

## Test Report

No. CANEC1824690201

Date: 07 Dec 2018

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PROSPERITY ELECTRONICS CO.,LIMITED

RM12, 20/F, HO KING COMM CTR, 2-16 FAYUEN ST, MONGKOK KOWLOON, HONG KONG

The following sample(s) was/were submitted and identified on behalf of the clients as : FERRITE CORE MATERIAL

SGS Job No. : CP18-063921 - GZ  
Client Ref. Info. : Belongs to: A2 SERIES  
Date of Sample Received : 28 Nov 2018  
Testing Period : 28 Nov 2018 - 04 Dec 2018  
Test Requested : Selected test(s) as requested by client.  
Test Method : Please refer to next page(s).  
Test Results : Please refer to next page(s).  
Conclusion : Based on the performed tests on submitted sample(s), the results of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP) , Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) , and Diisobutyl phthalate (DIBP) comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Signed for and on behalf of  
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

*Dongyu Xie*

Dongyu Xie  
Approved Signatory



Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN18-246902.001	Dk-grey core
SN2	CAN18-246902.002	Silvery metal pin

Remarks :

- (1) 1 mg/kg = 1 ppm = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected ( < MDL )
- (4) "-" = Not Regulated

**RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU**

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017 , IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES , UV-Vis and GC-MS .

Test Item(s)	Limit	Unit	MDL	001
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	ND
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (CrVI)	1,000	mg/kg	8	ND
Sum of PBBs	1,000	mg/kg	-	ND
Monobromobiphenyl	-	mg/kg	5	ND
Dibromobiphenyl	-	mg/kg	5	ND
Tribromobiphenyl	-	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl	-	mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl	-	mg/kg	5	ND
Octabromobiphenyl	-	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
Decabromobiphenyl	-	mg/kg	5	ND
Sum of PBDEs	1,000	mg/kg	-	ND
Monobromodiphenyl ether	-	mg/kg	5	ND
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND



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Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN\_Doccheck@sgs.com

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Test Item(s)	Limit	Unit	MDL	001
Pentabromodiphenyl ether	-	mg/kg	5	ND
Hexabromodiphenyl ether	-	mg/kg	5	ND
Heptabromodiphenyl ether	-	mg/kg	5	ND
Octabromodiphenyl ether	-	mg/kg	5	ND
Nonabromodiphenyl ether	-	mg/kg	5	ND
Decabromodiphenyl ether	-	mg/kg	5	ND
Dibutyl phthalate (DBP)	1,000	mg/kg	50	ND
Butyl benzyl phthalate (BBP)	1,000	mg/kg	50	ND
Bis (2-ethylhexyl) phthalate (DEHP)	1,000	mg/kg	50	ND
Diisobutyl Phthalates (DIBP)	1,000	mg/kg	50	ND

### Notes :

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.IEC 62321 series is equivalent to EN 62321 series  
[http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP\\_ORG\\_ID,FSP\\_LANG\\_ID:1258637,25](http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25)

### RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015, analyzed by ICP-OES and UV-Vis .

Test Item(s)	Limit	Unit	MDL	002
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	ND
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	-	µg/cm <sup>2</sup>	0.10	ND

### Notes :

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.  
 IEC 62321 series is equivalent to EN 62321 series  
[http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP\\_ORG\\_ID,FSP\\_LANG\\_ID:1258637,25](http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25)
- (2) ▼= a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 µg/cm<sup>2</sup>. The sample coating is considered to contain CrVI  
 b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm<sup>2</sup>). The coating is considered a non-CrVI based coating  
 c. The result between 0.10 µg/cm<sup>2</sup> and 0.13 µg/cm<sup>2</sup> is considered to be inconclusive - unavoidable coating variations may influence the determination  
 Information on storage conditions and production date of the tested sample is unavailable



and thus Cr(VI) results represent status of the sample at the time of testing.

**Halogen**

Test Method : With reference to EN 14582:2016, analysis was performed by IC.

