

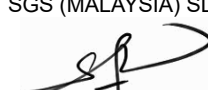
**TEST REPORT:**No. CRSSA/200946032-CA44177  
Job Ref. CRS/2020-08-13-024**REPORTED DATE:** 09-September-2020**TANAKA ELECTRONICS (M) SDN BHD**PLOT 11, PHASE IV, BAYAN LEPAS FIZ,  
11900, PENANG, MALAYSIA

The following sample(s) was/were submitted and identified by applicant as:

SAMPLE DESCRIPTION : Au Bonding Wire  
SAMPLE RECEIVED : 26-August-2020  
TESTING PERIOD : 26-August-2020 to 09-September-2020

---

TEST REQUESTED : Selected test(s) as requested by customer  
TEST METHOD : -PLEASE REFER TO NEXT PAGE(S)-  
TEST RESULTS : -PLEASE REFER TO NEXT PAGE(S)-  
REMARKS : 1) This report supersedes report no. CRSSA/200946023-CA44177.

SIGNED FOR AND ON BEHALF OF  
SGS (MALAYSIA) SDN BHD  
TAY SIAM PINE  
TECHNICAL MANAGER  
IKM No. M/3452/6047/11/12

Test Report Form No.: SGS/TR/CRS/013, Ver: 8.0, Effective Date: 01/09/2020

**Page 1 of 12**

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/terms-and-conditions> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 14 days (for perishable samples) or 30 days only.

**TEST REPORT:**

 No. CRSSA/200946032-CA44177  
 Job Ref. CRS/2020-08-13-024

**REPORTED DATE:** 09-September-2020

**TEST RESULTS:**
**Test Part Description**

Sample Description: -PLEASE REFER TO PAGE 1-

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

Test Parameter(s):	Unit	Test Method	Result	MDL	Limit
Lead (Pb)	mg/kg	With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.	N.D.	2	Max 1000
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.	N.D.	2	Max 100
Mercury (Hg)	mg/kg	With reference to IEC 62321-4:2013+A1:2017, determination of Mercury by ICP-OES.	N.D.	2	Max 1000
Hexavalent Chromium (CrVI)	µg/cm <sup>2</sup>	With reference to IEC 62321-7-1:2015, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis.	N.D.	0.10	-
Hexavalent Chromium (CrVI)	mg/kg	With reference to JIS H 8625, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis.	N.D.	2	Max 1000
Sum of PBBs	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	Max 1000
Monobromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Dibromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Tribromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Tetrabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Pentabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Hexabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Heptabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Octabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Nonabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Decabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-

 SIGNED FOR AND ON BEHALF OF  
 SGS (MALAYSIA) SDN BHD



 TAY SIAM PINE  
 TECHNICAL MANAGER  
 IKM No. M/3452/6047/11/12

Test Report Form No.: SGS/TR/CRS/013, Ver: 8.0, Effective Date: 01/09/2020

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/terms-and-conditions> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 14 days (for perishable samples) or 30 days only.

**TEST REPORT:**

No. CRSSA/200946032-CA44177  
Job Ref. CRS/2020-08-13-024

**REPORTED DATE:** 09-September-2020

**TEST RESULTS:**

**Test Part Description**

Sample Description: -PLEASE REFER TO PAGE 1-

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

Test Parameter(s):	Unit	Test Method	Result	MDL	Limit
Sum of PBDEs	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	Max 1000
Monobromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Dibromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Tribromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Tetrabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Pentabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Hexabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Heptabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Octabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Nonabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Decabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-

- Note :
- (a) mg/kg = ppm ; ug/kg = ppb (0.01 mg/kg = 10 ug/kg); 0.1wt% = 1000ppm
  - (b) N.D. = Not Detected
  - (c) MDL = Method Detection Limit
  - (d) - = Not regulated
  - (e) a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 µg/cm². The sample coating is considered to contain CrVI.
  - b. The sample is negative for CrVI if CrVI is N.D. (concentration less than 0.10 µg/cm²). The coating is considered a non-CrVI based coating.
  - c. The result between 0.10 µg/cm² and 0.13 µg/cm² is considered to be inconclusive - unavoidable coating variations may influence the determination.
- For corrosion protection coatings on metals: Information on storage conditions and production date of the tested sample is unavailable and thus results of Cr(VI) represent status of the sample at the time of testing.

SIGNED FOR AND ON BEHALF OF  
SGS (MALAYSIA) SDN BHD

  
TAY SIAM PINE  
TECHNICAL MANAGER  
IKM No. M/3452/6047/11/12



Test Report Form No.: SGS/TR/CRS/013, Ver: 8.0, Effective Date: 01/09/2020

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/terms-and-conditions> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 14 days (for perishable samples) or 30 days only.

