

## TEST REPORT:

No. CRSSA/190102097-CA00871  
Job Ref. CRS/2018-12-25-006

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 100 322  
TOYOLAC 100 X01  
TOYOLAC 250 X10  
TOYOLAC 500 322  
TOYOLAC 532 X02  
TOYOLAC 700 314  
TOYOLAC 700 X01  
TOYOLAC 700 SG5

SAMPLE RECEIVED : 26/12/2018

TESTING PERIOD : 25/12/2018 to 31/12/2018

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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(Company No. 10871-T)

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## TEST REPORT:

No. CRSSA/190102097-CA00871

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## TEST RESULTS:

### Test Part Description

Sample Description: TOYOLAC 100 322

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   | -        |

SIGNED FOR AND ON BEHALF OF

SGS (MALAYSIA) SDN BHD

CHEE TUCK CHOON  
SECTION HEAD  
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Page 2 of 5

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## TEST REPORT:

No. CRSSA/190102097-CA00871  
Job Ref. CRS/2018-12-25-006

REPORTED DATE: 09/01/2019

## TEST RESULTS:

### Test Part Description

Sample Description: TOYOLAC 100 322

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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REPORTED DATE: 09/01/2019

## TEST RESULTS:

### Test Part Description

Sample Description: TOYOLAC 100 322

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)<br>(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)<br>(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)<br>(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)<br>(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.

### Remark:

1. This report supersedes report no. CRSSA/190101411-CA00871.

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Page 4 of 5

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## TEST REPORT:

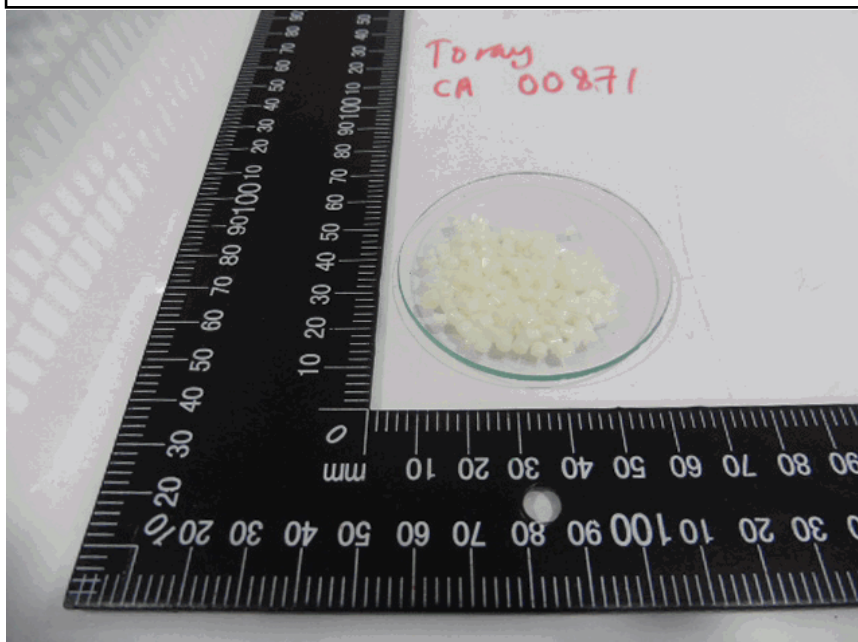
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## Test Part Description :

Sample Description: TOYOLAC 100 322

TORAY PLASTICS (M) SDN BHD  
CA00871



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\*\*\* End of test report \*\*\*

Page 5 of 5

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