Quantitative Analysis Report

* We report the parts, materials and ingredients consisting of this component as follows.

* Please refer to the attached document No. listed below for the analysis data of PBB and PBDE content in plastics and the RoHS 4 materials

Date of Issure: Jul/22/2011

TDK-EPC Corporation

Magnetics B.Grp

Wire Wound EMC BU

Approved by: Toshihiro Kuroshima

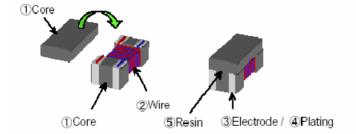
Prepared by : Kaori Yamada

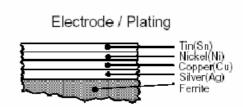
Item: ACM2012-***-2P-T002

		1002	1								
No.	Portion	Material name			Mea	asureme	ents (ppm	1)			Analysis
			Data item	Cd	Pb	Hg	Cr 6+	T-Cr	PBB	PBDE	data No.
1	Core	Ferrite	Data	<2	<5	<5	<1	-	-	-	Attachment 1
			Method	ICP	ICP	ICP	UV-VIS	-	-	-	
2	Wire	Cu	Data	<2	<2	<2	-	<2	-	-	Attachment 2
		Heat-resistant PUR	Data	<2	<2	<2	<2	-	<5	<5	
			Method	ICP	ICP	ICP	UV-VIS	ICP	GC/MS	GC/MS	
3	Electrode	Ag paste	Data	<2	<2	<2	<2	-	-	-	Attachment 3
			Method	ICP	ICP	ICP	UV-VIS	-	-	-	
4	Plating	Cu	Data	<2	<2	<2	<2	-	-	-	Attachment 4
		Ni	Data	<2	46	<2	<2	-	-	-	
		Sn	Data	<2	10	<2	<2	-	-	-	
			Method	ICP	ICP	ICP	UV-VIS	-	-	-	
5	Resin	Ероху	Data	<2	<2	<2	<2	-	<5	<5	Attachment 5
			Method	ICP	ICP	ICP	UV-VIS	-	GC/MS	GC/MS	

^{*} The display of "<xx" of measurements indicates less than fixed quantity lower bound value.

[Product structure]





^{*} We have not changed the materials used in this product since the acquisition of the analysis data. Therefore, we guarantee the information in this report to be up to date.

株式会社産業分析センター

THE INDUSTRIAL ANALYSIS SERVICE LTD.

TEL:+81-48-924-7151

FAX:+81-48-928-3587

e-mail ias@sangyobunseki.co.jp

405 Yatsuka Souka Saitama Japan 340-0023

TEST REPORT

Report No. 11221302 Date of issue: 17 May 2011

To;

Material / Manufacturer name are confidential

Date of receipt of sample: 9 May 2011 Sampling classification: Reception Name of sample: CERAMIC NZ

The following is the report on the requested test of the sample.

Object of test	Unit	Test result	Test method
Cd		Less than 2.0	IEC62321(2008)
	ppm		ICP-OES
D)		Less than 5.0	IEC62321(2008)
Pb	ppm		ICP-OES
Cr(VI)	ppm	Less than 1.0	IEC62321(2008) ANNEX B
Cr(vi)			uv-vis
YJ	ppm	Less than 5.0	IEC62321(2008)
Hg			ICP-OES

THE INDUSTRIAL ANALYSIS SERVICE LAD.

1/2

Report No. 11221302

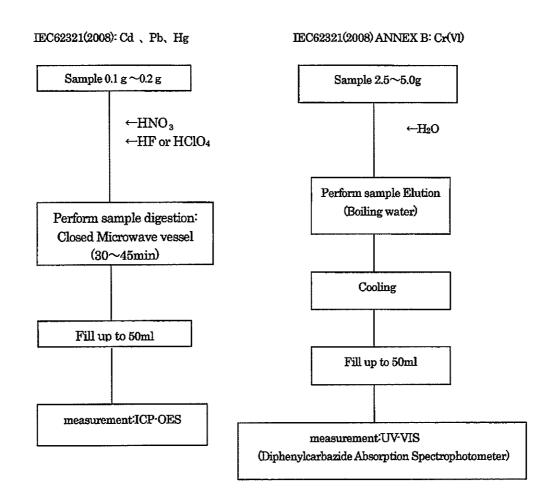
measurement days: 9 May 2011 ~ 17 May 2011

operator: Yumi Suzuki

minimum:Cd 2.0ppm Pb 5.0ppm

Cr(VI) 1.0ppm Hg 5.0ppm

note: The sample was completely digested



ICP-OES: Rigaku CIROS CCD

UV-VIS: HITACHI High-Technologies U-2010



No.: CE/2011/37281 Date: 2011/04/29

Page: 1 of 5

.....

Material / Manufacturer name are confidential

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

Sample Description

: CU铜

Sample Receiving Date

: 2011/03/29

Testing Period

: 2011/03/29 TO 2011/04/07

Test Result(s)

: Please refer to next page(s).