**TEST REPORT:**

No. CRSSA/200946032-CA44177  
 Job Ref. CRS/2020-08-13-024

**REPORTED DATE:** 09-September-2020

**TEST RESULTS:**

**Test Part Description**

Sample Description: -PLEASE REFER TO PAGE 1-

Optional: RoHS Directive 2011/65/EU, priority substances

Test Parameter(s):	Unit	Test Method	Result	MDL
Hexabromocyclododecane (HBCDD)(CAS No.: 3194-55-6,25637-99-4	mg/kg	In-house method, SGS-TM-RSTS-O-012, with reference to IEC 62321-6:2015. Analysis was performed by GCMS	N.D.	5

Note : (a) Reference Information: Directive 2011/65/EU recasting RoHS directive 2002/95/EC: Hexabromocyclododecane (HBCDD), Bis (2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) are considered as a priority for risk evaluation and substance restriction.  
 (b) N.D. = Not Detected

SIGNED FOR AND ON BEHALF OF  
 SGS (MALAYSIA) SDN BHD

  
 TAY SIAM PINE  
 TECHNICAL MANAGER  
 IKM No. M/3452/6047/11/12



Test Report Form No.: SGS/TR/CRS/013, Ver: 8.0, Effective Date: 01/09/2020

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/terms-and-conditions> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 14 days (for perishable samples) or 30 days only.

**TEST REPORT:**

No. CRSSA/200946032-CA44177  
Job Ref. CRS/2020-08-13-024

**REPORTED DATE:** 09-September-2020

**TEST RESULTS:**

**Test Part Description**

Sample Description: -PLEASE REFER TO PAGE 1-

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

Test Parameter(s):	Unit	Test Method	Result	MDL	Limit
Dibutyl phthalate (DBP) (CAS No. 84-74-2)	mg/kg	With reference to IEC 62321-8:2017, determination of phthalates by GC-MS.	N.D.	50	Max 1000
Di(2-ethylhexyl) phthalate (DEHP) (CAS No. 117-81-7)	mg/kg	With reference to IEC 62321-8:2017, determination of phthalates by GC-MS.	N.D.	50	Max 1000
Benzyl butyl phthalate (BBP) (CAS No. 85-68-7)	mg/kg	With reference to IEC 62321-8:2017, determination of phthalates by GC-MS.	N.D.	50	Max 1000
Diisobutyl phthalate (DIBP) (CAS No. 84-69-5)	mg/kg	With reference to IEC 62321-8:2017, determination of phthalates by GC-MS.	N.D.	50	Max 1000

- Note :
- (a) mg/kg = ppm ; ug/kg = ppb (0.01 mg/kg = 10 ug/kg); 0.1wt% = 1000ppm
  - (b) N.D. = Not Detected
  - (c) MDL = Method Detection Limit
  - (d) - = Not regulated
  - (e) On 4 June 2015, Commission Directive (EU) 2015/863 was published in the Official Journal of the European Union (OJEU) to include the phthalates BBP, DBP, DEHP and DIBP into ANNEX II of the RoHS Recast Directive. The new law restricts each phthalate to no more than 0.1% in each homogeneous material of an electrical product.
  - (f) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.
  - (g) The restriction of DEHP, BBP, DBP and DIBP shall not apply to cables or spare parts for the repair, the reuse, the updating of functionalities or upgrading of capacity of EEE placed on the market before 22 July 2019, and of medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, placed on the market before 22 July 2021.
  - (h) The restriction of DEHP, BBP and DBP shall not apply to toys which are already subject to the restriction of DEHP, BBP and DBP through entry 51 of Annex XVII to Regulation (EC) No 1907/2006.

SIGNED FOR AND ON BEHALF OF  
SGS (MALAYSIA) SDN BHD

  
TAY SIAM PINE  
TECHNICAL MANAGER  
IKM No. M/3452/6047/11/12



Test Report Form No.: SGS/TR/CRS/013, Ver: 8.0, Effective Date: 01/09/2020

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/terms-and-conditions> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 14 days (for perishable samples) or 30 days only.

**TEST REPORT:**

No. CRSSA/200946032-CA44177  
Job Ref. CRS/2020-08-13-024

**REPORTED DATE:** 09-September-2020

**TEST RESULTS BY CHEMICAL METHOD:**

**Test Part Description**

Sample Description: -PLEASE REFER TO PAGE 1-

Test Parameter(s):	Unit	Test Method	Result	MDL
Dimethyl Fumarate (CAS No.:624-49-7)	mg/kg	With reference to US EPA 3550C method. Analysis was performed by GC/MS.	N.D.	0.1
Polyvinylchloride (PVC)	-	Analysis was performed by FTIR and FLAME Test	negative	-
Antimony (Sb)	mg/kg	With reference to EPA Method 3052, and performed by ICP-OES.	N.D.	2
Beryllium (Be)	mg/kg	With reference to EPA Method 3052, and performed by ICP-OES.	6	2
Magnesium (Mg)	mg/kg	With reference to EPA Method 3052, and performed by ICP-OES.	N.D.	20
Arsenic (As)	mg/kg	With reference to EPA Method 3052, and performed by ICP-OES.	N.D.	2
Perfluorooctanesulfonic acid (PFOS)	%	With reference to US EPA 3550C:2007. Analysis was performed by HPLC-MS	N.D.	0.001
Perfluorooctanoic acid (PFOA)	%	With reference to US EPA 3550C:2007. Analysis was performed by HPLC-MS	N.D.	0.001
<b>Halogen</b>	-	-	-	-
Halogen-Fluorine (F)	mg/kg	With reference to BS EN 14582:2016, analysis performed by IC method for Fluorine content.	N.D.	50
Halogen-Chlorine (Cl)	mg/kg	With reference to BS EN 14582:2016, analysis performed by IC method for Chlorine content.	N.D.	50
Halogen-Bromine (Br)	mg/kg	With reference to BS EN 14582:2016, analysis performed by IC method for Bromine content.	N.D.	50
Halogen-Iodine (I)	mg/kg	With reference to BS EN 14582:2016, analysis performed by IC method for Iodine content.	N.D.	50

