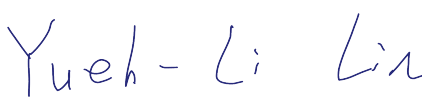



<b>Prüfbericht - Nr.: 0238100012b 001</b>		<b>Seite 1 von 9</b>	
<i>Test Report No.:</i>		<i>Page 1 of 9</i>	
<b>Auftraggeber:</b> <i>Client:</i>	Formosa Chemicals & Fibre Corporation 201, Tung Hwa N. Rd., Taipei 105, Taiwan, R.O.C.		
<b>Gegenstand der Prüfung:</b> <i>Test Item:</i>	Polystyrene (PS)		
<b>Bezeichnung:</b> <i>Identification:</i>	TAIRIREX PS : GP5000, GP525N, GP5250, GP5350, GP535A, GP5500, GP550N, MP6500, HP8250, HP8258, HP9450		
<b>Anlieferungszustand:</b> <i>Delivery condition:</i>	apparent good	<b>Eingangsdatum:</b> <i>Date of Receipt:</i>	2019-01-09
<b>Prüfört:</b> <i>Testing location:</i>	TÜV Rheinland (Shanghai) Co. Ltd.		
<b>Prüfgrundlage:</b> <i>Test specification:</i>	According to RoHS (recast): Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, 2011/65/EU last amended by (EU) 2015/863: Total Content of Lead, Cadmium, Mercury, Chromium VI, Polybrominated Biphenyls, Polybrominated Diphenyl Ethers; and Benzylbutyl phthalate (BBP), Dibutyl phthalate (DBP), Bis(2-ethylhexyl) phthalate (DEHP), Diisobutyl phthalate (DIBP)		
<b>Prüfergebnis:</b> <i>Test result:</i>	According to the kind and extend of tests performed the above mentioned test item passed the test specification.		
<b>geprüft: tested by:</b>	<b>kontrolliert: checked by:</b>		
 Yueh-Li Lin		 Tammy Wang	
2019-01-24 Yueh-Li Lin /Senior Project Coordinator		2019-01-24 Tammy Wang /Assistant Manager	
<b>Datum</b> <i>Date</i>	<b>Name/Stellung</b> <i>Name/Position</i>	<b>Unterschrift</b> <i>Signature</i>	<b>Datum</b> <i>Date</i>
<b>Sonstiges/ Other Aspects:</b>			
Test period: 2019-01-09 – 2019-01-22			
<b>Abkürzungen:</b>		<b>Abbreviations:</b>	
ok / P = entspricht Prüfgrundlage		ok / P = passed	
fail / F = entspricht nicht Prüfgrundlage		fail / F = failed	
n.a. / N = nicht anwendbar		n.a. / N = not applicable	
<p><b>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</b></p> <p><i>This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.</i></p>			



Test Report No. : 0238100012b 001  
Customer : Formosa Chemicals & Fibre Corporation

2019-01-24

**Sample list:**

Mat. No.	Description	Material	Color	Location / Lab no.:
1	GP5000	Plastic	Transparent	TCL190109-37
2	GP525N	Plastic	Transparent	TCL190109-38
3	GP5250	Plastic	Transparent	TCL190109-39
4	GP5350	Plastic	Transparent	TCL190109-40
5	GP535A	Plastic	Transparent	TCL190109-41
6	GP5500	Plastic	Transparent	TCL190109-42
7	GP550N	Plastic	Transparent	TCL190109-43
8	MP6500	Plastic	White	TCL190109-44
9	HP8250	Plastic	White	TCL190109-45
10	HP8258	Plastic	White	TCL190109-46
11	HP9450	Plastic	White	TCL190109-47



Test Report No. : 0238100012b 001 2019-01-24  
 Customer : Formosa Chemicals & Fibre Corporation  
 Test Method : Total Cadmium, Lead, Mercury, Chromium  
 - Ref. to IEC 62321-4:2013 and IEC 62321-5:2013  
 Chromium (VI)  
 - For Metal material - Ref. to IEC 62321-7-1:2015  
 - For Plastic or Electronic material - Ref. to IEC 62321-7-2:2017  
 - For Leather material - Ref. to EN ISO 17075-1:2017  
 PBBs, PBDEs - Ref. to IEC 62321-6:2015

