

No. CTSSA/03212/12

Date: 22/02/2012

Page: 1 of 5

CTS Ref. CTSSA/12/0515/CSC

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 Evershield Sand Yellow PPGI BMT 0.6mm CGC400 Z27

Sample Receiving Date 16/02/2012

16/02/2012 to 22/02/2012 **Testing Period**

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 Teh Pui Sean & Tay Siam Pine

SGS LABORATORY SERVICES (M) SDN. BHD.

CHÓNG KIEN LEN B.Sc.(HONS) AMIC

SENIOR LAB MANAGER



No. CTSSA/03212/12 CTS Ref. CTSSA/12/0515/CSC Date: 22/02/2012

Page: 2 of 5

Test results:

Test Part Description:

Sample Description : Evershield Sand Yellow PPGI BMT 0.6mm CGC400 Z27

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 EPA Method 3060A & 7196A, and performed by UV-VIS Spectrophotometry	109	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

SGS LABORATORY SERVICES (M) SDN. BHD.

CHÓNG KIEN LEN B.Sc.(HONS) AMIC

SENIOR LAB MANAGER



No. CTSSA/03212/12 CTS Ref. CTSSA/12/0515/CSC

Date: 22/02/2012 Pag

Page: 3 of 5

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

SGS LABORATORY SERVICES (M) SDN. BHD.

CHÓNG KIEN LEN B.Sc.(HONS) AMIC SENIOR LAB MANAGER



No. CTSSA/03212/12

Date: 22/02/2012

Page: 4 of 5

Test Part Description:

Sample Description : Evershield Sand Yellow PPGI BMT 0.6mm CGC400 Z27

CTS Ref. CTSSA/12/0515/CSC



SGS LABORATORY SERVICES (M) SDN. BHD.

CHÓNG KIEN LEN B.Sc.(HONS) AMIC SENIOR LAB MANAGER



No. CTSSA/03212/12

CTS Ref. CTSSA/12/0515/CSC

Date: 22/02/2012 Page: 5 of 5

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. <u>DETERMINATION OF CADMIUM CONTENT BY US</u> <u>EPA 3050B</u> Cut sample in small pieces

₩eight 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. <u>DETERMINATION OF LEAD CONTENT BY US EPA 3050B</u>

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 um membrane filter

Analyses by GC-MS (with appropriate dilution)

**** End of Report ****

SGS LABORATORY SERVICES (M) SDN. BHD.

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