

REPORT NO. : CTSSA/18453-1/15 CTS REF. : CTSSA/15/2348/Hitachi

DATE REPORTED: 15th Oct., 2015

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Hitachi Chemical (Selangor) Sdn. Bhd. No. 2, Persiaran Budiman, Seksyen 23, 40300 Shah Alam, Selangor Darul Ehsan

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

Sample Description : EPOXY MOLDING COMPOUND

Item No : GE-300 series Sample Receiving Date : 08/10/2015

Testing Period : 08/10/2015 to 15/10/2015

Test Result : Please see the next page

Analysts : Foong Cheng Chee & Shirley Then

SGS (MALAYSIA) SDN. BHD.

TAY SIAM PINE B.Sc.(HONS) AMIC

ASSISTANT LAB MANAGER



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No. 2, Persiaran Budiman, Seksyen 23, 40300 Shah Alam, Selangor Darul Ehsan

Test Result

Sample Description : EPOXY MOLDING COMPOUND

Item No : GE-300 series

Test Item (s) :	Unit	Method	Instrument	MDL	Results	Limit
Chromium VI (Cr6+)	ppm	IEC 62321 : 2008 Annex C	UV Vis - Spectrophotometer	2	N.D.	1000
Cadmium (Cd)	ppm	IEC 62321-5 : 2013	ICP OES	2	N.D.	100
Mercury (Hg)	ppm	IEC 62321-4 : 2013	ICP OES	2	N.D.	1000
Lead (Pb)	ppm	IEC 62321-5 : 2013	ICP OES	2	N.D.	1000

NOTE: (a) N.D. = Not detected (<MDL)

(b) ppm = mg/kg

(c) MDL= Method Detection Limit(d) Testing based on original basis

Analyst: Foong Cheng Chee

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No. 2, Persiaran Budiman, Seksyen 23, 40300 Shah Alam, Selangor Darul Ehsan

Test Result

Sample Description : EPOXY MOLDING COMPOUND

Item No : GE-300 series

Test Item (s) :	Unit	Method	Instrument	MDL	Result	Limit	
PBBs (Polybrominated Biphenyls)							
Manahyana Binhanyi		COMC IFC COOM : 0000	COMO	_	N.D.		
Monobromo Biphenyl	ppm	GCMS as per IEC 62321 : 2008	GCMS	5	N.D.		
Dibromo Biphenyl	ppm	GCMS as per IEC 62321 : 2008	GCMS	5	N.D.		
Tribromo Biphenyl	ppm	GCMS as per IEC 62321 : 2008	GCMS	5	N.D.		
Tetrabromo Biphenyl	ppm	GCMS as per IEC 62321 : 2008	GCMS	5	N.D.	1000	
Pentabromo Biphenyl	ppm	GCMS as per IEC 62321 : 2008	GCMS	5	N.D.		
Hexabromo Biphenyl	ppm	GCMS as per IEC 62321 : 2008	GCMS	5	N.D.		
Heptabromo Biphenyl	ppm	GCMS as per IEC 62321 : 2008	GCMS	5	N.D.		
Octabromo Biphenyl	ppm	GCMS as per IEC 62321 : 2008	GCMS	5	N.D.		
Nonabromo Biphenyl	ppm	GCMS as per IEC 62321 : 2008	GCMS	5	N.D.		
Decabromo Biphenyl	ppm	GCMS as per IEC 62321 : 2008	GCMS	5	N.D.		
PBDEs (Polybrominated Diphenyl ethers)							
Monobromo Diphenyl Ether	ppm	GCMS as per IEC 62321 : 2008	GCMS	5	N.D.		
Dibromo Diphenyl Ether	ppm	GCMS as per IEC 62321 : 2008	GCMS	5	N.D.		
Tribromo Diphenyl Ether	ppm	GCMS as per IEC 62321 : 2008	GCMS	5	N.D.		
Tetrabromo Diphenyl Ether	ppm	GCMS as per IEC 62321 : 2008	GCMS	5	N.D.	1000	
Pentabromo Diphenyl Ether	ppm	GCMS as per IEC 62321 : 2008	GCMS	5	N.D.	1000	
Hexabromo Diphenyl Ether	ppm	GCMS as per IEC 62321 : 2008	GCMS	5	N.D.		
Heptabromo Diphenyl Ether	ppm	GCMS as per IEC 62321 : 2008	GCMS	5	N.D.		
Octabromo Diphenyl Ether	ppm	GCMS as per IEC 62321 : 2008	GCMS	5	N.D.		
Nonabromo Diphenyl Ether	ppm	GCMS as per IEC 62321 : 2008	GCMS	5	N.D.		
Decabromo Diphenyl Ether	ppm	GCMS as per IEC 62321 : 2008	GCMS	5	N.D.		

NOTE: (a) N.D. = Not detected (<MDL)

(b) MDL = Method Detection Limit(c) Testing based on original basis

Analyst: Shirley Then

SGS (MALAYSIA) SDN. BHD.

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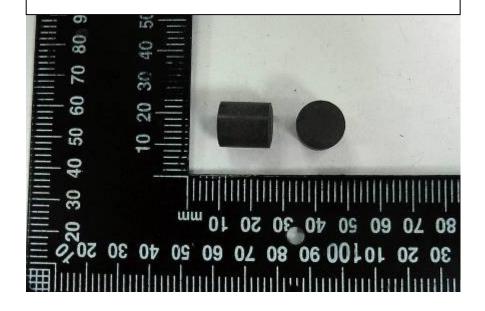
No. 2, Persiaran Budiman, Seksyen 23, 40300 Shah Alam, Selangor Darul Ehsan

Test Result

Sample Description : EPOXY MOLDING COMPOUND

Item No : GE-300 series

Hitachi Chemical (Selangor) Sdn. Bhd. CTSSA/18453-1/15



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1. DETERMINATION OF CADMIUM CONTENT BY

IEC 62321-5 2013

Sample Receiving and Registration

Sample Preparation

Weight sample (0.2-0.5g) into digestion vessel

Acid digestion (Microwave)

"Totally Dissolved"

Filtration

Analyses by ICP

2. DETERMINATION OF LEAD CONTENT BY

IEC 62321-5 2013

Sample Receiving and Registration

Sample Preparation

Weight sample (0.2-0.5g) into digestion vessel

Acid digestion (Microwave)

"Totally Dissolved"

Filtration

Analyses by ICP

3. DETERMINATION OF MERCURY CONTENT BY

IEC 62321-4 2013

Sample Receiving and Registration

Sample Preparation

Weight sample (0.1-0.5g) into digestion vessel

Acid digestion (Microwave)

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Filtration

Analyses by ICP

4. <u>DETERMINATION OF HEXAVALENT CHROMIUM</u> BY IEC 62321 2008

Sample Preparation

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Add colour-developing reagent

Acidify with H2SO4

Let stand for 5-10 min

Analyses by UV- Spectrophotometer (540 nm)

5. DETERMINATION OF PBB/PBDE WITH GC-MS

BY IEC 62321 2008

Sample Preparation

Weight sample (0.5-4.0g) into extraction thimble

Soxhlet Extraction with Toluene

Filter through 0.45 um membrane filter

Analyses by GC-MS (with appropriate dilution)

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