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No.: CE/2011/37281 Date: 2011/04/29 Page: 2 of 5

MINISTRACTOR STREET

Material / Manufacturer name are confidential

Test Result(s)

PART NAME No.1

: COPPER COLORED METAL WIRE

Toot Itom (a)	Unit Method		MDL	Result
Test Item (s):	Unit	Method	MDL	No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321; 2008 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321; 2008 and performed by ICP-AES.	2	n.d.
Chromium (Cr)	mg/kg	With reference to US EPA Method 3050B for Chromium Content. Analysis was performed by ICP-AES.	2	n.d.

Note:

mg/kg = ppm : 0.1wt% = 1000ppm

2. n.d. = Not Detected

3. MDL = Method Detection Limit

4. Testing Equipment / Model:

Test Item	Facilities	Instrument maker	Instrument model
Cr	ICP-AES	Varian	Vista Pro
Cd	ICP-AES	Varian	Vista Pro
Pb	ICP-AES	Varian	Vista Pro
Hg	ICP-AES	Varian	Vista Pro

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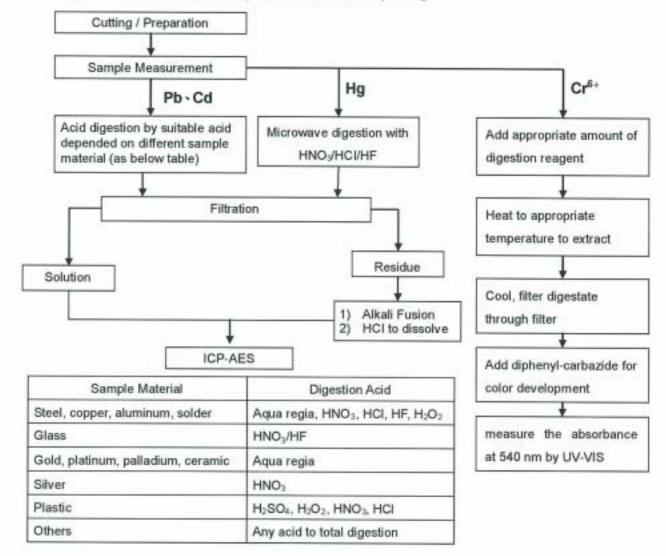


No.: CE/2011/37281 Date: 2011/04/29 Page: 3 of 5

MINISTRAL PROPERTY.

Material / Manufacturer name are confidential

- These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



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No.: CE/2011/37281 Date: 2011/04/29 Page: 4 of 5

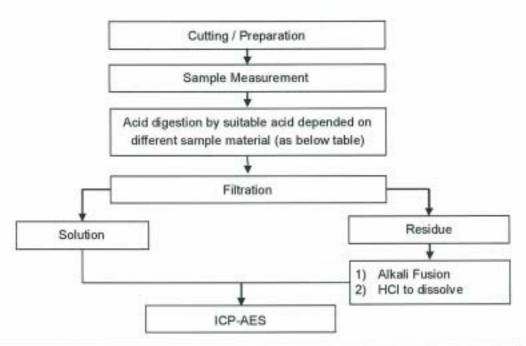
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Material / Manufacturer name are confidential

[For Chromium]

- These samples were dissolved totally by pre-conditioning method according to below flow chart.
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang

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



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

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No.: CE/2011/37281 Date: 2011/04/29 Page: 5 of 5



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CE/2011/37281



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No.: CE/2011/37470 Date: 2011/04/08 Page: 1 of 7

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Material / Manufacturer name are confidential

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

Sample Description

Sample Receiving Date : 2011/03/29

Testing Period : 2011/03/29 TO 2011/04/07

: HG

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

Chenyu Kung / Signed for and on behi SGS TAIWAN LTD. Chemical Laboratory - Taipei

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No.: CE/2011/37470 Date: 2011/04/08 Page: 2 of 7

Material / Manufacturer name are confidential

Test Result(s)

PART NAME No.1

: DK. BROWN LUMP

The second second second			· · · ·	Result
Test Item (s):	Unit	Method	MDL	No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
Halogen-Chlorine (CI) (CAS No.: 22537-15-1)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Sum of PBBs			+	n.d.
Monobromobiphenyl		1	5	n.d.
Dibromobiphenyl	1	1	5	n.d.
Tribromobiphenyl	1	1 [5	n.d.
Tetrabromobiphenyl		With reference to IEC 62321: 2008 and	5	n.d.
Pentabromobiphenyl	mg/kg	performed by GC/MS.	5	n.d.
Hexabromobiphenyl	100000000000000000000000000000000000000	performed by GO/MS.	5	n.d.
Heptabromobiphenyl	1	1 [5	n.d.
Octabromobiphenyl	1		5	n.d.
Nonabromobiphenyl		1	5	n.d.
Decabromobiphenyl			5	n.d.