Sample/Material No.		LoD	1	2	3	4
Cadmium (Cd)	mg/kg	2	n.d.	n.d.	n.d.	n.d.
Lead (Pb)	mg/kg	2	n.d.	n.d.	n.d.	n.d.
Mercury (Hg)	mg/kg	2	n.d.	n.d.	n.d.	n.d.
Chromium VI (Cr VI)*	mg/kg	10	n.d.	n.d.	n.d.	n.d.
<b>Sum of Polybrominated biphenyls (PBBs)</b>	mg/kg	-	n.d.	n.d.	n.d.	n.d.
Monobromobiphenyl	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Dibromobiphenyl	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Tribromobiphenyl	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Tetrabromobiphenyl	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Pentabromobiphenyl	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Hexabromobiphenyl	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Heptabromobiphenyl	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Octabromobiphenyl	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Nonabromobiphenyl	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Decabromobiphenyl	mg/kg	5	n.d.	n.d.	n.d.	n.d.
<b>Sum of Polybrominated diphenyl ethers (PBDEs)</b>	mg/kg	-	n.d.	n.d.	n.d.	n.d.
Monobromodiphenyl ether	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Dibromodiphenyl ether	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Tribromodiphenyl ether	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Tetrabromodiphenyl ether	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Pentabromodiphenyl ether	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Hexabromodiphenyl ether	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Heptabromodiphenyl ether	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Octabromodiphenyl ether	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Nonabromodiphenyl ether	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Decabromodiphenyl ether	mg/kg	5	n.d.	n.d.	n.d.	n.d.

**Notes:**

- n.d. - not detected
- n.a. - not applicable
- LoD - Limit of Detection
- mg/kg is equal to ppm (parts per million)
- \* Once the total Cr content in metal/ plastic or electronic sample is found to be exceeded the limit, the Cr (VI) content will be confirmed with reference to IEC 62321-7-1:2015/ IEC 62321-7-2:2017



Test Report No. : 0238100012b 001 2019-01-24  
 Customer : Formosa Chemicals & Fibre Corporation  
 Test Method : Total Cadmium, Lead, Mercury, Chromium  
 - Ref. to IEC 62321-4:2013 and IEC 62321-5:2013  
 Chromium (VI)  
 - For Metal material - Ref. to IEC 62321-7-1:2015  
 - For Plastic or Electronic material - Ref. to IEC 62321-7-2:2017  
 - For Leather material - Ref. to EN ISO 17075-1:2017  
 PBBs, PBDEs - Ref. to IEC 62321-6:2015

Sample/Material No.		LoD	5	6	7	8
Cadmium (Cd)	mg/kg	2	n.d.	n.d.	n.d.	n.d.
Lead (Pb)	mg/kg	2	n.d.	n.d.	n.d.	n.d.
Mercury (Hg)	mg/kg	2	n.d.	n.d.	n.d.	n.d.
Chromium VI (Cr VI)*	mg/kg	10	n.d.	n.d.	n.d.	n.d.
<b>Sum of Polybrominated biphenyls (PBBs)</b>	mg/kg	-	n.d.	n.d.	n.d.	n.d.
Monobromobiphenyl	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Dibromobiphenyl	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Tribromobiphenyl	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Tetrabromobiphenyl	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Pentabromobiphenyl	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Hexabromobiphenyl	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Heptabromobiphenyl	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Octabromobiphenyl	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Nonabromobiphenyl	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Decabromobiphenyl	mg/kg	5	n.d.	n.d.	n.d.	n.d.
<b>Sum of Polybrominated diphenyl ethers (PBDEs)</b>	mg/kg	-	n.d.	n.d.	n.d.	n.d.
Monobromodiphenyl ether	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Dibromodiphenyl ether	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Tribromodiphenyl ether	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Tetrabromodiphenyl ether	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Pentabromodiphenyl ether	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Hexabromodiphenyl ether	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Heptabromodiphenyl ether	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Octabromodiphenyl ether	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Nonabromodiphenyl ether	mg/kg	5	n.d.	n.d.	n.d.	n.d.
Decabromodiphenyl ether	mg/kg	5	n.d.	n.d.	n.d.	n.d.

