

Test Report

REPORT NO. : LPCI/09158/06
CTS REF. : CTS/06/2377/Toray
DATE REPORTED : JUNE 01, 2006
PAGE : 1 of 3

Toray Plastics Malaysia Sdn. Bhd.
2628 MK.1, SPT, Lorong Perusahaan 4,
Prai Free Industrial Zone, 13600 Prai, Penang, Malaysia.

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

Sample Description : Toyolac 335-X01 NG310
Sample Received : 2006/05/26
Testing Date : 2006/05/26 TO 2006/06/01

Test Result : Please see the next page

Analysts: Audrey Kua, Jocelyn

SGS LABORATORY SERVICES (M) SDN. BHD.



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B.Sc.(HONS) AMIC
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2628 MK.1, SPT, Lorong Perusahaan 4,
Prai Free Industrial Zone, 13600 Prai, Penang, Malaysia.

Test Result

Sample Description : Toyolac 335-X01 NG310

Test Item (s) :	Unit	Method	MDL	Result
Chromium VI (Cr6+)	ppm	UV-Vis as per EPA 3060 A / 7196 A	2	N.D.
Cadmium (Cd)	ppm	ICP-OES as per EN 1122, method B:2001	2	N.D.
Lead (Pb)	ppm	ICP-OES as per US EPA 3050B	2	N.D.
Mercury (Hg)	ppm	ICP-OES as per US EPA 3052	2	N.D.

NOTE: (1) N.D. = Not detected (<MDL)
(2) ppm = mg/kg
(3) MDL= Method Detection Limit

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Prai Free Industrial Zone, 13600 Prai, Penang, Malaysia.

Test Result

Sample Description : Toyolac 335-X01 NG310

Test Item (s) :	Unit	Method	MDL	Result
PBBS (Polybrominated Biphenyls)				
Monobromo Biphenyl	%	GCMS as per EPA 3540C/3550B	0.0005	N.D.
Dibromo Biphenyl	%	GCMS as per EPA 3540C/3550B	0.0005	N.D.
Tribromo Biphenyl	%	GCMS as per EPA 3540C/3550B	0.0005	N.D.
Tetrabromo Biphenyl	%	GCMS as per EPA 3540C/3550B	0.0005	N.D.
Pentabromo Biphenyl	%	GCMS as per EPA 3540C/3550B	0.0005	N.D.
Hexabromo Biphenyl	%	GCMS as per EPA 3540C/3550B	0.0005	N.D.
Heptabromo Biphenyl	%	GCMS as per EPA 3540C/3550B	0.0005	N.D.
Octabromo Biphenyl	%	GCMS as per EPA 3540C/3550B	0.0005	N.D.
Nonabromo Biphenyl	%	GCMS as per EPA 3540C/3550B	0.0005	N.D.
Decabromo Biphenyl	%	GCMS as per EPA 3540C/3550B	0.0005	N.D.
PBDEs (Polybrominated Diphenyl ethers)				
Monobromo Diphenyl Ether	%	GCMS as per EPA 3540C/3550B	0.0005	N.D.
Dibromo Diphenyl Ether	%	GCMS as per EPA 3540C/3550B	0.0005	N.D.
Tribromo Diphenyl Ether	%	GCMS as per EPA 3540C/3550B	0.0005	N.D.
Tetrabromo Diphenyl Ether	%	GCMS as per EPA 3540C/3550B	0.0005	N.D.
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Hexabromo Diphenyl Ether	%	GCMS as per EPA 3540C/3550B	0.0005	N.D.
Heptabromo Diphenyl Ether	%	GCMS as per EPA 3540C/3550B	0.0005	N.D.
Octabromo Diphenyl Ether	%	GCMS as per EPA 3540C/3550B	0.0005	N.D.
Nonabromo Diphenyl Ether	%	GCMS as per EPA 3540C/3550B	0.0005	N.D.
Decabromo Diphenyl Ether	%	GCMS as per EPA 3540C/3550B	0.0005	N.D.

NOTE: (1) N.D. = Not detected (<MDL)

(2) MDL = Method Detection Limit

Analyst: Jocelyn

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2628 MK.1, SPT, Lorong Perusahaan 4,
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The following merchandise was (were) submitted and identified by the client as:

Sample Description : Toyolac 345-X01 NG310
Sample Received : 2006/05/26
Testing Date : 2006/05/26 TO 2006/06/01

Test Result : Please see the next page

Analysts: Audrey Kua, Jocelyn

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Prai Free Industrial Zone, 13600 Prai, Penang, Malaysia.