Note : (a) mg/kg = ppm ; ug/kg = ppb (0.01 mg/kg = 10 ug/kg); 0.1wt% = 1000ppm  
 (b) N.D. = Not Detected  
 (c) MDL = Method Detection Limit  
 (d) Negative = Undetectable / Positive = Detectable

SIGNED FOR AND ON BEHALF OF  
SGS (MALAYSIA) SDN BHD

  
TAY SIAM PINE  
TECHNICAL MANAGER  
IKM No. M/3452/6047/11/12



Test Report Form No.: SGS/TR/CRS/013, Ver: 8.0, Effective Date: 01/09/2020

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/terms-and-conditions> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 14 days (for perishable samples) or 30 days only.

**TEST REPORT:**

No. CRSSA/200946032-CA44177  
Job Ref. CRS/2020-08-13-024

**REPORTED DATE:** 09-September-2020

**TEST RESULTS BY CHEMICAL METHOD:**

**Test Part Description**

Sample Description: -PLEASE REFER TO PAGE 1-

Test Parameter(s):	Unit	Test Method	Result	MDL
<b>Phthalates</b>	-	-	-	-
Di-n-octyl phthalate (DNOP) (CAS No. 117-84-0)	mg/kg	With reference to IEC 62321-8:2017, determination of phthalates by GC-MS.	N.D.	50
Di-isonyl phthalate(DINP) (CAS No.:2855 3-12-0;68515-48-0)	mg/kg	With reference to IEC 62321-8:2017, determination of phthalates by GC-MS.	N.D.	100
Di-isodecyl phthalate(DIDP) (CAS No.:2676 1-40-0,68515-49-1)	mg/kg	With reference to IEC 62321-8:2017, determination of phthalates by GC-MS.	N.D.	100
Di-n-hexyl phthalate (DnHP/DHEXP) (CAS No. 84-75-3)	mg/kg	In-house SGS-TM-RSTS-O-003 with reference to IEC 62321-8:2017. Analysis was performed by GC-MS.	N.D.	50
Bis (2-methoxyethyl) phthalate (DMEP) (CAS No.:117-82-8)	mg/kg	In-house SGS-TM-RSTS-O-003 with reference to IEC 62321-8:2017. Analysis was performed by GC-MS.	N.D.	50

- Note :
- (a) mg/kg = ppm ; ug/kg = ppb (0.01 mg/kg = 10 ug/kg); 0.1wt% = 1000ppm
  - (b) N.D. = Not Detected
  - (c) MDL = Method Detection Limit
  - (d) On 4 June 2015, Commission Directive (EU) 2015/863 was published in the Official Journal of the European Union (OJEU) to include the phthalates BBP, DBP, DEHP and DIBP into ANNEX II of the RoHS Recast Directive. The new law restricts each phthalate to no more than 0.1% in each homogeneous material of an electrical product.
  - (e) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.
  - (f) The restriction of DEHP, BBP, DBP and DIBP shall not apply to cables or spare parts for the repair, the reuse, the updating of functionalities or upgrading of capacity of EEE placed on the market before 22 July 2019, and of medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, placed on the market before 22 July 2021.
  - (g) The restriction of DEHP, BBP and DBP shall not apply to toys which are already subject to the restriction of DEHP, BBP and DBP through entry 51 of Annex XVII to Regulation (EC) No 1907/2006.

SIGNED FOR AND ON BEHALF OF  
SGS (MALAYSIA) SDN BHD

  
TAY SIAM PINE  
TECHNICAL MANAGER  
IKM No. M/3452/6047/11/12



Test Report Form No.: SGS/TR/CRS/013, Ver: 8.0, Effective Date: 01/09/2020

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/terms-and-conditions> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 14 days (for perishable samples) or 30 days only.