**Notes:**

- n.d. - not detected
- n.a. - not applicable
- LoD - Limit of Detection
- mg/kg is equal to ppm (parts per million)
- \* Once the total Cr content in metal/ plastic or electronic sample is found to be exceeded the limit, the Cr (VI) content will be confirmed with reference to IEC 62321-7-1:2015/ IEC 62321-7-2:2017



Test Report No. : 0238100012b 001  
 Customer : Formosa Chemicals & Fibre Corporation  
 Test Method : Total Cadmium, Lead, Mercury, Chromium  
 - Ref. to IEC 62321-4:2013 and IEC 62321-5:2013  
 Chromium (VI)  
 - For Metal material - Ref. to IEC 62321-7-1:2015  
 - For Plastic or Electronic material - Ref. to IEC 62321-7-2:2017  
 - For Leather material - Ref. to EN ISO 17075-1:2017  
 PBBs, PBDEs - Ref. to IEC 62321-6:2015

2019-01-24

Sample/Material No.	LoD	9	10	11
Cadmium (Cd) mg/kg	2	n.d.	n.d.	n.d.
Lead (Pb) mg/kg	2	n.d.	n.d.	n.d.
Mercury (Hg) mg/kg	2	n.d.	n.d.	n.d.
Chromium VI (Cr VI)* mg/kg	10	n.d.	n.d.	n.d.
<b>Sum of Polybrominated biphenyls (PBBs)</b> mg/kg	-	n.d.	n.d.	n.d.
Monobromobiphenyl mg/kg	5	n.d.	n.d.	n.d.
Dibromobiphenyl mg/kg	5	n.d.	n.d.	n.d.
Tribromobiphenyl mg/kg	5	n.d.	n.d.	n.d.
Tetrabromobiphenyl mg/kg	5	n.d.	n.d.	n.d.
Pentabromobiphenyl mg/kg	5	n.d.	n.d.	n.d.
Hexabromobiphenyl mg/kg	5	n.d.	n.d.	n.d.
Heptabromobiphenyl mg/kg	5	n.d.	n.d.	n.d.
Octabromobiphenyl mg/kg	5	n.d.	n.d.	n.d.
Nonabromobiphenyl mg/kg	5	n.d.	n.d.	n.d.
Decabromobiphenyl mg/kg	5	n.d.	n.d.	n.d.
<b>Sum of Polybrominated diphenyl ethers (PBDEs)</b> mg/kg	-	n.d.	n.d.	n.d.
Monobromodiphenyl ether mg/kg	5	n.d.	n.d.	n.d.
Dibromodiphenyl ether mg/kg	5	n.d.	n.d.	n.d.
Tribromodiphenyl ether mg/kg	5	n.d.	n.d.	n.d.
Tetrabromodiphenyl ether mg/kg	5	n.d.	n.d.	n.d.
Pentabromodiphenyl ether mg/kg	5	n.d.	n.d.	n.d.
Hexabromodiphenyl ether mg/kg	5	n.d.	n.d.	n.d.
Heptabromodiphenyl ether mg/kg	5	n.d.	n.d.	n.d.
Octabromodiphenyl ether mg/kg	5	n.d.	n.d.	n.d.
Nonabromodiphenyl ether mg/kg	5	n.d.	n.d.	n.d.
Decabromodiphenyl ether mg/kg	5	n.d.	n.d.	n.d.

**Notes:**

- n.d. - not detected
- n.a. - not applicable
- LoD - Limit of Detection
- mg/kg is equal to ppm (parts per million)
- \* Once the total Cr content in metal/ plastic or electronic sample is found to be exceeded the limit, the Cr (VI) content will be confirmed with reference to IEC 62321-7-1:2015/ IEC 62321-7-2:2017

	Cd	Cr(VI)	Pb	Hg	PBBs	PBDEs
<b>Maximum permissible Limit acc. to 2011/65/EU (mg/kg)</b>	100	1000	1000	1000	1000	1000



