

Test Report

No. 10100310/07 (2)

Date: 13 September 2007

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CTS Corporation (Singapore) Electronic Components
14 Ang Mo Kio Industrial Park
Singapore 569503

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

Sample Description : Group 2 – Crystal, Ceramic SMT Type
403, 405, 406, 407, 425 and variants

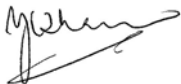
Sample Receiving Date : 05 September 2007
Testing Period : 06 September 2007 to 13 September 2007

Test Requested : In accordance with the RoHS Directive 2002/95/EC, and its amendment directives.

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

Conclusion : Based on the performed tests on submitted samples, the results are **compliant with** the limits of RoHS Directive 2002/95/EC and its subsequent amendments.

Signed for and on behalf of
SGS Testing & Control Services Singapore Pte Ltd



Y.C. Tham
Laboratory Manager

Test Location: 26 Ayer Rajah Crescent, #07-07, Singapore 139944

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Test Result(s):

Sample Description : Group 2 – Crystal, Ceramic SMT Type
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Test Item(s):	Unit	Method	Results	MDL	RoHS Limit
Cadmium(Cd)	mg/kg	With reference to US EPA Method 3052. Analysis was performed by ICP/AES.	n.d.	2	100
Lead (Pb)	mg/kg		n.d.	2	1000
Mercury (Hg)	mg/kg		n.d.	2	1000
Hexavalent Chromium (CrVI)	mg/kg	With reference to US EPA Method 3060A & 7196A. Analysis was performed by UV/Vis Spectrometry.	n.d.	2	1000
Sum of PBBs	mg/kg	With reference to EPA Method 3550C. Analysis was performed by GC/MS.	n.d.	-	1000
Monobromobiphenyl	mg/kg		n.d.	5	-
Dibromobiphenyl	mg/kg		n.d.	5	-
Tribromobiphenyl	mg/kg		n.d.	5	-
Tetrabromobiphenyl	mg/kg		n.d.	5	-
Hexabromobiphenyl	mg/kg		n.d.	5	-
Pentabromobiphenyl	mg/kg		n.d.	5	-
Heptabromobiphenyl	mg/kg		n.d.	5	-
Octabromobiphenyl	mg/kg		n.d.	5	-
Nonabromobiphenyl	mg/kg		n.d.	5	-
Decabromobiphenyl	mg/kg		n.d.	5	-
Sum of PBDE (Mono to Nona)(Note 4)	mg/kg		n.d.	-	1000
Monobromodiphenyl ether	mg/kg		n.d.	5	-
Dibromodiphenyl ether	mg/kg	n.d.	5	-	
Tribromodiphenyl ether	mg/kg	n.d.	5	-	
Tetrabromodiphenyl ether	mg/kg	n.d.	5	-	
Pentabromodiphenyl ether	mg/kg	n.d.	5	-	
Hexabromodiphenyl ether	mg/kg	n.d.	5	-	
Heptabromodiphenyl ether	mg/kg	n.d.	5	-	
Octabromodiphenyl ether	mg/kg	n.d.	5	-	
Nonabromodiphenyl ether	mg/kg	n.d.	5	-	
Decabromodiphenyl ether	mg/kg	n.d.	5	-	
Sum of PBDEs (Mono to Deca)	mg/kg	n.d.	-	-	

- Note:
- (1) mg/kg = ppm
 - (2) n.d.= Not Detected = Denoted less than MDL
 - (3) MDL = Method Detection Limit
 - (4) Sum of Mono to NonaBDE & according to 2005/717/EC DecaBDE is exempt.
 - (5) “-“ = Not regulated
 - (6) “ --- “ = Not Conducted

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Remarks: Sample received was totally dissolved by preconditioning & destroyed after the analysis.
Lab Analyst: Christine Choy, Irene Li & Jessica Chong.

Sample photo:



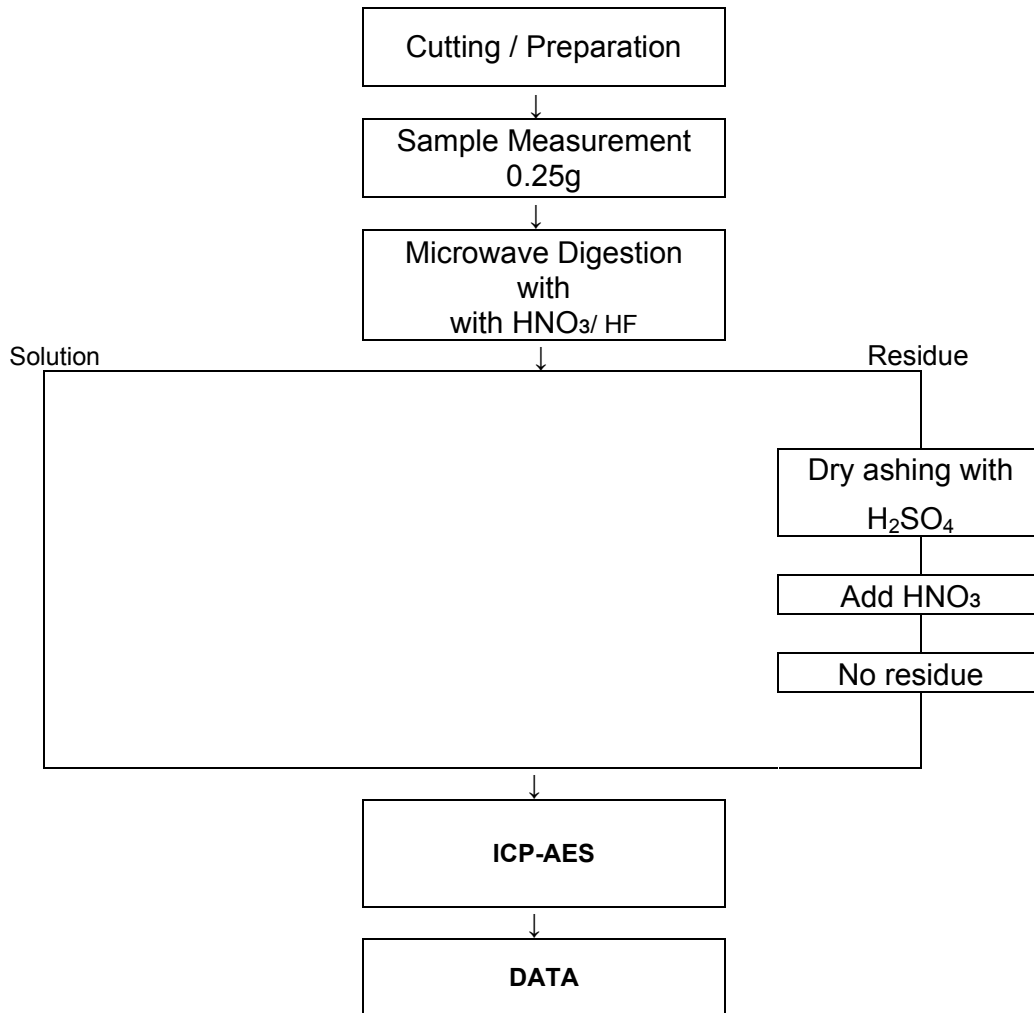
SGS authenticate the photo on original report only

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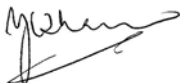
Process Flow of US EPA 3051A/3052 (Hg, Cd, Pb)



Lab Analyst : Jessica Chong

Sample received has been totally digested and dissolved by preconditioning method.

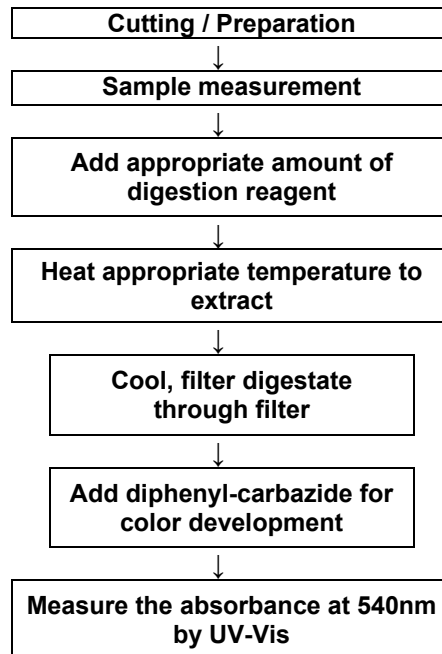
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Y.C. Tham
Laboratory Manager

Process Flow of EPA 3060A, 7196A for analysis of Cr (VI)

Lab Analyst : Christine Choy
Sample received has been totally digested and dissolved by preconditioning method.

Signed for and on behalf of
SGS Testing & Control Services Singapore Pte Ltd

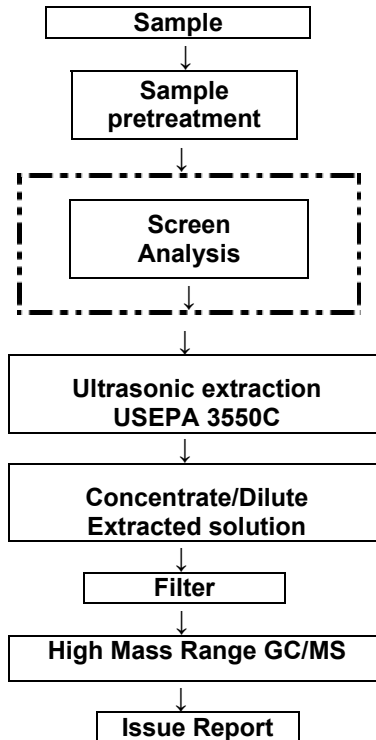
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Y.C. Tham
Laboratory Manager

Process Flow of PBBs and PBDEs Flame Retardants by GC/MS

First Testing Process → Optional screen process Confirmation process ...→



Lab Analyst : Irene Li

Sample received has been totally digested and dissolved by preconditioning method.

Signed for and on behalf of
SGS Testing & Control Services Singapore Pte Ltd

Y.C. Tham
Laboratory Manager

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End of Report

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