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Fluorine (F)	mg/kg	50	ND
Chlorine (Cl)	mg/kg	50	ND
Bromine (Br)	mg/kg	50	ND
Iodine (I)	mg/kg	50	ND

**PFOA & PFOS (Perfluorooctanoic acid & Perfluorooctane sulfonates)**

Test Method : With reference to CEN/TS15968:2010, analysis was performed by LC-MS.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Perfluorooctanoic acid (PFOA)	335-67-1	mg/kg	10	ND
Perfluorooctane Sulfonates (PFOS)^	-	mg/kg	10	ND

Notes :

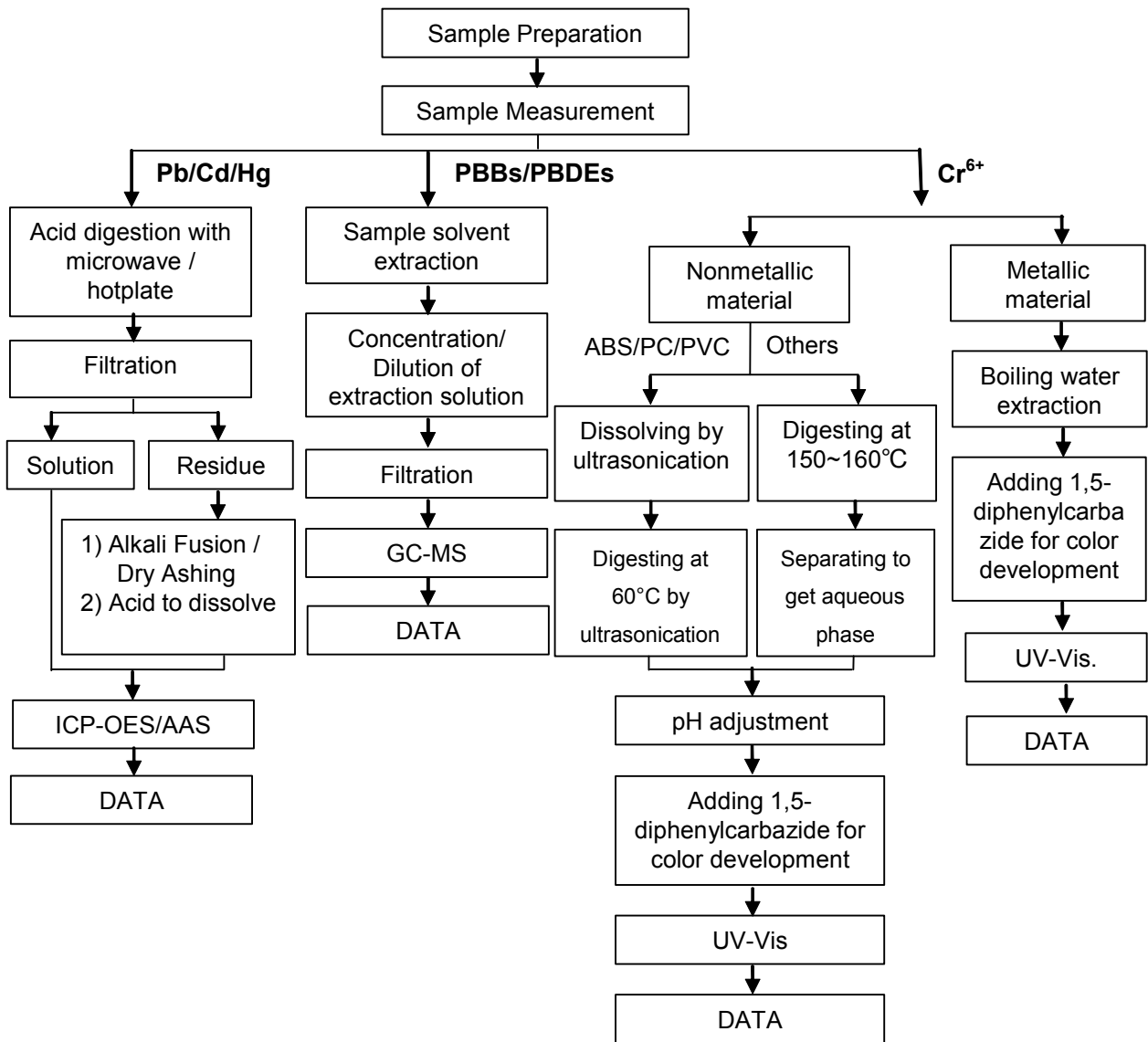
(1) ^ PFOS refer to Perfluorooctanesulfonic acid and its derivatives including Perfluorooctanesulfonic acid, Perfluorooctane sulfonamide, N-Methylperfluorooctane sulfonamide, N-Ethylperfluorooctane sulfonamide, N-Methylperfluorooctane sulfonamidoethanol and N-Ethylperfluorooctane sulfonamidoethanol.



