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Chemical Laboratory - Kao., SGS Taiwan Ltd.

Test Report Page: 1 of 7 No.: KA/2018/10189 Date: 2018/01/09

GRAND PACIFIC PETROCHEMICAL CORP.

NO. 4, HSING KUNG RD., TA-SHE INDUSTRIAL DISTRICT, KAOHSIUNG, 81567 TAIWAN R.O.C.

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

Sample Description : ABS

Style/Item No. : D-1000S Sample Receiving Date : 2018/01/03

Testing Period : 2018/01/03 TO 2018/01/09

Sample Submitted By : GRAND PACIFIC PETROCHEMICAL CORP.

: As specified by client, with reference to RoHS 2011/65/EU Annex II and amending Directive **Test Requested**

(EU) 2015/863 to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP,

DEHP, DIBP contents in the submitted sample(s).

Please refer to following pages. **Test Method** Test Result(s) Please refer to following pages.

Based on the performed tests on submitted sample(s), the test results of Cadmium, Lead, Conclusion

Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP comply with the limits as set by

RoHS and amending Directive (EU) 2015/863.

Signed for and on behalf **SGS Taiwan Limited**

Ray Chang Ph.D.

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GRAND PACIFIC PETROCHEMICAL CORP.
NO. 4, HSING KUNG RD., TA-SHE INDUSTRIAL DISTRICT, KAOHSIUNG, 81567 TAIWAN R.O.C.

Test Result(s)

PART NAME No.1 : WHITE ABS PELLET

Test Item(s)	Unit	Method	MDL	Result No.1	Limit
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.	100
Lead (Pb)	mg/kg	With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.	1000
Mercury (Hg)	mg/kg	With reference to IEC 62321-4: 2013 and performed by ICP-AES.	2	n.d.	1000
Hexavalent Chromium Cr(VI)	mg/kg	With reference to IEC 62321-7-2:2017 and performed by UV-VIS.	8	n.d.	1000
Sum of PBBs		With reference to IEC 62321-6: 2015 and performed by GC/MS.	-	n.d.	1000
Monobromobiphenyl			5	n.d.	-
Dibromobiphenyl			5	n.d.	-
Tribromobiphenyl			5	n.d.	-
Tetrabromobiphenyl			5	n.d.	-
Pentabromobiphenyl	mg/kg		5	n.d.	-
Hexabromobiphenyl			5	n.d.	-
Heptabromobiphenyl			5	n.d.	-
Octabromobiphenyl			5	n.d.	-
Nonabromobiphenyl			5	n.d.	-
Decabromobiphenyl			5	n.d.	-
Sum of PBDEs		With reference to IEC 62321-6: 2015 and performed by GC/MS.	-	n.d.	1000
Monobromodiphenyl ether			5	n.d.	-
Dibromodiphenyl ether			5	n.d.	-
Tribromodiphenyl ether			5	n.d.	-
Tetrabromodiphenyl ether			5	n.d.	-
Pentabromodiphenyl ether	mg/kg		5	n.d.	-
Hexabromodiphenyl ether			5	n.d.	-
Heptabromodiphenyl ether			5	n.d.	-
Octabromodiphenyl ether			5	n.d.	-
Nonabromodiphenyl ether			5	n.d.	-
Decabromodiphenyl ether			5	n.d.	-

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Test Item(s)	Unit	Method	MDL	Result	Limit
				No.1	
DIBP (Di-isobutyl phthalate) (CAS No.: 84-69-5)	- mg/kg	With reference to IEC 62321-8:2017. Analysis was performed by GC/MS.	50	n.d.	1000
DBP (Dibutyl phthalate) (CAS No.: 84-74-2)			50	n.d.	1000
BBP (Butyl Benzyl phthalate) (CAS No.: 85-68-7)			50	n.d.	1000
DEHP (Di- (2-ethylhexyl) phthalate) (CAS No.: 117-81-7)			50	n.d.	1000

Note:

1. mg/kg = ppm; 0.1wt% = 1000ppm

2. n.d. = Not Detected

3. MDL = Method Detection Limit

4. " - " = Not Regulated

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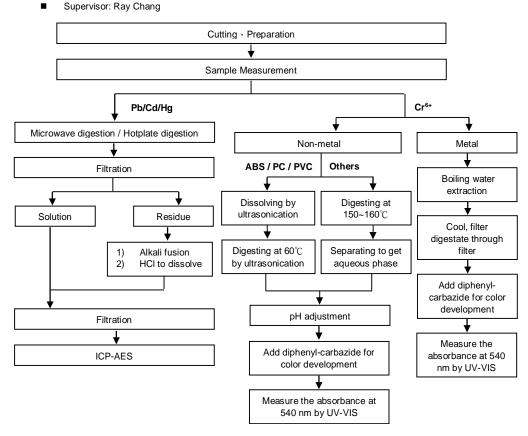
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Analytical flow chart of Heavy Metal

These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)

Technician: Jony Liu



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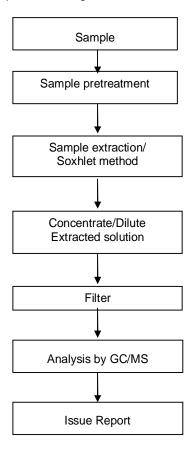


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PBB/PBDE analytical FLOW CHART

- 1) Name of the person who made measurement: Dorothy Chen
- 2) Name of the person in charge of measurement: Ray Chang



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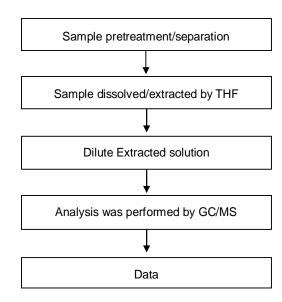
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Analytical flow chart of phthalate content

- Name of the person who made measurement: Dorothy Chen
- Name of the person in charge of measurement: Ray Chang

[Test method: IEC 62321-8]



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* The tested sample / part is marked by an arrow if it's shown on the photo. *

KA/2018/10189



** End of Report **

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