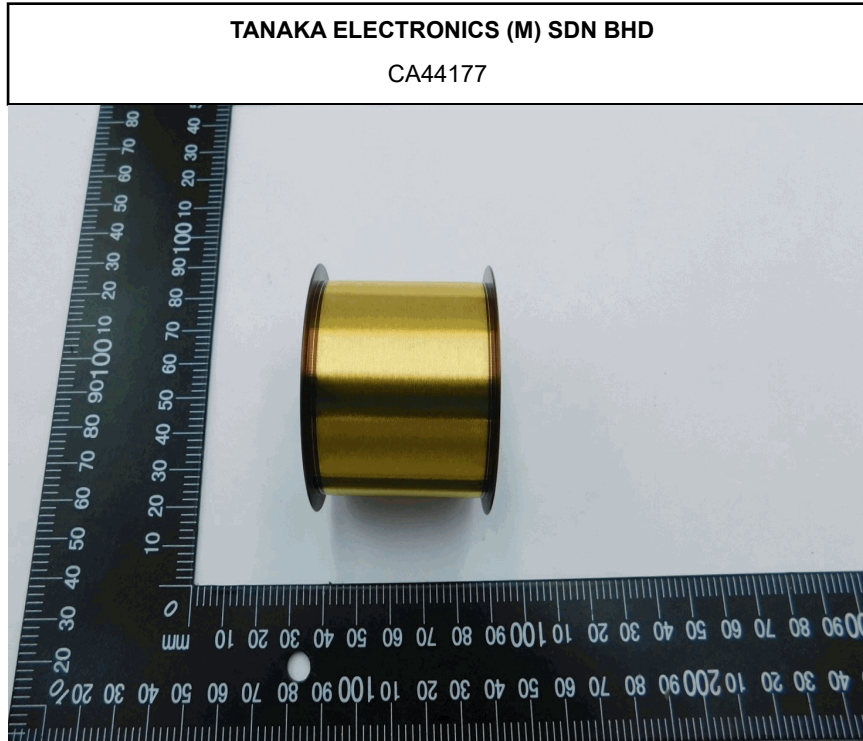
**TEST REPORT:**

No. CRSSA/200946032-CA44177  
Job Ref. CRS/2020-08-13-024

**REPORTED DATE:** 09-September-2020

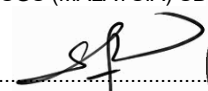
**Test Part Description :**

Sample Description: -PLEASE REFER TO PAGE 1-



SGS authenticate the photo on original report only

SIGNED FOR AND ON BEHALF OF  
SGS (MALAYSIA) SDN BHD

  
TAY SIAM PINE  
TECHNICAL MANAGER  
IKM No. M/3452/6047/11/12

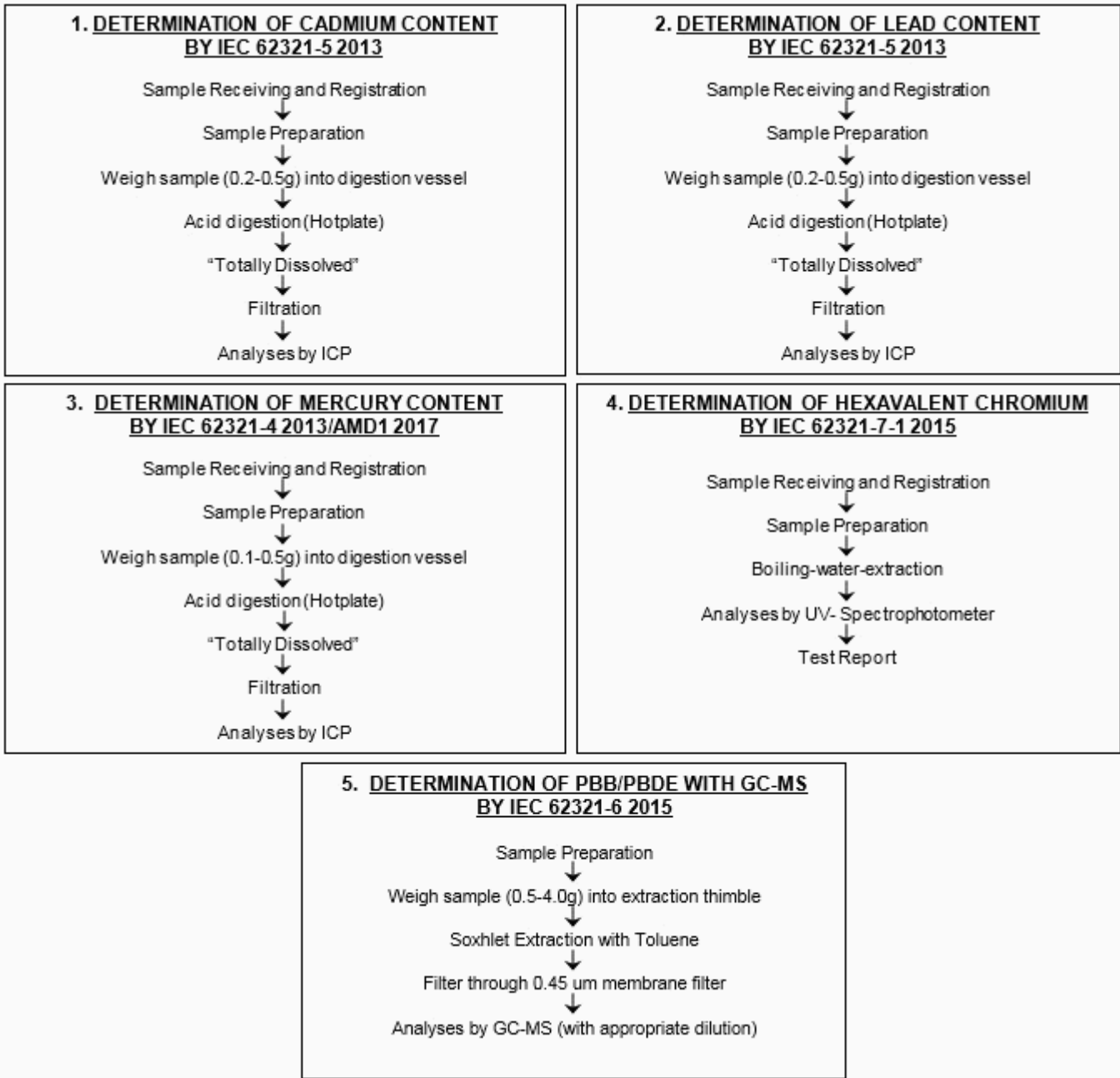


Test Report Form No.: SGS/TR/CRS/013, Ver: 8.0, Effective Date: 01/09/2020

**Page 8 of 12**

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/terms-and-conditions> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 14 days (for perishable samples) or 30 days only.