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No.: CE/2011/37470 Date: 2011/04/08 Page: 3 of 7

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Material / Manufacturer name are confidential

Test Item (s):	Unit	Method	MDL - 5 5 5 5 5 5 5 5 5 5	Result
rest item (s).	Onit	metriod	MDL	No.1
Sum of PBDEs				n.d.
Monobromodiphenyl ether	1	1	5	n.d.
Dibromodiphenyl ether		With reference to IEC 62321; 2008 and performed by GC/MS.	5	n.d.
Tribromodiphenyl ether			5	n.d.
Tetrabromodiphenyl ether			5	n.d.
Pentabromodiphenyl ether	mg/kg		5	n.d.
Hexabromodiphenyl ether	D. Callingue, 2009 8		5	n.d.
Heptabromodiphenyl ether		1	5	n.d.
Octabromodiphenyl ether		I F	5	n.d.
Nonabromodiphenyl ether			5	n.d.
Decabromodiphenyl ether			5	n.d.

Note:

- mg/kg = ppm : 0.1wt% = 1000ppm
- 2. n.d. = Not Detected
- 3. MDL = Method Detection Limit
- 4. " " = Not Regulated
- Testing Equipment / Model:

Test Item	Facilities	Instrument maker	Instrument model
Cr(VI)	UV-VIS	Varian	Cary 50
Cd	ICP-AES	Varian	Vista Pro
Pb	ICP-AES	Varian	Vista Pro
Hg	ICP-AES	Varian	Vista Pro
PBBs	GC/MS	Agilent	6890/5975
PBDEs	GC/MS	Agilent	6890/5975
Halogen	IC	DIONEX	ICS-1500

6. This report supersedes the previous document bearing the test report number CE/2011/37470 which was issued on 2011/04/07.

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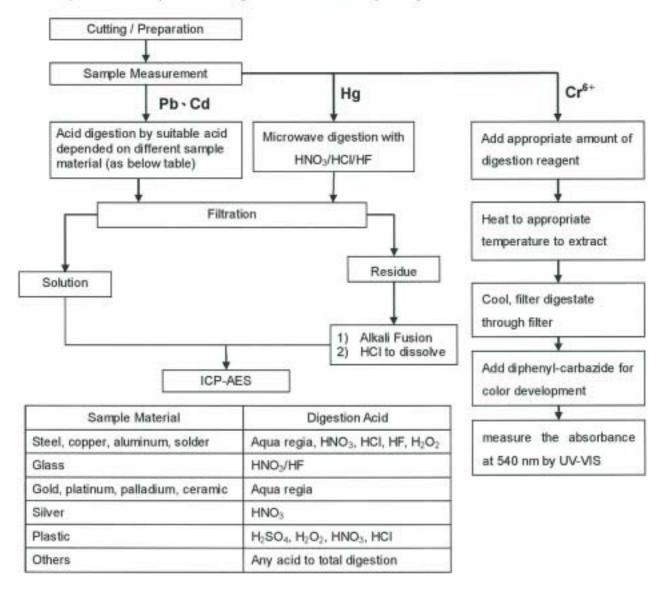


No.: CE/2011/37470 Date: 2011/04/08 Page: 4 of 7

RESIDENCE DE L'ANNERS

Material / Manufacturer name are confidential

- These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁵⁺ test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



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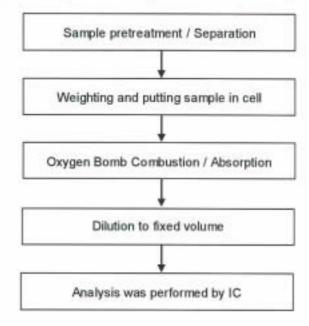
No.: CE/2011/37470 Date: 2011/04/08 Page: 5 of 7

THE OWNER OF THE PARTY

Material / Manufacturer name are confidential

Analytical flow chart of halogen content

- 1) Name of the person who made measurement: Rita Chen
- 2) Name of the person in charge of measurement: Troy Chang



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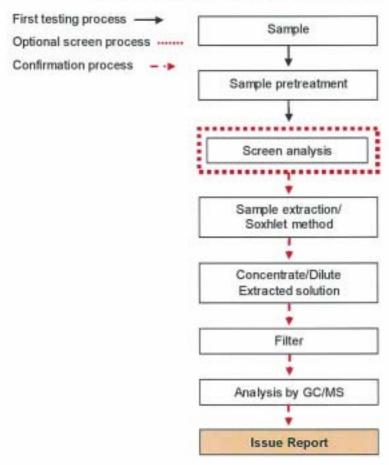
No.: CE/2011/37470 Date: 2011/04/08 Page: 6 of 7

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Material / Manufacturer name are confidential

PBB/PBDE analytical FLOW CHART

- 1) Name of the person who made measurement: Roman Wong
- 2) Name of the person in charge of measurement: Troy Chang



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No.: CE/2011/37470 Date: 2011/04/08 Page: 7 of 7



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CE/2011/37470



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No.: CE/2010/C0022 Date: 2010/12/07

Page: 1 of 5

MINISTRA DE LA COMPANIONE DEL COMPANIONE DE LA COMPANIONE

Material / Manufacturer name are confidential

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

Sample Description

DP

Sample Receiving Date

2010/12/1

Testing Period

2010/12/1 TO 2010/12/07

Test Requested

In accordance with the RoHS Directive 2002/95/EC, and its amendment

Test Method

With reference to IEC 62321: 2008

Procedures for the Determination of Levels of Regulated Substances in

Electrotechnical Products.

