB	
030	Silvery solder	

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### 3. Test Results

#### 3.1 Screening test for the specified hazardous substances of RoHS for the selected materials of the submitted sample:

- Heavy Metal (Cadmium, Chromium, Mercury, Lead) Content Test
- Bromine Content Test

According to IEC 62321-3-1:2013, and Quantification analyzed with Energy Dispersive X-ray Fluorescence Spectrometers.

Sample No.	Total Cadmium	Total Lead	Total Mercury	Total Chromium	Total Bromine
Sample 001	BL	BL	BL	BL	BL
Sample 002	BL	BL	BL	Inconclusive^	N.A.
Sample 003	BL	BL	BL	BL	BL
Sample 004	BL	BL	BL	BL	BL
Sample 005	BL	BL	BL	BL	BL
Sample 006	BL	BL	BL	BL	BL
Sample 007	BL	BL	BL	BL	BL
Sample 008	BL	BL	BL	BL	BL
Sample 009	BL	BL	BL	BL	BL
Sample 010	BL	BL	BL	BL	BL
Sample 011	BL	BL	BL	BL	BL
Sample 012	BL	BL	BL	BL	BL
Sample 013	BL	BL	BL	BL	BL
Sample 014	BL	BL	BL	BL	BL
Sample 015	BL	BL	BL	BL	BL
Sample 016	BL	BL	BL	BL	BL
Sample 017	BL	BL	BL	BL	N.A.
Sample 018	BL	BL	BL	BL	N.A.
Sample 019	BL	BL	BL	BL	BL
Sample 020	BL	BL	BL	BL	BL
Sample 021	BL	BL	BL	BL	N.A.
Sample 022	BL	BL	BL	BL	BL
Sample 023	BL	BL	BL	BL	BL
Sample 024	BL	BL	BL	BL	BL
Sample 025	BL	BL	BL	BL	N.A.

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Sample No.	Total Cadmium	Total Lead	Total Mercury	Total Chromium	Total Bromine
Sample 026	BL	BL	BL	BL	BL
Sample 027	BL	BL	BL	BL	BL
Sample 028	BL	BL	BL	BL	N.A.
Sample 029	BL	BL	BL	BL	BL
Sample 030	BL	BL	BL	BL	N.A.

### Note:

1. All Concentrations express in "mg/kg" (milligram per kilogram), mg/kg ~ ppm
2. "OL" denotes "over limit"
3. "BL" denotes "below limit"
4. "N.A." denotes "Not Applicable"
5. "Inconclusive" denotes result is intermediate between "OL" and "BL"
6. "A" denotes the screening result was inconclusive(X) or over limit (OL), thus further confirmation test was conducted, results are listed in 3.2 and 3.3.

### XRF screening limits for different materials:

Materials	Concentration (mg/kg)				
	Cd	Cr	Pb	Hg	Br
<b>Metal</b>	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	N.A.
<b>Polymers</b>	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (300-3\sigma) < X$
<b>Composite material</b>	$BL \leq (50-3\sigma) < X < (150+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$	$BL \leq (250-3\sigma) < X$

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### 3.2 Test for Heavy Metals

– Lead, Cadmium, Hexavalent Chromium and Mercury Tests according to IEC 62321-4:2013+A1:2017 & IEC 62321-5:2013 & IEC 62321-7-1:2015 & IEC 62321-7-2:2017

Element	Total Cadmium [mg/kg]	Total Lead [mg/kg]	Total Mercury [mg/kg]	Hexavalent Chromium [μg/cm <sup>2</sup> ]	Hexavalent Chromium [mg/kg]
Detection Limit	5	5	5	0.10	5
Limit	100	1000	1000	0.10	1000
Sample 002	/	/	/	N.D.	/

Note:

1. All Concentrations express in “mg/kg”(milligram per kilogram), mg/kg ~ ppm.
2. “N.D.” = “Not Detected”.
3. Boiling-water-extraction:
  - Negative = Absence of Cr(VI) coating / surface layer: the detected concentration in boiling-water-extraction solution is less than 0.10μg with 1cm<sup>2</sup> sample surface area.
  - Positive = Presence of Cr(VI) coating / surface layer: the detected concentration in boiling-water-extraction solution is greater than 0.13μg with 1cm<sup>2</sup> sample surface area.
  - Inconclusive = the detected concentration in boiling-water-extraction solution is greater than 0.10μg and less than 0.13μg with 1cm<sup>2</sup> sample surface area.
4. Positive = result be regarded as not comply with RoHS requirement  
Negative = result be regarded as comply with RoHS requirement
5. “-” =Not regulated