SIGNED FOR AND ON BEHALF OF  
SGS (MALAYSIA) SDN BHD

  
TAY SIAM PINE  
TECHNICAL MANAGER  
IKM No. M/3452/6047/11/12



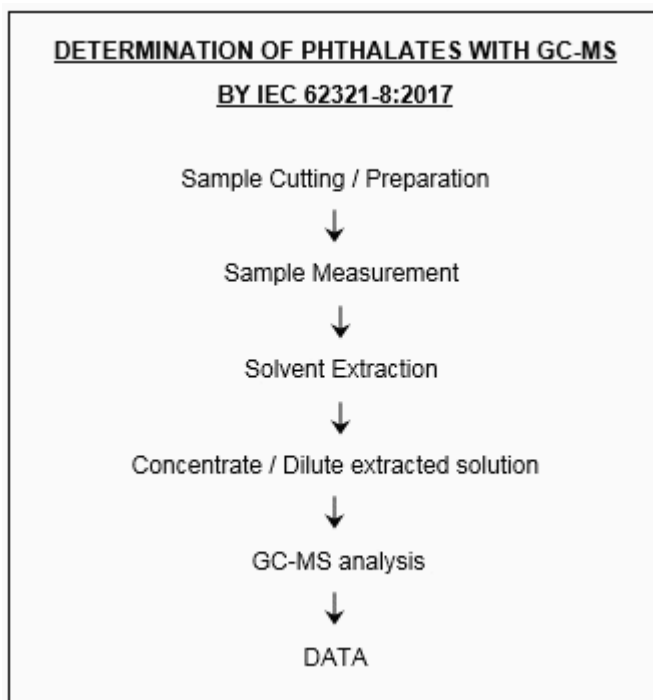
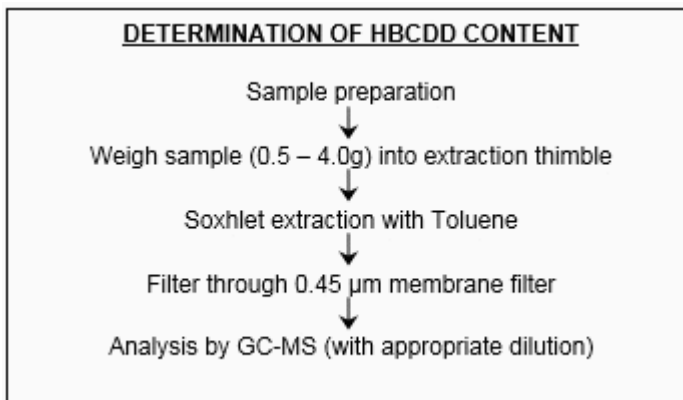
Test Report Form No.: SGS/TR/CRS/013, Ver: 8.0, Effective Date: 01/09/2020

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/terms-and-conditions> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 14 days (for perishable samples) or 30 days only.

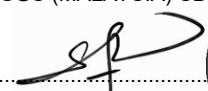
TEST REPORT:

No. CRSSA/200946032-CA44177  
Job Ref. CRS/2020-08-13-024

REPORTED DATE: 09-September-2020



SIGNED FOR AND ON BEHALF OF  
SGS (MALAYSIA) SDN BHD

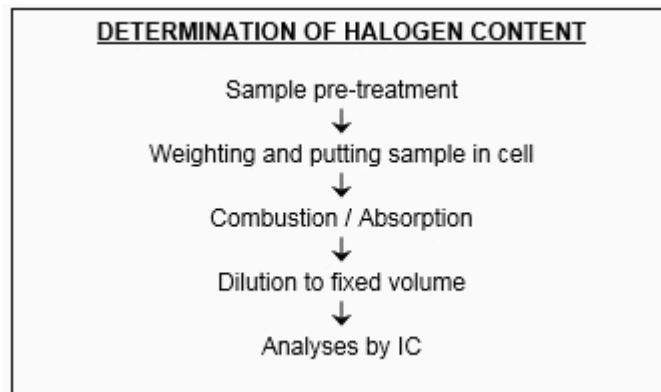
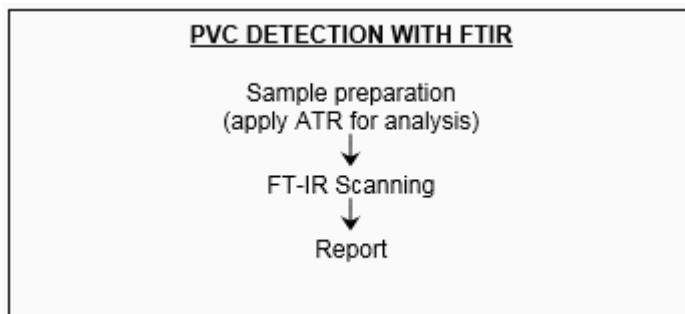
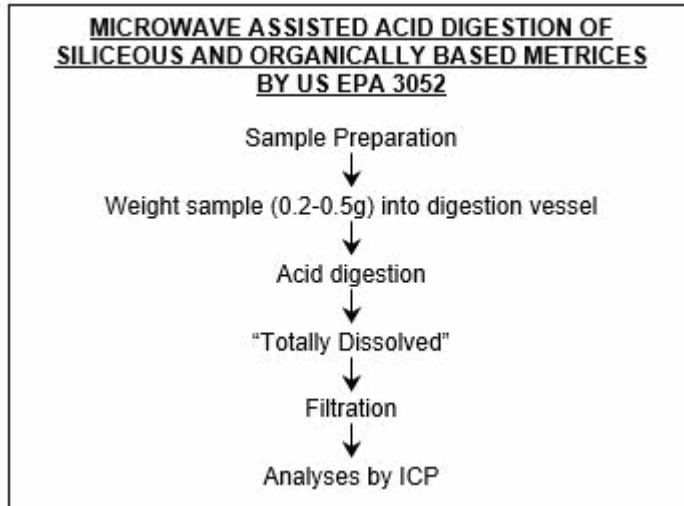
  
