

Test Report

No. CRSPN/00552-1/16

Date : 18/03/2016

Page: 1 of 5

CRS Ref. CRSPN/16/0116/Dynacraft

DYNACRAFT INDUSTRIES SDN. BHD.
255-A, BLOCK D, PHASE II, BAYAN LEPAS INDUSTRIAL ZONE,
11900 PENANG, MALAYSIA.

The following merchandise was (were) submitted and identified by the client as:

Sample Description : Advanced Micro / RT PPF NiPdAuAg Lead frame using Copper Blank C7025
STK # : EN103825SBXA
WO # : R1022671
Manufacturing Date : 10/12/2015
Country of Origin : Malaysia
Sample Receiving Date : 14/03/2016
Testing Period : 14/03/2016 to 18/03/2016

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).
Analyst : Ong Seng Wee

SGS (MALAYSIA) SDN. BHD.



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Test Report

No. CRSPN/00552-1/16

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Page: 2 of 5

CRS Ref. CRSPN/16/0116/Dynacraft

Test results:

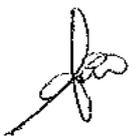
Test Part Description :

Sample Description : As per page 1 & 4

RoHS Directive 2011/65/EU Annex II

Test Item(s):	Unit	Test Method	Results	MDL	Limit
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5:2013 (Determination of Cd by ICP-OES)	N.D.	2	100
Lead (Pb)	mg/kg	With reference to IEC 62321-5:2013 (Determination of Pb by ICP-OES)	N.D.	2	1000
Mercury (Hg)	mg/kg	With reference to IEC 62321-4:2013 (Determination of Hg by ICP-OES)	N.D.	2	1000
Hexavalent Chromium (CrVI) #	µg/cm ²	With reference to IEC 62321-7-1:2015 (Determination of CrVI by UV-VIS)	N.D.	0.10	-
Sum of PBBs	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	N.D.	-	1000
Monobromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	N.D.	5	-
Dibromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	N.D.	5	-
Tribromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	N.D.	5	-
Tetrabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	N.D.	5	-
Pentabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	N.D.	5	-
Hexabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	N.D.	5	-
Heptabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	N.D.	5	-
Octabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	N.D.	5	-
Nonabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	N.D.	5	-
Decabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	N.D.	5	-

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No. CRSPN/00552-1/16

Date : 18/03/2016

Page: 3 of 5

CRS Ref. CRSPN/16/0116/Dynacraft

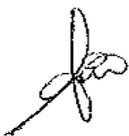
Sum of PBDEs	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	N.D.	-	1000
Monobromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	N.D.	5	-
Dibromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	N.D.	5	-
Tribromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	N.D.	5	-
Tetrabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	N.D.	5	-
Pentabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	N.D.	5	-
Hexabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	N.D.	5	-
Heptabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	N.D.	5	-
Octabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	N.D.	5	-
Nonabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	N.D.	5	-
Decabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	N.D.	5	-

Note :

- (a) mg/kg = ppm ; 0.1wt% = 1000ppm
- (b) n.d.= not detected
- (c) MDL = Method Detection Limit
- (d) # =
 - a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 $\mu\text{g}/\text{cm}^2$. 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 $\mu\text{g}/\text{cm}^2$). The coating is considered a non-CrVI based coating
 - c. The result between 0.10 $\mu\text{g}/\text{cm}^2$ and 0.13 $\mu\text{g}/\text{cm}^2$ 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 represent status of the sample at the time of testing.
- (e) - = not regulated

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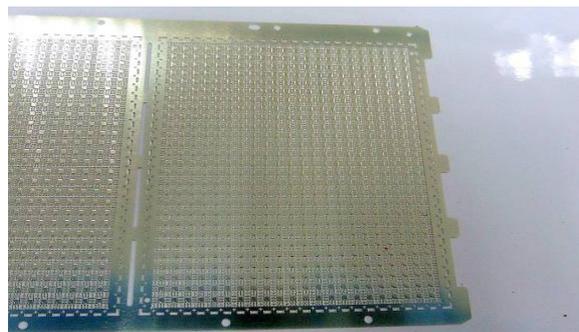
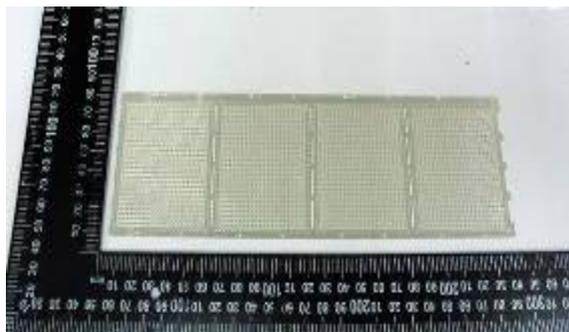
Date : 18/03/2016

Page: 4 of 5

CRS Ref. CRSPN/16/0116/Dynacraft

Test Part Description :