Test Result

Sample Description : Toyolac 345-X01 NG310

Test Item (s) :	Unit	Method	MDL	Result
Chromium VI (Cr6+)	ppm	UV-Vis as per EPA 3060 A / 7196 A	2	N.D.
Cadmium (Cd)	ppm	ICP-OES as per EN 1122, method B:2001	2	N.D.
Lead (Pb)	ppm	ICP-OES as per US EPA 3050B	2	N.D.
Mercury (Hg)	ppm	ICP-OES as per US EPA 3052	2	N.D.

NOTE: (1) N.D. = Not detected (<MDL)
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Test Result

Sample Description : Toyolac 345-X01 NG310

Test Item (s) :	Unit	Method	MDL	Result
PBBS (Polybrominated Biphenyls)				
Monobromo Biphenyl	%	GCMS as per EPA 3540C/3550B	0.0005	N.D.
Dibromo Biphenyl	%	GCMS as per EPA 3540C/3550B	0.0005	N.D.
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Tetrabromo Diphenyl Ether	%	GCMS as per EPA 3540C/3550B	0.0005	N.D.
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Nonabromo Diphenyl Ether	%	GCMS as per EPA 3540C/3550B	0.0005	N.D.
Decabromo Diphenyl Ether	%	GCMS as per EPA 3540C/3550B	0.0005	N.D.

NOTE: (1) N.D. = Not detected (<MDL)

(2) MDL = Method Detection Limit

Analyst: Jocelyn

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2628 MK.1, SPT, Lorong Perusahaan 4,
Prai Free Industrial Zone, 13600 Prai, Penang, Malaysia.

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

Sample Description : Toyolac 700-X01 B1
Sample Received : 2006/05/26
Testing Date : 2006/05/26 TO 2006/06/01

Test Result : Please see the next page

Analysts: Audrey Kua, Jocelyn

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Company : **Toray Plastics Malaysia Sdn. Bhd.**
2628 MK.1, SPT, Lorong Perusahaan 4,
Prai Free Industrial Zone, 13600 Prai, Penang, Malaysia.

Test Result

Sample Description : Toyolac 700-X01 B1

Test Item (s) :	Unit	Method	MDL	Result
Chromium VI (Cr6+)	ppm	UV-Vis as per EPA 3060 A / 7196 A	2	N.D.
Cadmium (Cd)	ppm	ICP-OES as per EN 1122, method B:2001	2	N.D.
Lead (Pb)	ppm	ICP-OES as per US EPA 3050B	2	N.D.
Mercury (Hg)	ppm	ICP-OES as per US EPA 3052	2	N.D.

NOTE: (1) N.D. = Not detected (<MDL)
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Sample Description : Toyolac 700-X01 B1

Test Item (s) :	Unit	Method	MDL	Result
PBBS (Polybrominated Biphenyls)				
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Analyst: Jocelyn

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1. DETERMINATION OF HEXAVALENT CHROMIUM BY

METHOD 3060/7196A

Sample Preparation
 ↓
 Add colour-developing reagent
 ↓
 Acidify with H_2SO_4
 ↓
 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 (0.5g) into digestion vessel
 ↓
 Acid digestion (HCl and HNO_3)
 ↓
 "Totally Dissolved"
 ↓
 Analyses by ICP (220.353 nm)

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

(US EPA 3052)

Cut sample in small pieces
 ↓
 Weight sample (1-2g) into digestion vessel
 ↓
 Acid digestion (HF and HNO_3) – Microwave
 ↓
 "Totally Dissolved"
 ↓
 Analyses by ICP

**4. PLASTIC – DETERMINATION OF CADMIUM – WET
DECOMPOSITION METHOD (EN 1122) – METHOD B**

Cut sample in small pieces
 ↓
 Weight sample (0.5g) into Kjeldahl flask
 ↓
 Acid digestion (H_2SO_4)
 ↓
 "Totally Dissolved"
 ↓
 Analyses by ICP (228.802 nm)

5. DETERMINATION OF PBB/PBDE WITH GC-MS

Cut sample in small pieces
 ↓
 Weight sample (2g) 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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