TAY SIAM PINE  
TECHNICAL MANAGER  
IKM No. M/3452/6047/11/12



Test Report Form No.: SGS/TR/CRS/013, Ver: 8.0, Effective Date: 01/09/2020

Page 10 of 12

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/terms-and-conditions> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 14 days (for perishable samples) or 30 days only.



SIGNED FOR AND ON BEHALF OF  
SGS (MALAYSIA) SDN BHD

  
TAY SIAM PINE  
TECHNICAL MANAGER  
IKM No. M/3452/6047/11/12



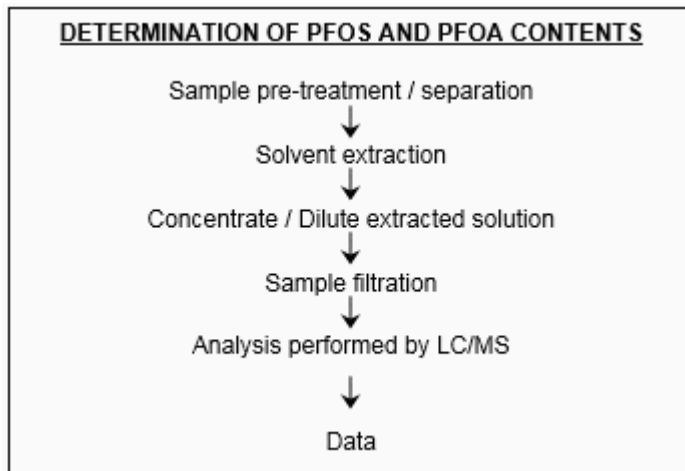
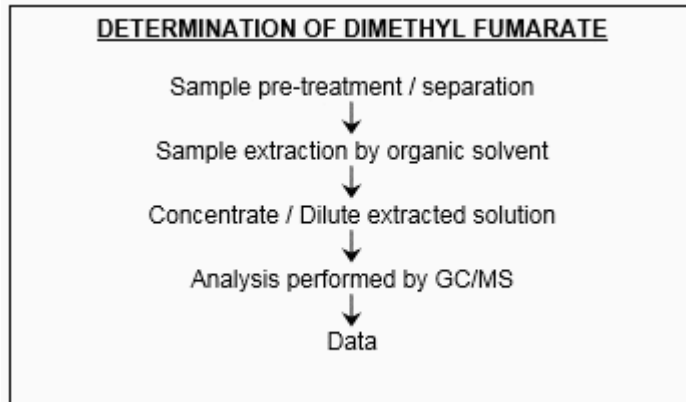
Test Report Form No.: SGS/TR/CRS/013, Ver: 8.0, Effective Date: 01/09/2020

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/terms-and-conditions> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 14 days (for perishable samples) or 30 days only.

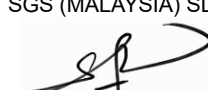
TEST REPORT:

No. CRSSA/200946032-CA44177  
Job Ref. CRS/2020-08-13-024

REPORTED DATE: 09-September-2020



SIGNED FOR AND ON BEHALF OF  
SGS (MALAYSIA) SDN BHD

  
TAY SIAM PINE  
TECHNICAL MANAGER  
IKM No. M/3452/6047/11/12



Test Report Form No.: SGS/TR/CRS/013, Ver: 8.0, Effective Date: 01/09/2020

\*\*\* End of test report \*\*\*

Page 12 of 12

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/terms-and-conditions> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com/en/terms-and-conditions/terms-e-document>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 14 days (for perishable samples) or 30 days only.

## Test Report

No. : KA/2020/81393

Date : 2020/09/09

Page: 1 of 8


TANAKA ELECTRONICS (M) SDN BHD  
PLOT 11, PHASE IV, BAYAN LEPAS FIZ, 11900 PENANG, MALAYSIA.

The following sample(s) was/were submitted and identified by/on behalf of the applicant as :

Sample Submitted By : TANAKA ELECTRONICS (M) SDN BHD  
Sample Description : Au BONDING WIRE  
CRS Reference No. : 2020-08-13-024(CA44187-CA44200)  
Sample Receiving Date : 2020/08/26  
Testing Period : 2020/08/26 to 2020/09/09

Test Result(s) : Please refer to next page(s).