Determination of Cadmium by ICP-AES.

Determination of Lead by ICP-AES.

Determination of Mercury by ICP-AES.

(4) Determination of Hexavalent Chromium by UV/Vis Spectrometry.

Determination of PBB and PBDE by GC/MS.

Test Result(s)

Please refer to next page(s).



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No.: CE/2010/C0022 Date: 2010/12/07

Page: 2 of 5

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Material / Manufacturer name are confidential

Test results by chemical method (Unit: mg/kg)

Toot Itam (a):	Method	Result	MDL	
Test Item (s):	(Refer to)	No.1	MDL	
Cadmium (Cd)	(1)	n.d.	2	
Lead (Pb)	(2)	n.d.	2	
Mercury (Hg)	(3)	n.d.	2	
Hexavalent Chromium Cr(VI) by alkaline extraction	(4)	n.d.	2	
Sum of PBBs		n.d.	-	
Monobromobiphenyl	1 1	n.d.	5	
Dibromobiphenyl	1 1	n.d.	5	
Tribromobiphenyl	1 1	n.d.	5	
Tetrabromobiphenyl	1 [n.d.	5	
Pentabromobiphenyl	1 [n.d.	5	
Hexabromobiphenyl	1 [n.d.	5	
Heptabromobiphenyl] [n.d.	5	
Octabromobiphenyl	1 [n.d.	5	
Nonabromobiphenyl		n.d.	5	
Decabromobiphenyl	1 (5)	n.d.	5	
Sum of PBDEs	(5)	n.d.	7-	
Monobromodiphenyl ether	1 [n.d.	5	
Dibromodiphenyl ether	1 [n.d.	5	
Tribromodiphenyl ether	1 [n.d.	5	
Tetrabromodiphenyl ether	1 1	n.d.	5	
Pentabromodiphenyl ether	1 1	n.d.	5	
Hexabromodiphenyl ether] [n.d.	5	
Heptabromodiphenyl ether	1 [n.d.	5	
Octabromodiphenyl ether	1 1	n.d.	5	
Nonabromodiphenyl ether] [n.d.	5	
Decabromodiphenyl ether	1 1	n.d.	5	

TEST PART DESCRIPTION:

No.1: DARK GRAY PASTE

Note:

1, mg/kg = ppm; 0.1wt% = 1000ppm

2. n.d. = Not Detected

3. MDL = Method Detection Limit

4. "-" = Not Regulated

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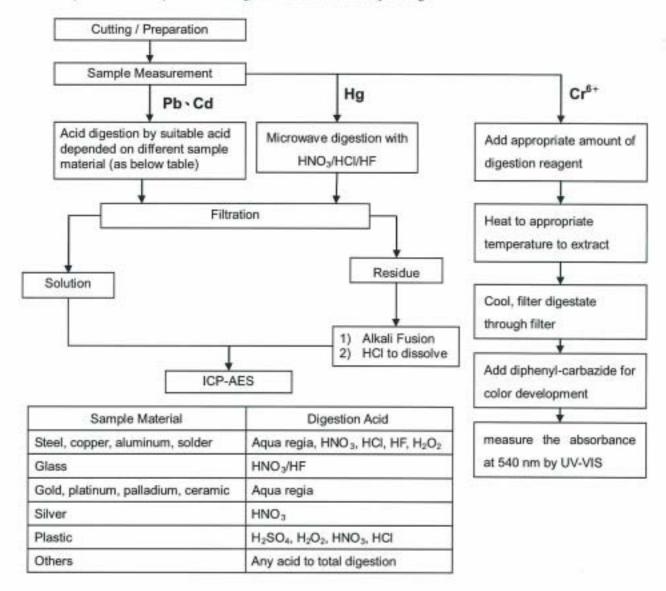


Test Report No.: CE/2010/C0022 Date: 2010/12/07 Page: 3 of 5

THE RESIDENCE OF THE PARTY OF

Material / Manufacturer name are confidential

- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr6* test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- Name of the person in charge of measurement: Troy Chang



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Company, 指生另有证明于,此能性能导通性的证明性的有效。本理由于证本公司管理的可,不可能问题等。
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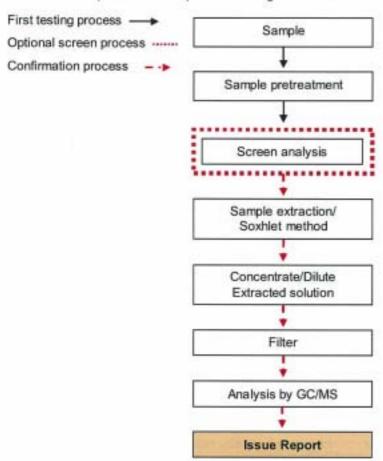
No.: CE/2010/C0022 Date: 2010/12/07

Page: 4 of 5

Material / Manufacturer name are confidential

PBB/PBDE analytical FLOW CHART

- 1) Name of the person who made measurement: Roman Wong
- 2) Name of the person in charge of measurement: Troy Chang



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No.: CE/2010/C0022 Date: 2010/12/07

Page:5 of 5

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Material / Manufacturer name are confidential



