

Test Report

No. CTSSA/03432/13
CTS Ref. CTSSA/12/0561/CSC

Date : 26/02/2013

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CSC STEEL SDN BHD (228899-P)
180, KAWASAN INDUSTRI AYER KEROH, AYER KEROH
75450 MELAKA, MALAYSIA

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

Sample Description : PICKLED AND OILED SAMPLE
Sample Receiving Date : 20/02/2013
Testing Period : 20/02/2013 to 26/02/2013

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).
Analysts : Ng Jing Wei, Cho Kar Yen, Tan Li Wei & Choong Lap Kit

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Test results:

Test Part Description :

Sample Description : PICKLED AND OILED SAMPLE

RoHS Directive 2011/65/EU Annex II

Test Item(s):	Unit	Test Method	Results	MDL
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 JIS H 8625, 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
Pentabromobiphenyl	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
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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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) - = Not regulated

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Test Part Description :

Sample Description : PICKLED AND OILED SAMPLE



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1. DETERMINATION OF HEXAVALENT CHROMIUM BY JIS H 8625

Sample Preparation
↓
Hot water extraction
↓
Add colour-developing reagent
↓
Let stand for 5-10 min
↓
Analyses by UV- Spectrophotometer (540 nm)

2. 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

3. MICROWAVE ASSISTED ACID DIGESTION OF SILICEOUS AND ORGANICALLY BASED METRICES (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 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

5. DETERMINATION OF PBB/PBDE WITH GC-MS

Cut sample in small pieces
↓
Weight sample (0.5-4g) into extraction thimble
↓
Ultrasonic / Soxhlet Extraction with Toluene
↓
Filter through 0.45 µm membrane filter
↓
Analyses by GC-MS (with appropriate dilution)

**** End of Report ****

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