Test Report No. : 0238100012b 001  
 Customer : Formosa Chemicals & Fibre Corporation  
 Test Method : BBP/DBP/DEHP/DIBP - Ref. to IEC 62321-8:2017

2019-01-24

Sample/Material No.	LoD	1	2	3	4
Benzylbutylphthalate (BBP) mg/kg	50	n.d.	n.d.	n.d.	n.d.
Dibutylphthalate (DBP) mg/kg	50	n.d.	n.d.	n.d.	n.d.
Diethylhexylphthalate (DEHP) mg/kg	50	n.d.	n.d.	n.d.	n.d.
Diisobutylphthalate (DIBP) mg/kg	50	n.d.	n.d.	n.d.	n.d.

Sample/Material No.	LoD	5	6	7	8
Benzylbutylphthalate (BBP) mg/kg	50	n.d.	n.d.	n.d.	n.d.
Dibutylphthalate (DBP) mg/kg	50	n.d.	n.d.	n.d.	n.d.
Diethylhexylphthalate (DEHP) mg/kg	50	n.d.	n.d.	n.d.	n.d.
Diisobutylphthalate (DIBP) mg/kg	50	n.d.	n.d.	n.d.	n.d.

Sample/Material No.	LoD	9	10	11
Benzylbutylphthalate (BBP) mg/kg	50	n.d.	n.d.	n.d.
Dibutylphthalate (DBP) mg/kg	50	n.d.	n.d.	n.d.
Diethylhexylphthalate (DEHP) mg/kg	50	n.d.	n.d.	n.d.
Diisobutylphthalate (DIBP) mg/kg	50	n.d.	n.d.	n.d.

**Notes:**

- n.d. - not detected
- n.a. - not applicable
- LoD - Limit of Detection
- mg/kg is equal to ppm (parts per million)

	<b>BBP</b>	<b>DBP</b>	<b>DEHP</b>	<b>DIBP</b>
<b>Maximum permissible Limit acc. to (EU) 2015/863 (mg/kg)</b>	1000	1000	1000	1000





Test Report No. : 0238100012b 001  
Customer : Formosa Chemicals & Fibre Corporation

