

No.: KA/2015/40317 Date: 2015/04/13

MINMAX TECHNOLOGY CO.,LTD 18, SHIN-SIN ROAD, TAINAN 702, TAIWAN

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

: DC-DC CONVERTER Sample Description Style/Item No. : MSLU3XX SERIES

Sample Receiving Date : 2015/04/07

**Testing Period** : 2015/04/07 TO 2015/04/13

: MINMAX TECHNOLOGY CO.,LTD Sample Submitted By

As specified by client, to test Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs contents **Test Requested** 

in the submitted sample.

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

Ray Chang Ph.D. / Manag Signed for and on behalf

**SGS Taiwan Limited** 

Chemical Laboratory-Kaohsiung

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company,除非另有說明,此報告結果僅對測試之樣品負責。本職告未經本公司書面許可,不可部分複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. 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 the transaction documents. This document cannot be reproduced each to the law. appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. No. 61, Kai-Fa Road, Nanzih Export Processing Zone , Kaohsiung, Taiwan / 高雄市楠梓加工出口區開發路61號

台灣檢驗科技股份有限公司 t + 886 (07)301 2121 www.tw.sgs.com

Page: 1 of 6



No.: KA/2015/40317 Date: 2015/04/13

MINMAX TECHNOLOGY CO.,LTD 18, SHIN-SIN ROAD, TAINAN 702, TAIWAN

#### Test Result(s)

PART NAME No.1 : MIXED ALL PARTS:DC-DC CONVERTER

Test Item(s)	Unit	Method	MDL	Result No.1
Lead (Pb)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	30.0
Mercury (Hg)	mg/kg	With reference to IEC 62321-4: 2013 and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI)	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	mg/kg		5	n.d.
Dibromobiphenyl	mg/kg		5	n.d.
Tribromobiphenyl	mg/kg		5	n.d.
Tetrabromobiphenyl	mg/kg		5	n.d.
Pentabromobiphenyl	mg/kg		5	n.d.
Hexabromobiphenyl	mg/kg		5	n.d.
Heptabromobiphenyl	mg/kg		5	n.d.
Octabromobiphenyl	mg/kg		5	n.d.
Nonabromobiphenyl	mg/kg		5	n.d.
Decabromobiphenyl	mg/kg		5	n.d.
Sum of PBDEs	mg/kg		-	n.d.
Monobromodiphenyl ether	mg/kg		5	n.d.
Dibromodiphenyl ether	mg/kg		5	n.d.
Tribromodiphenyl ether	mg/kg		5	n.d.
Tetrabromodiphenyl ether	mg/kg		5	n.d.
Pentabromodiphenyl ether	mg/kg		5	n.d.
Hexabromodiphenyl ether	mg/kg		5	n.d.
Heptabromodiphenyl ether	mg/kg		5	n.d.
Octabromodiphenyl ether	mg/kg		5	n.d.
Nonabromodiphenyl ether	mg/kg		5	n.d.
Decabromodiphenyl ether	mg/kg		5	n.d.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company,除非另有說明,此報告結果僅對測試之樣品負責。本報告未經本公司書面許可,不可部分複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. 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 sulpayfull and offenders may be prosequent to the fullest extent of the law. appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd., No. 61, Kai-Fa Road, Nanzih Export Processing Zone , Kaohsiung, Taiwan / 高雄市楠梓加工出口區開發路61號

台灣檢驗科技股份有限公司 t + 886 (07)301 2121 www.tw.sgs.com

Page: 2 of 6



No.: KA/2015/40317 Date: 2015/04/13

MINMAX TECHNOLOGY CO.,LTD 18, SHIN-SIN ROAD, TAINAN 702, TAIWAN

#### Note:

- 1. mg/kg = ppm; 0.1wt% = 1000ppm
- 2. n.d. = Not Detected
- 3. MDL = Method Detection Limit
- 4. " " = Not Regulated
- 5. The sample(s) was/were analyzed on behalf of the applicant as mixing sample in one testing. The above result(s) was/were only given as the informality value.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company,除非另有說明,此報告結果僅對測試之樣品負責。本職告未經本公司書面許可,不可部分複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and

indication 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.

SGS Taiwan Ltd.