** End of Report **

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REPORT NO. JP/2010/120384

DATE: December 27, 2010

PAGE 1 OF 4

TDK UGO CORPORATION

16-2 TAMACHI IWAKIKAMEDAKAMEDA-MACHI YURIHONJO-SHI AKITA JAPAN

THE FOLLOWING SAMPLE(S) WAS/WERE SUBMITTED AND IDENTIFIED BY/ON BEHALF OF THE CLIENT AS: 以下のサンプルは顧客により提供され、顧客に代わって確認を行いました:

SAMPLE DESCRIPTION : Electro plating/Copper Plate(No.10 Line)

CLIENT REF.NO

SAMPLE RECEIVED

2010/12/13

TESTING DATE

2010/12/14 TO 2010/12/24

TEST REQUESTED

分析項目

SELECTED TEST(S) AS REQUESTED BY CLIENT.

分析項目は顧客の要求によります。

TEST METHOD(S) 分析方法

: WITH REFERENCE TO IEC62321 EDITION 1.0 2008-12 FOR RoHS 6 SUBSTANCES.

Cd, Pb: SECTION 8, 9, 10

Hg: SECTION 7 Cr(VI): ANNEX B, C PBB/PBDE: ANNEX A

OTHER CHEMICALS WERE TESTED BY EACH APPROPRIATE METHOD. RoHS6物質の分析はIEC62321第1.0版(2008年12月)を参照しました。

Cd, Pb: 第8, 9, 10章

Hg: 第7章

Cr(VI): 付属文書B, C PBB/PBDE: 付属文書A

それ以外の化学物質についてはそれぞれに最適な方法で分析を行いました。

TEST RESULT(S)

分析結果

PLEASE REFER TO THE NEXT PAGE(S).

以下のページをご参照願います。

Kuniyuki Goto / Laboratory Manage SGS Japan Inc., Green Testing Center

JP 289308

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REPORT NO. JP/2010/120384

DATE: December 27, 2010

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TDK UGO CORPORATION

16-2 TAMACHI IWAKIKAMEDAKAMEDA-MACHI YURIHONJO-SHI AKITA JAPAN

TEST RESULT(S)

ITEM(S)	UNIT	RESULT	METHOD	INST./PLACE	MDL
CADMIUM(Cd)	mg/kg	N.D.	Wet decomposition(HNO ₃)	ICP-OES	2
LEAD(Pb)	mg/kg	N.D.	Wet decomposition(HNO ₃)	ICP-OES	2
MERCURY(Hg)	mg/kg	N.D.	Microwave/HPV/digestion(HNO ₃ +HF) /Thermal decomposition	ICP-OES	2
CHROMIUM VI(Cr(VI))	μg/cm²	N.D.	Boiling water extraction	UV/V i S	0.01

NOTES: mg/kg = ppm, N.D. = Not Detected, INST. = INSTRUMENT, MDL = Method Detection Limit

REMARK: Cr(VI) has been tested with regard to the surface area of 12cm.

Reference: The MDL of Cr(VI) can be converted into 2 (ppm) with regard to the sample weight.

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REPORT NO. JP/2010/120384

DATE: December 27, 2010

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TDK UGO CORPORATION

16-2 TAMACHI IWAKIKAMEDAKAMEDA-MACHI YURIHONJO-SHI AKITA JAPAN

分析フローチャート MEASUREMENT FLOW CHART

1)酸分解前処理において試料を完全分解しています。

The sample was dissolved/ decomposed totally by acid pre-conditioning method according to below flow chart.

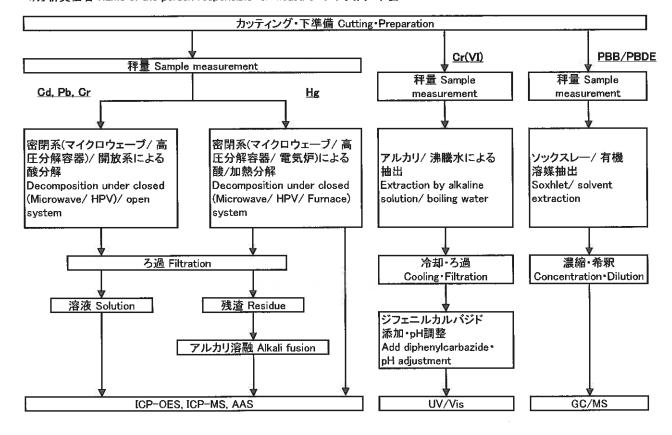
2)Cd, Pb, Hg, Cr, Cr(VI)

分析担当者 Name of the person in charge of measurement: 丸山 文隆 Fumitaka Maruyama

3)PBB/PBDE

分析担当者 Name of the person in charge of measurement: 高橋 英樹 Hideki Takahashi

4)分析責任者 Name of the person responsible for measurement: 大内 幸弘 Yukihiro Ouchi



JP 289310

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REPORT NO. JP/2010/120384

DATE: December 27, 2010

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TDK UGO CORPORATION

16-2 TAMACHI IWAKIKAMEDAKAMEDA-MACHI YURIHONJO-SHI AKITA JAPAN

SAMPLE IMAGE



<END>

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REPORT NO. JP/2010/120385

DATE: December 27, 2010

PAGE 1 OF 4

TDK UGO CORPORATION

16-2 TAMACHI IWAKIKAMEDAKAMEDA-MACHI YURIHONJO-SHI AKITA JAPAN

THE FOLLOWING SAMPLE(S) WAS/WERE SUBMITTED AND IDENTIFIED BY/ON BEHALF OF THE CLIENT AS: 以下のサンプルは顧客により提供され、顧客に代わって確認を行いました:

SAMPLE DESCRIPTION: Electro plating/Nickel Plate(No.10 Line)

CLIENT REF.NO

SAMPLE RECEIVED

2010/12/13

TESTING DATE

2010/12/14 TO 2010/12/24

TEST REQUESTED

分析項目

SELECTED TEST(S) AS REQUESTED BY CLIENT.

分析項目は顧客の要求によります。

TEST METHOD(S) 分析方法

: WITH REFERENCE TO IEC62321 EDITION 1.0 2008-12 FOR RoHS 6 SUBSTANCES.

Cd. Pb: SECTION 8, 9, 10

Hg: SECTION 7 Cr(VI): ANNEX B, C PBB/PBDE: ANNEX A

OTHER CHEMICALS WERE TESTED BY EACH APPROPRIATE METHOD. RoHS6物質の分析はIEC62321第1.0版(2008年12月)を参照しました。

Cd, Pb: 第8, 9, 10章

Hg: 第7章

Cr(VI): 付属文書B, C PBB/PBDE: 付属文書A

それ以外の化学物質についてはそれぞれに最適な方法で分析を行いました。

TEST RESULT(S)

分析結果

PLEASE REFER TO THE NEXT PAGE(S).

以下のページをご参照願います。

Kuniyuki Goto / Laboratory Wanager SGS Japan Inc., Green Testing Center

JP 289312

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REPORT NO. JP/2010/120385

DATE: December 27, 2010

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TDK UGO CORPORATION

16-2 TAMACHI IWAKIKAMEDAKAMEDA-MACHI YURIHONJO-SHI AKITA JAPAN

TEST RESULT(S)

ITEM(S)	UNIT	RESULT	METHOD	INST./PLACE	MDL
CADMIUM(Cd)	mg/kg	N.D.	Wet decomposition(HNO ₃)	ICP-OES	2
LEAD(Pb)	mg/kg	46	Wet decomposition(HNO ₃)	ICP-OES	2
MERCURY(Hg)	mg/kg	N.D.	Microwave/HPV/digestion(HNO ₃ +HF) /Thermal decomposition	ICP-OES	2
CHROMIUM VI(Cr(VI))	μ g/cm 2	N.D.	Boiling water extraction	UV/VIS	0.01

NOTES: mg/kg = ppm, N.D. = Not Detected, INST. = INSTRUMENT, MDL = Method Detection Limit

REMARK: Cr(VI) has been tested with regard to the surface area of 12cm.

Reference: The MDL of Cr(VI) can be converted into 2 (ppm) with regard to the sample weight.

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REPORT NO. JP/2010/120385 DATE: December 27, 2010

PAGE 3 OF 4

TDK UGO CORPORATION

16-2 TAMACHI IWAKIKAMEDAKAMEDA-MACHI YURIHONJO-SHI AKITA JAPAN

分析フローチャート MEASUREMENT FLOW CHART

1)酸分解前処理において試料を完全分解しています。

The sample was dissolved/ decomposed totally by acid pre-conditioning method according to below flow chart.

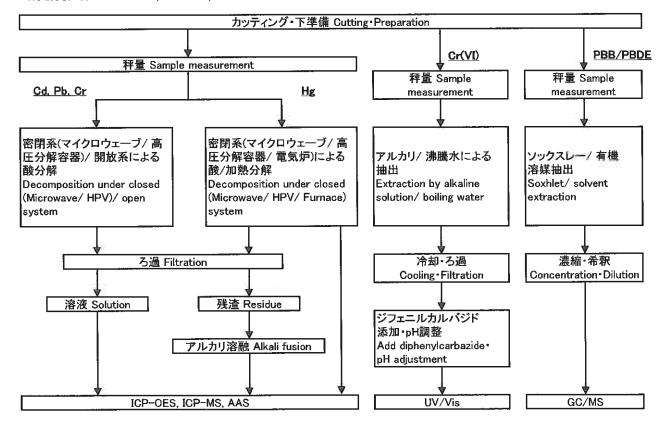
2)Cd, Pb, Hg, Cr, Cr(VI)