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### 3.4 Di-(2-ethylhexyl) phthalate(DEHP), Benzylbutyl phthalate(BBP), Dibutyl phthalate (DBP), Diisobutyl phthalate (DIBP) Content—RoHS Directive 2011/65/EU Annex II amending Annex (EU)2017/2102

Test method: With reference to IEC 62321-8:2017; Analysis was conducted by GC-MS.

Element	Di-(2-ethylhexyl) phthalate (DEHP) [mg/kg]	Benzylbutyl phthalate (BBP) [mg/kg]	Dibutyl phthalate (DBP) [mg/kg]	Diisobutyl phthalate(DIBP) [mg/kg]
<b>Detection Limit</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>50</b>
<b>Limit</b>	<b>1000</b>	<b>1000</b>	<b>1000</b>	<b>1000</b>
Sample 001	N.D.	N.D.	N.D.	N.D.
Sample 003	N.D.	N.D.	N.D.	N.D.
Sample 004	N.D.	N.D.	N.D.	N.D.
Sample 005	N.D.	N.D.	N.D.	N.D.
Sample 006	N.D.	N.D.	N.D.	N.D.
Sample 007	N.D.	N.D.	N.D.	N.D.
Sample 008	N.D.	N.D.	N.D.	N.D.
Sample 009	N.D.	N.D.	N.D.	N.D.
Sample 010	N.D.	N.D.	N.D.	N.D.
Sample 011	N.D.	N.D.	N.D.	N.D.
Sample 012	N.D.	N.D.	N.D.	N.D.
Sample 013	N.D.	N.D.	N.D.	N.D.
Sample 014	N.D.	N.D.	N.D.	N.D.
Sample 015	N.D.	N.D.	N.D.	N.D.
Sample 016	N.D.	N.D.	N.D.	N.D.
Sample 019	N.D.	N.D.	N.D.	N.D.
Sample 020	N.D.	N.D.	N.D.	N.D.
Sample 022	N.D.	N.D.	N.D.	N.D.
Sample 023	N.D.	N.D.	N.D.	N.D.
Sample 024	N.D.	N.D.	N.D.	N.D.
Sample 026	N.D.	N.D.	N.D.	N.D.
Sample 027	N.D.	N.D.	N.D.	N.D.
Sample 029	N.D.	N.D.	N.D.	N.D.

#### Note:

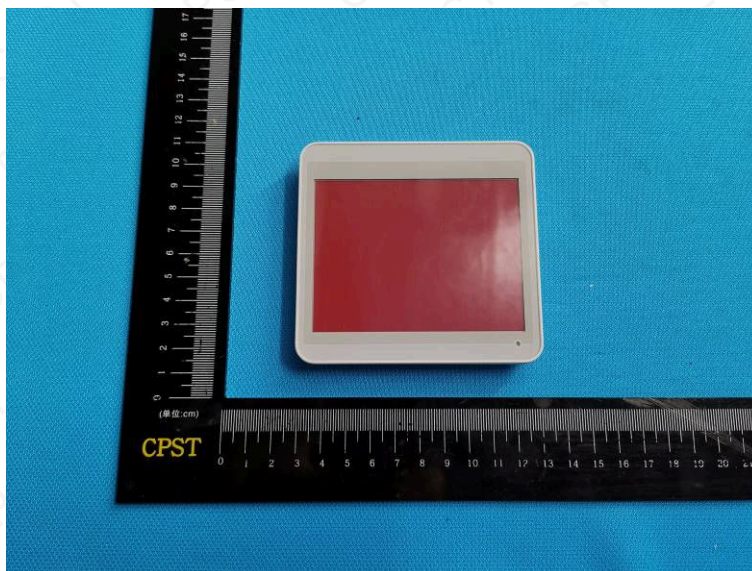
1. All Concentrations express in “mg/kg”(milligram per kilogram), mg/kg ~ ppm.
2. “N.D.” = “Not Detected”.

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### Photo of the Submitted Sample



\*\*\* End of Report \*\*\*

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