  
Ray Chang Ph.D. / Manager  
Signed for and on behalf of  
SGS Taiwan Limited  
Chemical Laboratory-Kaohsiung



PIN CODE: 988C540B

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com.tw/terms-of-service> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com.tw/terms-of-service>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

# Test Report

No. : KA/2020/81393

Date : 2020/09/09

Page: 2 of 8

TANAKA ELECTRONICS (M) SDN BHD  
 PLOT 11, PHASE IV, BAYAN LEPAS FIZ, 11900 PENANG, MALAYSIA.

## Test Result(s)

PART NAME NO.1 : GOLDEN COLORED METAL WIRE

Test Item (s)	Unit	Method	MDL	Result
				No.1
Phosphorus (P)	mg/kg	With reference to US EPA 3052: 1996. Analysis was performed by ICP-OES.	2	n.d.
Polychlorinated Biphenyls (PCBs)	mg/kg	With reference to US EPA 3550C: 2007. Analysis was performed by GC/MS.	0.5	n.d.
Polychlorinated Naphthalene (PCNs)	mg/kg		5	n.d.
Polychlorinated Terphenyls (PCTs)	mg/kg		0.5	n.d.
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) (CAS No.:85535-84-8)	%	With reference to US EPA 3550C: 2007. Analysis was performed by GC/ECD.	0.01	n.d.
Tributyl Tin (TBT)	mg/kg	With reference to ISO 17353: 2004. Analysis was performed by GC/FPD.	0.03	n.d.
Triphenyl Tin (TphT)	mg/kg		0.03	n.d.
Dibutyl Tin (DBT)	mg/kg		0.03	n.d.
Diocetyl Tin (DOT)	mg/kg		0.03	n.d.
Bis(tributyltin)oxide (TBTO) (CAS No.: 56-35-9)	mg/kg		0.03 (▲)	n.d.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com.tw/terms-of-service> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com.tw/terms-of-service>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

# Test Report

No. : KA/2020/81393

Date : 2020/09/09

Page: 3 of 8

TANAKA ELECTRONICS (M) SDN BHD  
 PLOT 11, PHASE IV, BAYAN LEPAS FIZ, 11900 PENANG, MALAYSIA.

**Note :**

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit
4. " - " = Not Regulated
5. (▲) : The MDL was evaluated for element / tested substance.
6. Parameter Conversion Table: [https://twap.sgs.com/sgsrsts/chn/download-REACH\\_tw.asp](https://twap.sgs.com/sgsrsts/chn/download-REACH_tw.asp)

Conversion Formula :  $AX = A \times F$

AX	A	F
Bis(tributyltin)oxide (TBTO)	Tributyl Tin (TBT)	1.024

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com.tw/terms-of-service> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com.tw/terms-of-service>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

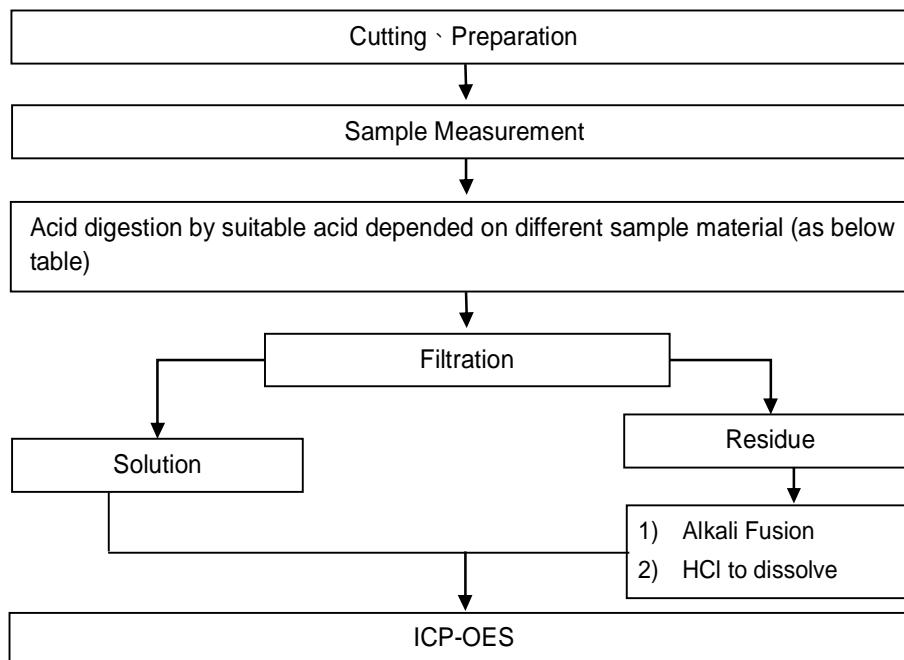


TANAKA ELECTRONICS (M) SDN BHD

PLOT 11, PHASE IV, BAYAN LEPAS FIZ, 11900 PENANG, MALAYSIA.

### Flow Chart of digestion for the elements analysis performed by ICP-OES

These samples were dissolved totally by pre-conditioning method according to below flow chart.