ATTACHMENTS

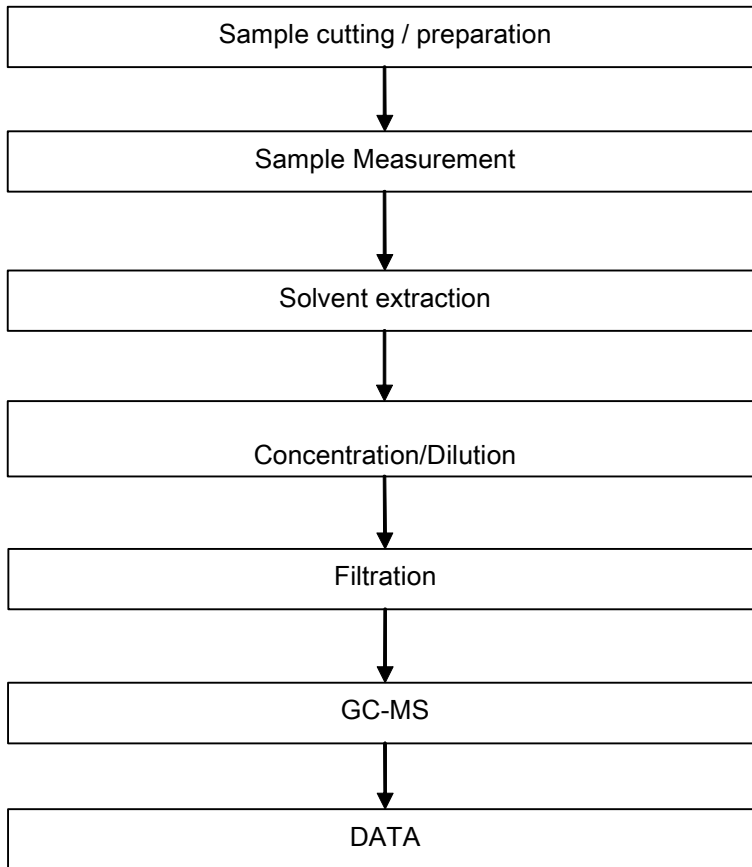
**Pb/Cd/Hg/Cr<sup>6+</sup>/PBBs/PBDEs Testing Flow Chart**

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> and PBBs/PBDEs test method excluded).



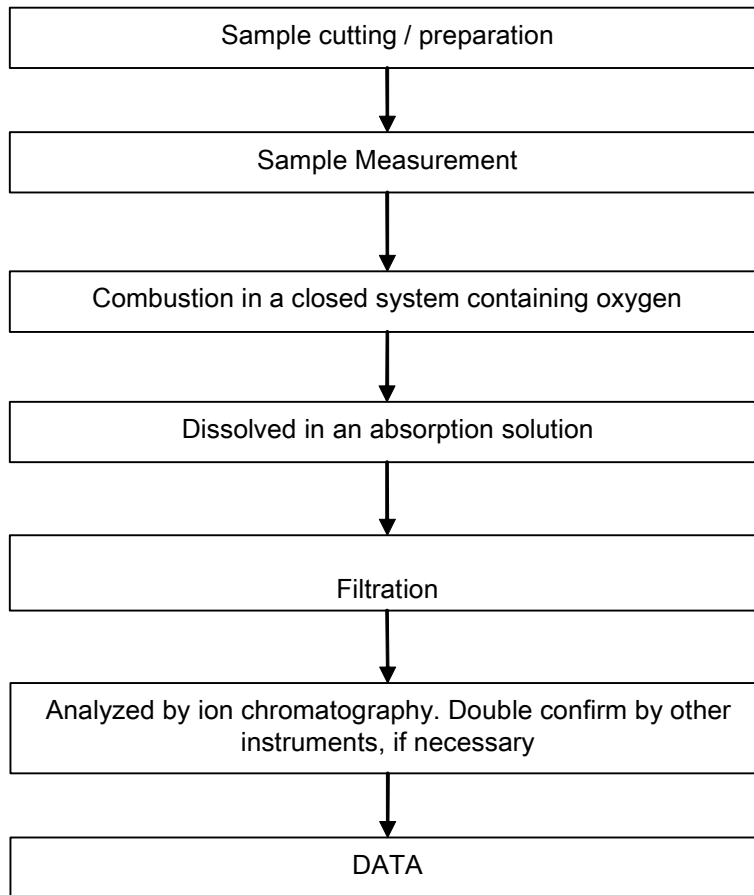
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Phthalates Testing Flow Chart



