

TEST REPORT:

No. CRSSA/190102106-CA01468
Job Ref. CRS/2019-01-03-006

REPORTED DATE: 09/01/2019

TORAY PLASTICS (M) SDN BHD

2628, MK.1, SPT., LORONG PERUSAHAAN 4,
PRAI FREE INDUSTRIAL ZONE,
13600 PRAI, PENANG

The following sample(s) was/were submitted and identified by/on behalf of applicant as:

SAMPLE DESCRIPTION : TOYOLAC 600 X50
TOYOLAC 600 X52
SAMPLE RECEIVED : 03/01/2019
TESTING PERIOD : 03/01/2019 to 08/01/2019

TEST REQUESTED : Selected test(s) as requested by customer
TEST METHOD : -PLEASE REFER TO NEXT PAGE(S)-
TEST RESULTS : -PLEASE REFER TO NEXT PAGE(S)-

SIGNED FOR AND ON BEHALF OF
SGS (MALAYSIA) SDN BHD

CHEE TUCK CHOON
SECTION HEAD
IKM NO. M/3983/6401/12/14



Test Report Form No.: SGS/TR/CRS/001, Ver: 1.0, Effective Date: 03/12/2018

Page 1 of 5

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SGS (Malaysia) Sdn. Bhd.
(Company No. 10871-T)

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TEST REPORT:

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TEST RESULTS:

Test Part Description

Sample Description: TOYOLAC 600 X50

RoHS Directive 2011/65/EU Annex II

Test Item(s):	Unit	Test Method	Result	MDL	Limit
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.	Not Detected	2	Max 100
Lead (Pb)	mg/kg	With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.	Not Detected	2	Max 1000
Mercury (Hg)	mg/kg	With reference to IEC 62321-4:2013+A1:2017, determination of Mercury by ICP-OES.	Not Detected	2	Max 1000
Hexavalent Chromium (CrVI)	mg/kg	With reference to IEC 62321-7-2:2017, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis.	Not Detected	8	Max 1000
Sum of PBBs	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D(<5)	5	Max 1000
Monobromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D(<5)	5	-
Dibromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D(<5)	5	-
Tribromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D(<5)	5	-
Tetrabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D(<5)	5	-
Pentabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D(<5)	5	-
Hexabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D(<5)	5	-
Heptabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D(<5)	5	-
Octabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D(<5)	5	-
Nonabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D(<5)	5	-
Decabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D(<5)	5	-

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Page 2 of 5

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TEST RESULTS:

Test Part Description

Sample Description: TOYOLAC 600 X50

RoHS Directive 2011/65/EU Annex II

Test Item(s):	Unit	Test Method	Result	MDL	Limit
Sum of PBDEs	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D(<5)	5	Max 1000
Monobromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D(<5)	5	-
Dibromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D(<5)	5	-
Tribromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D(<5)	5	-
Tetrabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D(<5)	5	-
Pentabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D(<5)	5	-
Hexabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D(<5)	5	-
Heptabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D(<5)	5	-
Octabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D(<5)	5	-
Nonabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D(<5)	5	-
Decabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D(<5)	5	-

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Page 3 of 5

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TEST RESULTS:

Test Part Description

Sample Description: TOYOLAC 600 X50

RoHS Directive 2011/65/EU Annex II (amended by Directive (EU) 2015/863)

Test Item(s):	Unit	Test Method	Result	MDL	Limit
Dibutyl phthalate (DBP) (CAS No. 84-74-2)	mg/kg	In-house SGS-TM-RSTS-O-003 with reference to IEC 62321-8:2017, determination of phthalates by GC-MS.	N.D(<50)	50	Max 1000
Benzyl butyl phthalate (BBP) (CAS No. 85-68-7)	mg/kg	In-house SGS-TM-RSTS-O-003 with reference to IEC 62321-8:2017, determination of phthalates by GC-MS.	N.D(<50)	50	Max 1000
Di(2-ethylhexyl) phthalate (DEHP) (CAS No. 117-81-7)	mg/kg	In-house SGS-TM-RSTS-O-003 with reference to IEC 62321-8:2017, determination of phthalates by GC-MS.	N.D(<50)	50	Max 1000
Diisobutyl phthalate (DIBP) (CAS No. 84-69-5)	mg/kg	In-house SGS-TM-RSTS-O-003 with reference to IEC 62321-8:2017, determination of phthalates by GC-MS.	N.D(<50)	50	Max 1000

Note : (a) mg/kg = ppm ; (0.1wt% = 1000ppm)

(b) N.D. = Not Detected

(c) MDL = Method Detection Limit

(d) - = Not regulated

(e) On 4 June 2015, Commission Directive (EU) 2015/863 was published in the Official Journal of the European Union (OJEU) to include the phthalates BBP, DBP, DEHP and DIBP into ANNEX II of the RoHS Recast Directive. The new law restricts each phthalate to no more than 0.1% in each homogeneous material of an electrical product.

(f) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.

(g) The restriction of DEHP, BBP, DBP and DIBP shall not apply to cables or spare parts for the repair, the reuse, the updating of functionalities or upgrading of capacity of EEE placed on the market before 22 July 2019, and of medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, placed on the market before 22 July 2021.

(h) The restriction of DEHP, BBP and DBP shall not apply to toys which are already subject to the restriction of DEHP, BBP and DBP through entry 51 of Annex XVII to Regulation (EC) No 1907/2006.

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Page 4 of 5

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*** End of test report ***

Page 5 of 5

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