Steel, copper, aluminum, solder	Aqua regia, HNO <sub>3</sub> , HCl, HF, H <sub>2</sub> O <sub>2</sub>
Glass	HNO <sub>3</sub> /HF
Gold, platinum, palladium, ceramic	Aqua regia
Silver	HNO <sub>3</sub>
Plastic	H <sub>2</sub> SO <sub>4</sub> , H <sub>2</sub> O <sub>2</sub> , HNO <sub>3</sub> , HCl
Others	Any acid to total digestion

# Test Report

No. : KA/2020/81393

Date : 2020/09/09

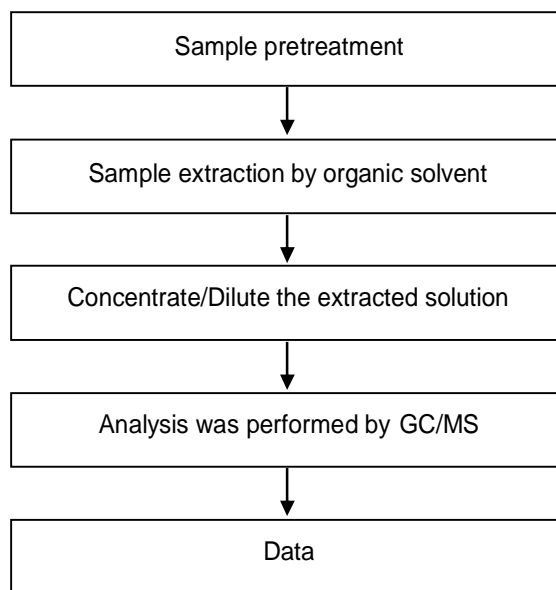
Page: 5 of 8

TANAKA ELECTRONICS (M) SDN BHD

PLOT 11, PHASE IV, BAYAN LEPAS FIZ, 11900 PENANG, MALAYSIA.

## Analytical flow chart

\*Apply to: PCBs, PCNs, PCTs, Mirex

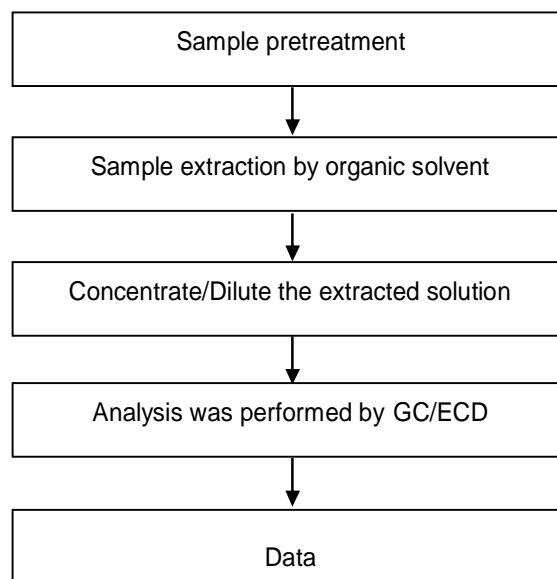


This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com.tw/terms-of-service> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com.tw/terms-of-service>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

TANAKA ELECTRONICS (M) SDN BHD

PLOT 11, PHASE IV, BAYAN LEPAS FIZ, 11900 PENANG, MALAYSIA.

### Analytical flow chart - Chlorinated Paraffins



# Test Report

No. : KA/2020/81393

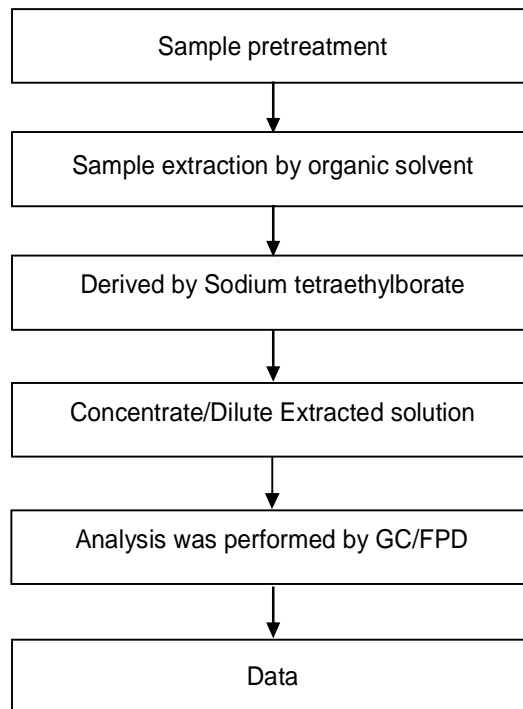
Date : 2020/09/09

Page: 7 of 8

TANAKA ELECTRONICS (M) SDN BHD

PLOT 11, PHASE IV, BAYAN LEPAS FIZ, 11900 PENANG, MALAYSIA.

## Analytical flow chart of Organic-Tin



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com.tw/terms-of-service> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com.tw/terms-of-service>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

## Test Report

No. : KA/2020/81393

Date : 2020/09/09

Page: 8 of 8

TANAKA ELECTRONICS (M) SDN BHD

PLOT 11, PHASE IV, BAYAN LEPAS FIZ, 11900 PENANG, MALAYSIA.

\* The tested sample / part is marked by an arrow if it's shown on the photo. \*

### KA/2020/81393



\*\* End of Report \*\*

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com.tw/terms-of-service> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <https://www.sgs.com.tw/terms-of-service>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.