2019-01-24

Test Sample



1



2



3



4



5



6



7



8



9



10



11

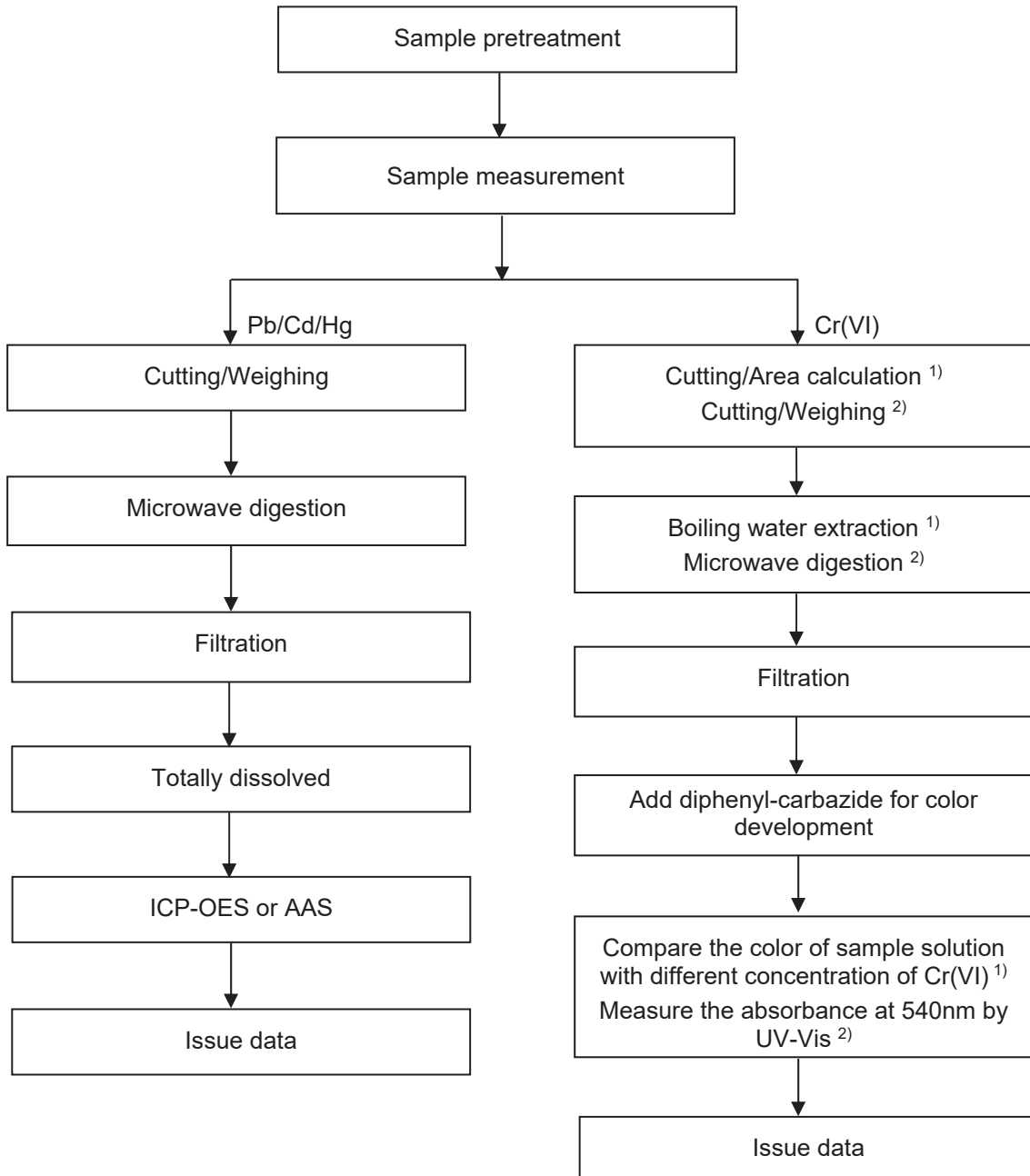


Test Report No. : 0238100012b 001  
 Customer : Formosa Chemicals & Fibre Corporation

2019-01-24

**Testing procedure:**

RoHS (Pb, Cd, Hg, Cr(VI))



Notes: <sup>1)</sup> For metallic material  
<sup>2)</sup> For non-metallic material



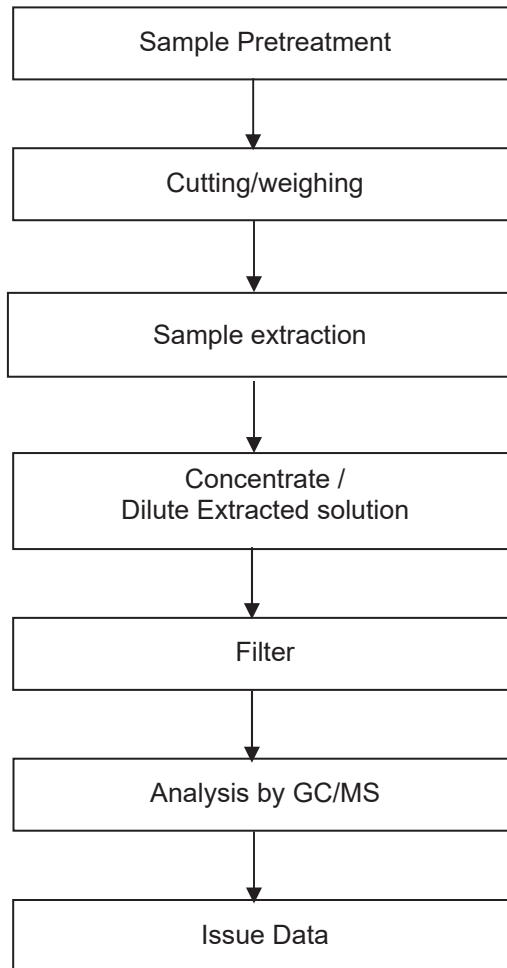


Test Report No. : 0238100012b 001  
Customer : Formosa Chemicals & Fibre Corporation

2019-01-24

**Testing procedure:**

RoHS (PBBs/PBDEs, DEHP/DBP/BBP/DIBP)



--- End of Test-Report ---