No. 61, Kai-Fa Road, Nanzih Export Processing Zone , Kaohsiung, Taiwan / 高雄市楠梓加工出口區開發路61號

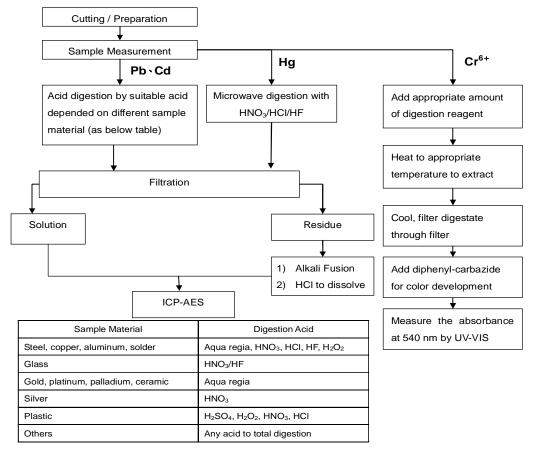
Page: 3 of 6



No.: KA/2015/40317 Date: 2015/04/13

MINMAX TECHNOLOGY CO.,LTD 18, SHIN-SIN ROAD, TAINAN 702, TAIWAN

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



Note\*\*: (1) For non-metallic material, add alkaline digestion reagent and heat to 90~95

(2) For metallic material, add pure water and heat to boiling.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company,除非另有說明,此報告結果僅對測試之樣品負責。本職告未經本公司書面許可,不可部分複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. 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 the transaction documents. This document cannot be reproduced each to the law. appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. No. 61, Kai-Fa Road, Nanzih Export Processing Zone , Kaohsiung, Taiwan /

t + 886 (07)301 2121

高雄市楠梓加工出口區開發路61號

Page: 4 of 6

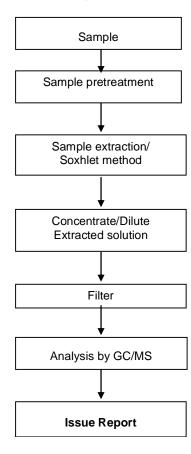


No.: KA/2015/40317 Date: 2015/04/13

MINMAX TECHNOLOGY CO.,LTD 18,SHIN-SIN ROAD,TAINAN 702,TAIWAN

### PBB/PBDE analytical FLOW CHART

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



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company,除非另有說明,此報告結果僅對測試之樣品負責。本職告未經本公司書面許可,不可部分複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and

This document is issued by the Company subject to its General Conditions or Service printed overlear, available on request or accessione at <a href="https://www.sgs.com/rerms">www.sgs.com/rerms</a> e-documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/rerms">www.sgs.com/rerms</a> e-document.htm</a>, Attention is dorawn 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.

\*\*SGS Taiwan Ltd.\*\*

\*\*No.18, Kai-Fa Read, Nanzih Export Processing Zone , Kaohsiung, Taiwan / 

\*\*SGS Taiwan Ltd.\*\*

\*\*No.18, Kai-Fa Read, Nanzih Export Processing Zone , Kaohsiung, Taiwan / 

\*\*SGS Taiwan Ltd.\*\*

\*\*No.18, Kai-Fa Read, Nanzih Export Processing Zone , Kaohsiung, Taiwan / 

\*\*SGS Taiwan Ltd.\*\*

\*\*No.18, Kai-Fa Read, Nanzih Export Processing Zone , Kaohsiung, Taiwan / 

\*\*SGS Taiwan Ltd.\*\*

\*\*No.18, Kai-Fa Read, Nanzih Export Processing Zone , Kaohsiung, Taiwan / 

\*\*SGS Taiwan Ltd.\*\*

\*\*No.18, Kai-Fa Read, Nanzih Export Processing Zone , Kaohsiung, Taiwan / 

\*\*SGS Taiwan Ltd.\*\*

\*\*No.18, Kai-Fa Read, Nanzih Export Processing Zone , Kaohsiung, Taiwan / 

\*\*SGS Taiwan Ltd.\*\*

\*\*No.18, Kai-Fa Read, Nanzih Export Processing Zone , Kaohsiung, Taiwan / 

\*\*No.18, Taiwan / 

\*

高雄市桶梓加工出口區開發路61號 www.tw.sgs.com

Page: 5 of 6

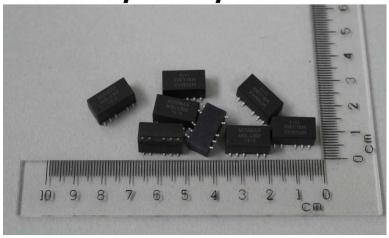


No.: KA/2015/40317 Date: 2015/04/13

MINMAX TECHNOLOGY CO.,LTD 18, SHIN-SIN ROAD, TAINAN 702, TAIWAN

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

KA/2015/40317



\*\* End of Report \*\*

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company,除非另有說明,此報告結果僅對測試之樣品負責。本職告未經本公司書面許可,不可部分複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and

intrisdiction 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.

SGS Taiwan Ltd.
No. 61, Kai Fa Road, Nanzih Export Processing Zone , Kaohsiung, Taiwan /

台灣檢驗科技股份有限公司

t + 886 (07)301 2121

高雄市楠梓加工出口區開發路61號

Page: 6 of 6