分析担当者 Name of the person in charge of measurement: 丸山 文隆 Fumitaka Maruyama

3)PBB/PBDE

分析担当者 Name of the person in charge of measurement: 高橋 英樹 Hideki Takahashi

4)分析責任者 Name of the person responsible for measurement: 大内 幸弘 Yukihiro Ouchi



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REPORT NO. JP/2010/120385

DATE: December 27, 2010

PAGE 4 OF 4

TDK UGO CORPORATION

16-2 TAMACHI IWAKIKAMEDAKAMEDA-MACHI YURIHONJO-SHI AKITA JAPAN

SAMPLE IMAGE



<END>



REPORT NO. JP/2010/120386 DATE: December 27, 2010

PAGE 1 OF 4

TDK UGO CORPORATION

16-2 TAMACHI IWAKIKAMEDAKAMEDA-MACHI YURIHONJO-SHI AKITA JAPAN

THE FOLLOWING SAMPLE(S) WAS/WERE SUBMITTED AND IDENTIFIED BY/ON BEHALF OF THE CLIENT AS: 以下のサンプルは顧客により提供され、顧客に代わって確認を行いました:

SAMPLE DESCRIPTION : Electro plating/Tin Plate(No.10 Line)

CLIENT REF.NO

:

SAMPLE RECEIVED

2010/12/13

TESTING DATE

2010/12/14 TO 2010/12/24

TEST REQUESTED

分析項目

SELECTED TEST(S) AS REQUESTED BY CLIENT.

分析項目は顧客の要求によります。

TEST METHOD(S) 分析方法

: WITH REFERENCE TO IEC62321 EDITION 1.0 2008-12 FOR RoHS 6 SUBSTANCES.

Cd, Pb: SECTION 8, 9, 10

Hg: SECTION 7 Cr(VI): ANNEX B, C PBB/PBDE: ANNEX A

OTHER CHEMICALS WERE TESTED BY EACH APPROPRIATE METHOD. RoHS6物質の分析はIEC62321第1.0版(2008年12月)を参照しました。

Cd, Pb: 第8, 9, 10章

Hg: 第7章

Cr(VI): 付属文書B, C PBB/PBDE: 付属文書A

それ以外の化学物質についてはそれぞれに最適な方法で分析を行いました。

TEST RESULT(S)

分析結果

PLEASE REFER TO THE NEXT PAGE(S).

以下のページをご参照願います。

Kuniyuki Goto / Laboratory SGS Japan Inc., Green Testing Center



REPORT NO. JP/2010/120386

DATE: December 27, 2010

PAGE 2 OF 4

TDK UGO CORPORATION

16-2 TAMACHI IWAKIKAMEDAKAMEDA-MACHI YURIHONJO-SHI AKITA JAPAN

TEST RESULT(S)

ITEM(S)	UNIT	RESULT	METHOD	INST./PLACE	MDL
11 EM(2)	CHI	RESOLI	WETHOD	INGT./TEACE	WIDE
CADMIUM(Cd)	mg/kg	N.D.	Wet decomposition(HNO ₃)	ICP-OES	2
LEAD(Pb)	mg/kg	10	Wet decomposition(HNO₃)	ICP-MS	2
MERCURY(Hg)	mg/kg	N.D.	Microwave/HPV/digestion(HNO ₃ +HF) /Thermal decomposition	ICP-OES	2
CHROMIUM VI(Cr(VI))	μg/cm²	N.D.	Boiling water extraction	UV/VIS	0.01

NOTES: mg/kg = ppm, N.D. = Not Detected, INST. = INSTRUMENT, MDL = Method Detection Limit

REMARK: Cr(VI) has been tested with regard to the surface area of 12cm.

Reference: The MDL of Cr(VI) can be converted into 2 (ppm) with regard to the sample weight.

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TDK UGO CORPORATION

16-2 TAMACHI IWAKIKAMEDAKAMEDA-MACHI YURIHONJO-SHI AKITA JAPAN

分析フローチャート MEASUREMENT FLOW CHART

1)酸分解前処理において試料を完全分解しています。

The sample was dissolved/ decomposed totally by acid pre-conditioning method according to below flow chart.

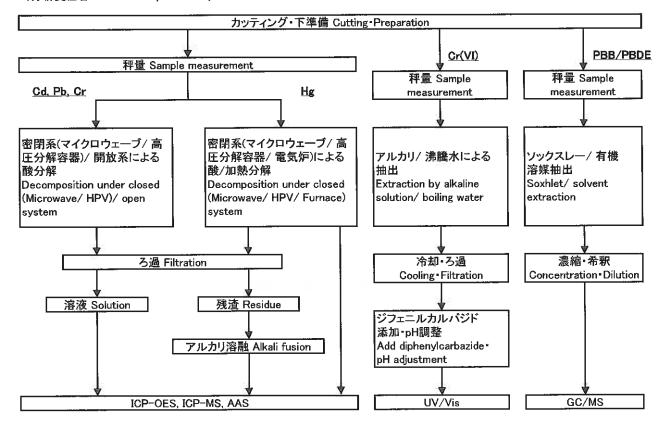
2)Cd, Pb, Hg, Cr, Cr(VI)

分析担当者 Name of the person in charge of measurement: 丸山 文隆 Fumitaka Maruyama

3)PBB/PBDE

分析担当者 Name of the person in charge of measurement: 高橋 英樹 Hideki Takahashi

4)分析責任者 Name of the person responsible for measurement: 大内 幸弘 Yukihiro Ouchi



JP 289318

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TDK UGO CORPORATION

16-2 TAMACHI IWAKIKAMEDAKAMEDA-MACHI YURIHONJO-SHI AKITA JAPAN

SAMPLE IMAGE



<END>

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3001100000000000000

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

Sample Description

Sample Receiving Date

Style/Item No.