Sample Description : Advanced Micro / RT PPF NiPdAuAg Lead frame using Copper Blank C7025
STK # : EN103825SBXA
WO # : R1022671
Manufacturing Date : 10/12/2015
Country of Origin : Malaysia

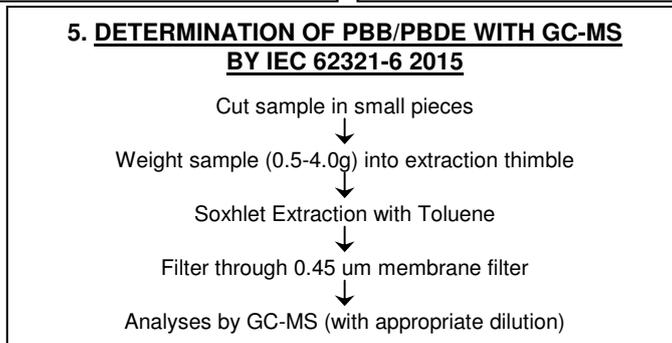
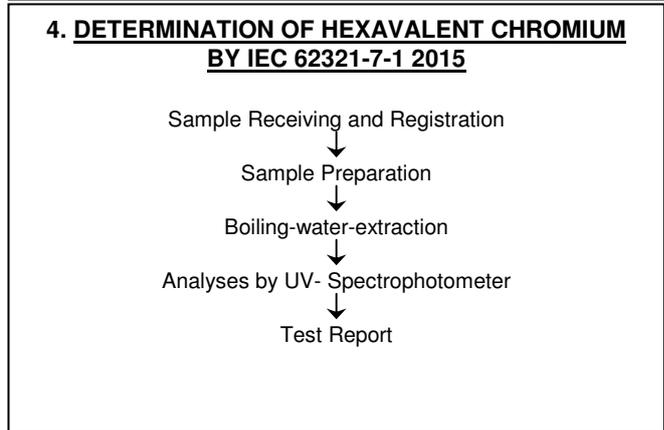
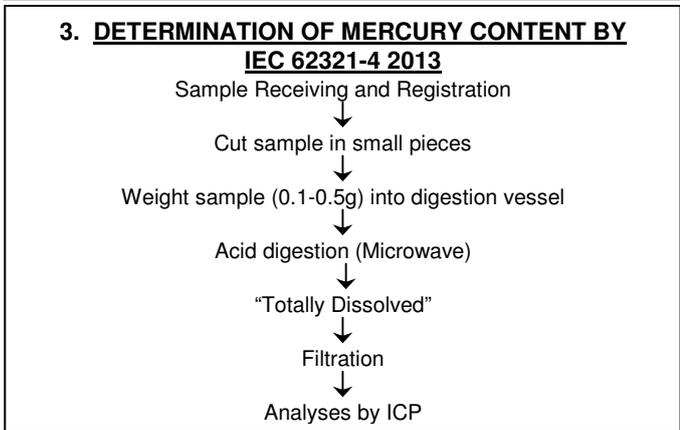
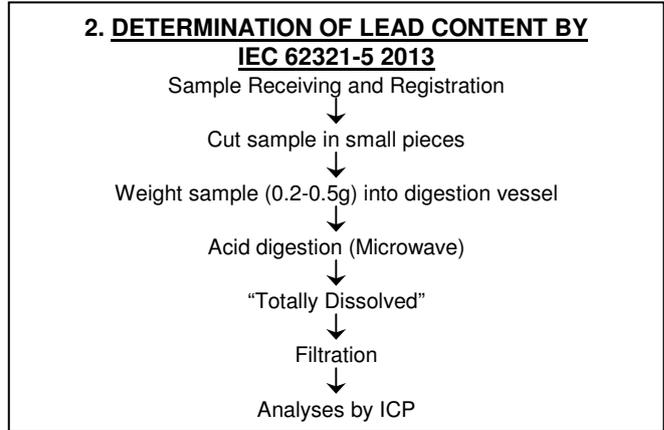
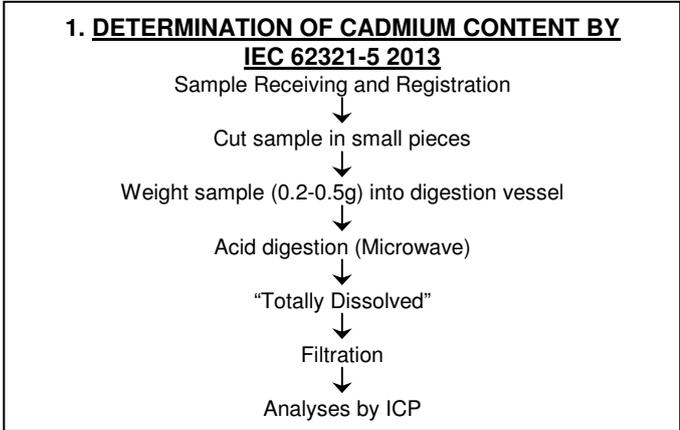


SGS authenticate the photo on the original report only

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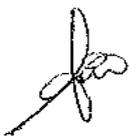
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**** End of Report ****

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