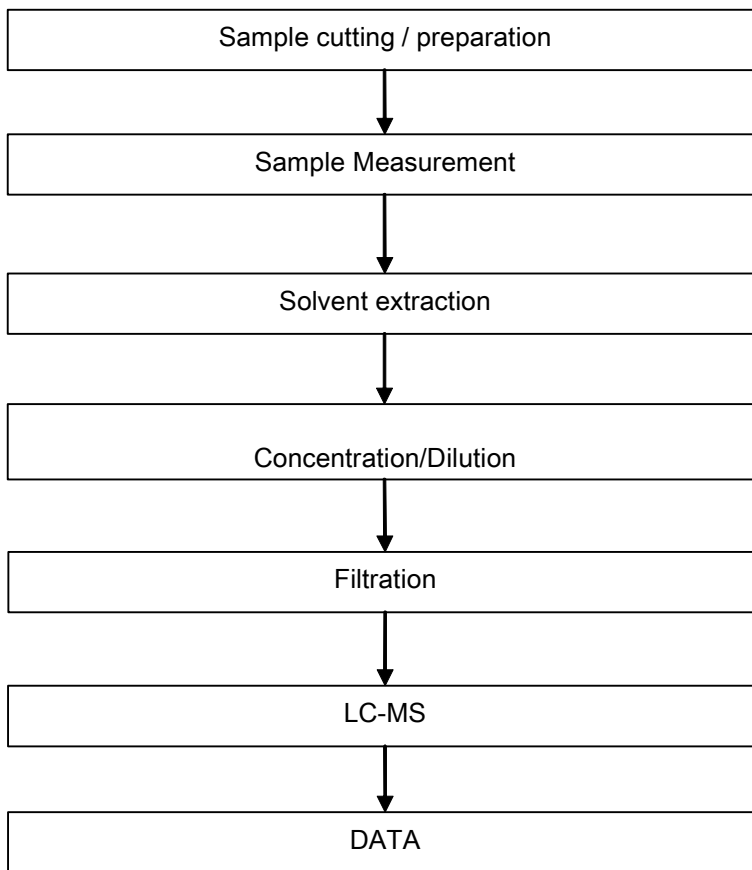
## ATTACHMENTS

### Halogen Testing Flow Chart



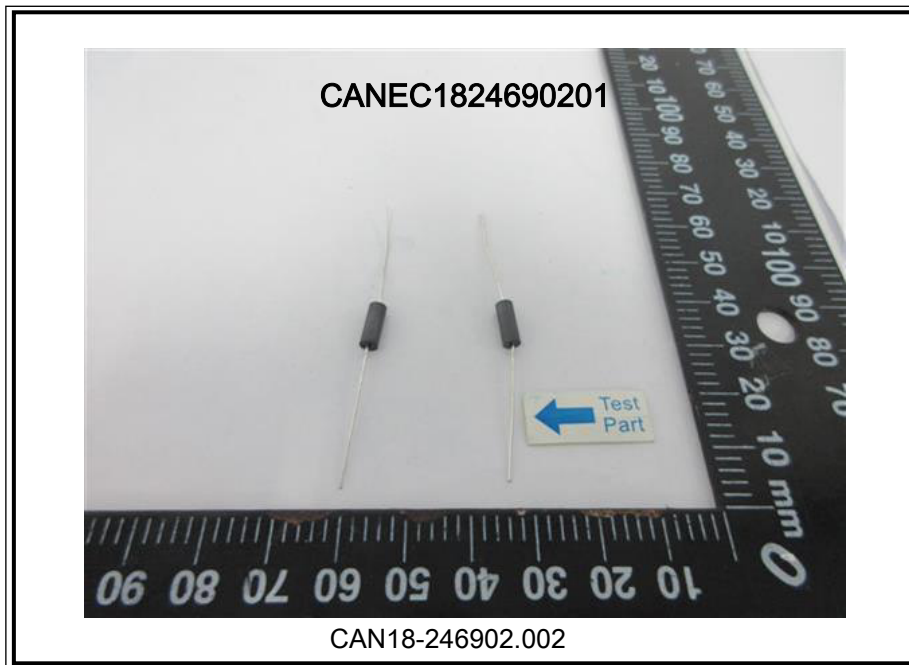
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### PFOA / PFOS Testing Flow Chart





Sample photo:



SGS authenticate the photo on original report only

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