

## Test Report

No. CRSSA/11909/17 Date : 02/10/2017  
CRS Ref. CRSSA/17/2486/Microclean

Page: 1 of 9

**MICROCLEAN TECH RUBBER (M) SDN BHD**  
**LOT 5, JALAN SULTAN MOHAMAD 5**  
**BANDAR SULTAN SULAIMAN**  
**42000 PORT KLANG, SELANGOR**

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

Sample Description : NBR BLUE EXCOTS  
Sample Receiving Date : 26/09/2017  
Testing Period : 26/09/2017 to 02/10/2017

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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 : Tan Mei Ann & Ling Yii Ming

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# Test Report

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Test results:

Test Part Description :

Sample Description : NBR BLUE EXCOTS

## RoHS Directive 2011/65/EU Annex II

Test Item(s):	Unit	Test Method	Results	MDL	Limit
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5:2013 (Determination of Cd by ICP-OES)	N.D.	2	100
Lead (Pb)	mg/kg	With reference to IEC 62321-5:2013 (Determination of Pb by ICP-OES)	N.D.	2	1000
Mercury (Hg)	mg/kg	With reference to IEC 62321-4:2013 (Determination of Hg by ICP-OES)	N.D.	2	1000
Hexavalent Chromium (CrVI)	mg/kg	With reference to IEC 62321:2008 (Determination of CrVI by UV-Vis)	N.D.	2	1000
<b>Sum of PBBs</b>	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	N.D.	-	1000
Monobromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	N.D.	5	-
Dibromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	N.D.	5	-
Tribromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	N.D.	5	-
Tetrabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	N.D.	5	-
Pentabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	N.D.	5	-
Hexabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	N.D.	5	-
Heptabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	N.D.	5	-
Octabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	N.D.	5	-
Nonabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	N.D.	5	-
Decabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB by GC-MS)	N.D.	5	-

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Sum of PBDEs	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	N.D.	-	1000
Monobromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	N.D.	5	-
Dibromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	N.D.	5	-
Tribromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	N.D.	5	-
Tetrabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	N.D.	5	-
Pentabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	N.D.	5	-
Hexabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	N.D.	5	-
Heptabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	N.D.	5	-
Octabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	N.D.	5	-
Nonabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE by GC-MS)	N.D.	5	-
Decabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBDE 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
  - (e) The above test was conducted at SGS Shah Alam Seksyen 22

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Test result:

Test Part Description :

Sample Description : NBR BLUE EXCOTS

**Optional: RoHS Directive 2011/65/EU, priority substances**

Test Item(s):	Unit	Test Method	Results	MDL	Limit
Hexabromocyclododecane (HBCDD) (Cas#25637-99-4 & 3194-55-6)	mg/kg	Based on IEC 62321:2008 (Determination of HBCDD by GC-MS)	N.D.	10	-

Note:

- (a) Reference Information: Directive 2011/65/EU recasting RoHS directive 2002/95/EC: Hexabromocyclododecane (HBCDD), Bis (2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP) and Dibutyl phthalate (DBP) are considered as a priority for risk evaluation and substance restriction.
- (b) - = not regulated
- (c) N.D. = Not Detected
- (d) The above test was conducted at SGS Shah Alam Seksyen 22

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Test result:

Test Part Description :

Sample Description : NBR BLUE EXCOTS

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

Test Item(s):	Unit	Test Method	Results	MDL	Limit
Bis (2-ethylhexyl) phthalate (DEHP) (CAS No. 117-81-7)	mg/kg	Based on EN 14372:2004 (Determination of DEHP by GC-MS)	N.D.	30	1000
Butyl benzyl phthalate (BBP) (CAS No. 85-68-7)	mg/kg	Based on EN 14372:2004 (Determination of BBP by GC-MS)	N.D.	30	1000
Dibutyl phthalate (DBP) (CAS No. 84-74-2)	mg/kg	Based on EN 14372:2004 (Determination of DBP by GC-MS)	N.D.	30	1000
Diisobutyl phthalate (DIBP) (CAS No. 84-69-5)	mg/kg	Based on EN 14372:2004 (Determination of DIBP by GC-MS)	N.D.	30	1000

- Note : (a) mg/kg = ppm ; (0.1wt% = 1000ppm)  
 (b) N.D. = Not Detected  
 (c) MDL = Method Detection Limit  
 (d) - = Not regulated  
 (e) The above test was conducted at SGS Shah Alam Seksyen 22.

