

No. LPCI/24083/10

CTS Ref. CTS/10/4393/CSC

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CSC STEEL SDN BHD 180, KAWASAN INDUSTRI AYER KEROH, AYER KEROH 75450 MELAKA, MALAYSIA

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

Sample Description : Galvanizing Strip (1.2mm) Chromated HM6332

Sample Receiving Date : 15/11/2010

Testing Period : 15/11/2010 to 22/11/2010

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

amendment directives.

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

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

Analysts : Ng Mei Kheng & Loi Woan Yee

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CHONG KIEN LEN B.Sc.(HONS) AMIC LAB MANAGER



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Test results:

Test Part Description:

Sample Description : Galvanizing Strip (1.2mm) Chromated HM6332

RoHS Directive 2002/95/EC

Test Item(s):	Unit	Test Method	Results	<u>MDL</u>
Cadmium(Cd)	mg/kg	With reference to EPA Method 3050B, and performed by ICP-OES	N.D.	2
Lead (Pb)	mg/kg	With reference to EPA Method 3050B, and performed by ICP-OES	N.D.	2
Mercury (Hg)	mg/kg	With reference to EPA Method 3052, and performed by ICP-OES	N.D.	2
Hexavalent Chromium (CrVI)	mg/kg	With reference to EPA Method 3060A & 7196A, and performed by UV-VIS Spectrophotometry	N.D.	2
Sum of PBBs	mg/kg	With reference to EPA Method 3540C/3550C, and performed by GC-MS	N.D.	-
Monobromobiphenyl	mg/kg	With reference to EPA Method 3540C/3550C, and performed by GC-MS	N.D.	5
Dibromobiphenyl	mg/kg	With reference to EPA Method 3540C/3550C, and performed by GC-MS	N.D.	5
Tribromobiphenyl	mg/kg	With reference to EPA Method 3540C/3550C, and performed by GC-MS	N.D.	5
Tetrabromobiphenyl	mg/kg	With reference to EPA Method 3540C/3550C, and performed by GC-MS	N.D.	5
Hexabromobiphenyl	mg/kg	With reference to EPA Method 3540C/3550C, and performed by GC-MS	N.D.	5
Pentabromobiphenyl	mg/kg	With reference to EPA Method 3540C/3550C, and performed by GC-MS	N.D.	5
Heptabromobiphenyl	mg/kg	With reference to EPA Method 3540C/3550C, and performed by GC-MS	N.D.	5
Octabromobiphenyl	mg/kg	With reference to EPA Method 3540C/3550C, and performed by GC-MS	N.D.	5
Nonabromobiphenyl	mg/kg	With reference to EPA Method 3540C/3550C, and performed by GC-MS	N.D.	5
Decabromobiphenyl	mg/kg	With reference to EPA Method 3540C/3550C, and performed by GC-MS	N.D.	5

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Test Item(s):	Unit	Test Method	Results	<u>MDL</u>
Sum of PBDEs	mg/kg	With reference to EPA Method 3540C/3550C, and performed by GC-MS	N.D.	-
Monobromodiphenyl ether	mg/kg	With reference to EPA Method 3540C/3550C, and performed by GC-MS	N.D.	5
Dibromodiphenyl ether	mg/kg	With reference to EPA Method 3540C/3550C, and performed by GC-MS	N.D.	5
Tribromodiphenyl ether	mg/kg	With reference to EPA Method 3540C/3550C, and performed by GC-MS	N.D.	5
Tetrabromodiphenyl ether	mg/kg	With reference to EPA Method 3540C/3550C, and performed by GC-MS	N.D.	5
Pentabromodiphenyl ether	mg/kg	With reference to EPA Method 3540C/3550C, and performed by GC-MS	N.D.	5
Hexabromodiphenyl ether	mg/kg	With reference to EPA Method 3540C/3550C, and performed by GC-MS	N.D.	5
Heptabromodiphenyl ether	mg/kg	With reference to EPA Method 3540C/3550C, and performed by GC-MS	N.D.	5
Octabromodiphenyl ether	mg/kg	With reference to EPA Method 3540C/3550C, and performed by GC-MS	N.D.	5
Nonabromodiphenyl ether	mg/kg	With reference to EPA Method 3540C/3550C, and performed by GC-MS	N.D.	5
Decabromodiphenyl ether ##	mg/kg	With reference to EPA Method 3540C/3550C, and performed 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) ## = The exemption of DecaBDE in polymeric application according 2005/717/EC was overruled by the European Court of Justice by its decision of 01.04.2008. Subsequently DecaBDE is included in the sum of PBDE after 01.07.2008

(e) - = Not regulated

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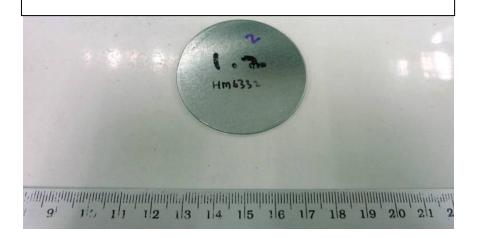
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Test Part Description:

Sample Description : Galvanizing Strip (1.2mm) Chromated HM6332

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1. <u>DETERMINATION OF HEXAVALENT CHROMIUM BY</u> METHOD US EPA 3060A/7196A

Sample Preparation

Add colour-developing reagent

Acidify with H₂SO₄

Let stand for 5-10 min

Analyses by UV- Spectrophotometer (540 nm)

2. DETERMINATION OF LEAD CONTENT BY US EPA 3050B Cut sample in small pieces Weight sample (1.0g) into digestion vessel Acid digestion (HCl and HNO₃) "Totally Dissolved" Filtration Analyses by ICP

3. MICROWAVE ASSISTED ACID DIGESTION OF SILICEOUS AND ORGANICALLY BASED METRICES (US EPA 3052)

(US EPA 3052)
Cut sample in small pieces

Weight sample (0.2-0.5g) into digestion vessel

Acid digestion (HF and HNO₃) – Microwave

"Totally Dissolved"

Filtration

Analyses by ICP

4. DETERMINATION OF CADMIUM CONTENT BY US EPA 3050B

Cut sample in small pieces

Weight sample (1.0g) into digestion vessel

Acid digestion (HCl and HNO₃)

"Totally Dissolved"

Filtration

Analyses by ICP

5. DETERMINATION OF PBB/PBDE WITH GC-MS

Cut sample in small pieces

Weight sample (0.5-2g) into extraction thimble

Ultrasonic / Soxhlet Extraction with Toluene

Filter through 0.45 um membrane filter

Analyses by GC-MS (with appropriate dilution)

**** End of Report ****

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