: 2011/05/30

Testing Period

: 2011/05/30 TO 2011/06/03

Material / Manufacturer name are confidential

Test Result(s)

: Please refer to next page(s).



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Material / Manufacturer name are confidential

Test Result(s)

PART NAME No.1

: BLACK LUMP

Test Item (s):	Unit	Method	MDL	Result
		Method		No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Mercury (Hg)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
Sum of PBBs	mg/kg	With reference to IEC 62321: 2008 and performed by GC/MS.	+	n.d.
Monobromobiphenyl			5	n.d.
Dibromobiphenyl			5	n.d.
Tribromobiphenyl			5	n.d.
Tetrabromobiphenyl			5	n.d.
Pentabromobiphenyl			5	n.d.
Hexabromobiphenyl			5	n.d.
Heptabromobiphenyl			5	n.d.
Octabromobiphenyl			5	n.d.
Nonabromobiphenyl			5	n.d.
Decabromobiphenyl			5	n.d.
Sum of PBDEs			-	n.d.
Monobromodiphenyl ether			5	n.d.
Dibromodiphenyl ether			5	n.d.
Tribromodiphenyl ether			5	n.d.
Tetrabromodiphenyl ether			5	n.d.
Pentabromodiphenyl ether			5	n.d.
Hexabromodiphenyl ether			5	n.d.
Heptabromodiphenyl ether			5	n.d.
Octabromodiphenyl ether			5	n.d.
Nonabromodiphenyl ether			5	n.d.
Decabromodiphenyl ether			5	n.d.

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Material / Manufacturer name are confidential

Test Item (s):	Unit	Method	MDL	Result No.1
Halogen-Fluorine (F) (CAS No.: 14762-94-8)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
Halogen-Chlorine (CI) (CAS No.: 22537-15-1)			50	549
Halogen-Bromine (Br) (CAS No.: 10097-32-2)			50	n.d.
Halogen-lodine (I) (CAS No.: 14362-44-8)			50	n.d.

Note:

mg/kg = ppm : 0.1wt% = 1000ppm

2. n.d. = Not Detected

3. MDL = Method Detection Limit

4. " - " = Not Regulated

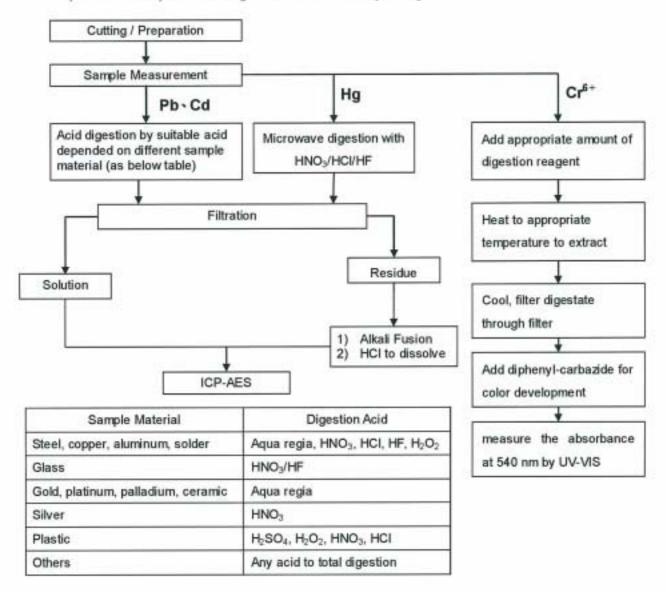


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Material / Manufacturer name are confidential

- These samples were dissolved totally by pre-conditioning method according to below flow chart.
 (Cr⁶⁺ test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



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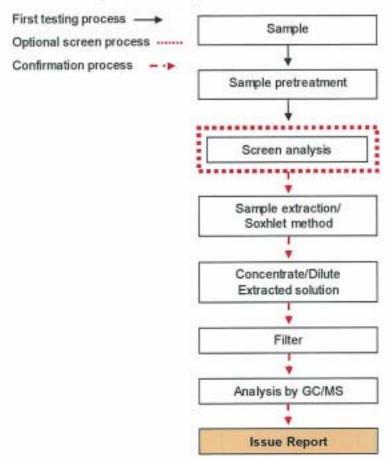


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Material / Manufacturer name are confidential

PBB/PBDE analytical FLOW CHART

- 1) Name of the person who made measurement: Roman Wong
- 2) Name of the person in charge of measurement: Troy Chang



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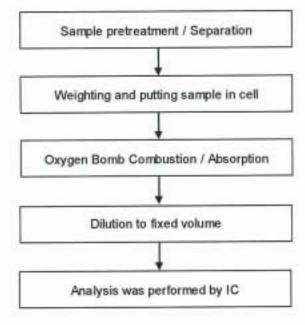
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Analytical flow chart of halogen content

- 1) Name of the person who made measurement: Rita Chen
- 2) Name of the person in charge of measurement: Troy Chang



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** End of Report **

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