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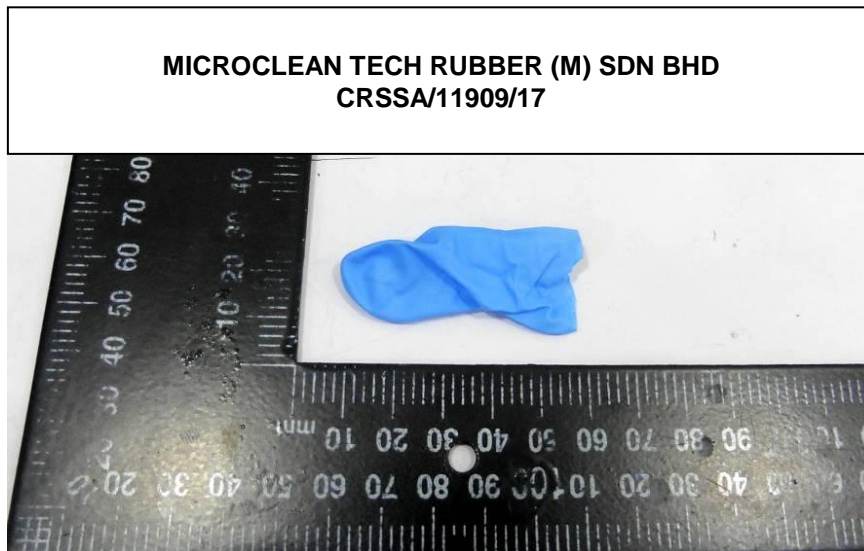
## Test Report

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### Test Part Description :

Sample Description : NBR BLUE EXCOTS



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**1. DETERMINATION OF CADMIUM CONTENT BY IEC 62321-5 2013**

Sample Receiving and Registration  
 ↓  
 Cut sample in small pieces  
 ↓  
 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  
 ↓  
 Cut sample in small pieces  
 ↓  
 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  
 ↓  
 Cut sample in small pieces  
 ↓  
 Weight sample (0.1-0.5g) into digestion vessel  
 ↓  
 Acid digestion (Microwave)  
 ↓  
 "Totally Dissolved"  
 ↓  
 Filtration  
 ↓  
 Analyses by ICP

**4. DETERMINATION OF HEXAVALENT CHROMIUM BY IEC 62321 2008**

Sample Preparation  
 ↓  
 Add colour-developing reagent  
 ↓  
 Acidify with H<sub>2</sub>SO<sub>4</sub>  
 ↓  
 Let stand for 5-10 min  
 ↓  
 Analyses by UV- Spectrophotometer (540 nm)

**5. DETERMINATION OF PBB/PBDE WITH GC-MS BY IEC 62321-6 2015**

Cut sample in small pieces  
 ↓  
 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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### DETERMINATION OF HBCDD CONTENT

Cut sample in small pieces  
↓  
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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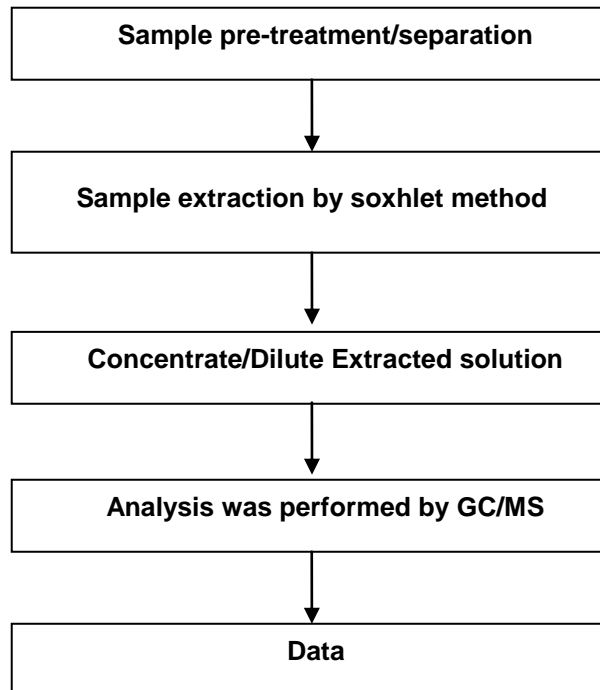


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**Analytical flow chart of Phthalates Content**



\*\*\*\* End of Report \*\*\*\*

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