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The results relate only to the item tested.

TEST REPORT

Number: BKKH13101467

Applicant: V.POWDERTECH CO., LTD.
1/58 MOO 2, SAMUTSAKORN INDUSTRIAL ESTATE,
RAMA II RD., T. THA SAI, A. MUANG SAMUTSAKORN,
SAMUTSAKORN THAILAND 74000
ATTN: K.KOMANAT

Date: May 17, 2013

Sample description:

One (1) bag of submitted sample said to be Powder Coating Code

E10001FN	P40134AN	P90709AN	S89076TN
E10001XN	P40136AN	P90757DN	S90276BN
E10041AN	P40139AN	P91035BN	S90281TN
E10049BN	P50010AN	P98002BN	S90489DN
E30346FN	P50455BN	P98088BN	S90507TN
E50416AN	P60453AN	P98089BN	S90536FN
E70636AN	P70315AN	P98096BN	S91029TN
P00000AC	P70594BN	S00007BN	VP00284AN
P00002AN	P70600AN	S00016AN	VP00322AN
P00006AN	P70641WN	S00023AN	VP00326AN
P00055AN	P80002AN	S00239AN	VP00330AN
P00075BN	P80011AN	S00240AN	VP10034BN
P00140AN	P80028AN	S00272BN	
P00181AN	P80051AN	S00317AN	
P00184BN	P80057AN	S00319AN	
P00302AN	P80156AN	S08025FN	
P00305BN	P90025AN	S10001BN	
P08019AN	P90097BN	S18001FN	
P10001AN	P90098AN	S18039FN	
P10001DN	P90403BN	S30110AN	
P10057CN	P90480BN	S50484AN	
P18011DN	P90522AN	S60040AN	
P20241XN	P90555AN	S70071BN	
P30089BN	P90597AN	S70534AN	
P30111AN	P90700DN	S70665BN	

Total 87 codes

Date sample received: May 10, 2013
Testing period: May 10, 2013 to May 16, 2013

To be continued.

Authorized by :
For Intertek Testing Services (Thailand)

Ladtaka Wongwiboonporn
Laboratory Manager
Toys & Hardlines Division



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Test conducted:

As requested by the applicant, for details please refer to attached page(s)
Type of test: RoHS wet chemical analysis

Conclusion:

<u>Tested samples</u>	<u>Standard</u>	<u>Result</u>
Submitted samples	With reference to test method of IEC 62321 - Edition 1.0 : 2008 and limits quoted from RoHS Directives 2011/65/EU	Pass



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Test conducted:

(A) Test result summary:

Testing item	Result (mg/kg)
	Submitted samples
Cadmium (Cd) Content	<2
Lead (Pb) Content	37
Mercury (Hg) Content	<2
Chromium VI (Cr ⁶⁺) Content	<1
Polybrominated Biphenyls (PBBs)	
Monobromobiphenyl (MonoBB)	<5
Dibromobiphenyl (DiBB)	<5
Tribromobiphenyl (TriBB)	<5
Tetrabromobiphenyl (TetraBB)	<5
Pentabromobiphenyl (PentaBB)	<5
Hexabromobiphenyl (HexaBB)	<5
Heptabromobiphenyl (HeptaBB)	<5
Octabromobiphenyl (OctaBB)	<5
Nonabromobiphenyl (NonaBB)	<5
Decabromobiphenyl (DecaBB)	<5
Sum. of Polybrominated Biphenyls (PBBs)	<5
Polybrominated Diphenyl Ethers (PBDEs)	
Monobromodiphenyl Ether (MonoBDE)	<5
Dibromodiphenyl Ether (DiBDE)	<5
Tribromodiphenyl Ether (TriBDE)	<5
Tetrabromodiphenyl Ether (TetraBDE)	<5
Pentabromodiphenyl Ether (PentaBDE)	<5
Hexabromodiphenyl Ether (HexaBDE)	<5
Heptabromodiphenyl Ether (HeptaBDE)	<5
Octabromodiphenyl Ether (OctaBDE)	<5
Nonabromodiphenyl Ether (NonaBDE)	<5
Decabromodiphenyl Ether (DecaBDE)	<5
Sum. of Polybrominated Diphenyl Ethers (PBDEs)	<5

Name of operation: Kritsana T.

Remark: mg/kg = Milligram per kilogram based on weight of sample = ppm
< = Less than



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Test conducted:

Tested component: Green material

(B) RoHS Requirement:

Restricted substances	Limits
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium VI (Cr ⁶⁺)	0.1% (1000 mg/kg)
Polybrominated Biphenyls (PBBs)	0.1% (1000 mg/kg)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 mg/kg)

The above limits were quoted from 2011/65/EU for homogeneous material.

(C) Test method:

Testing item	Testing method	Reporting limit
Cadmium (Cd) Content	With reference to IEC 62321 Edition 1.0 : 2008 Clause 8, by acid digestion and determined by ICP-OES	2 mg/kg
Lead (Pb) Content	With reference to IEC 62321 Edition 1.0 : 2008 Clause 8, by acid digestion and determined by ICP-OES	2 mg/kg
Mercury (Hg) Content	With reference to IEC 62321 Edition 1.0 : 2008 Clause 7, by acid digestion and determined by ICP-OES	2 mg/kg
Chromium VI (Cr ⁶⁺) Content	With reference to IEC 62321 Edition 1.0 : 2008 Annex C, by alkaline digestion and determined by UV-VIS spectrophotometer	1 mg/kg
Polybrominated Biphenyls (PBBs) & Polybrominated Diphenyl Ethers (PBDEs)	In-house method based on IEC 62321 Edition 1.0 : 2008 Annex A, by solvent extraction and determined by GC/MS and further HPLC confirmation when necessary	5 mg/kg

Remark: Reporting limit = Quantitation limit of analyte in sample



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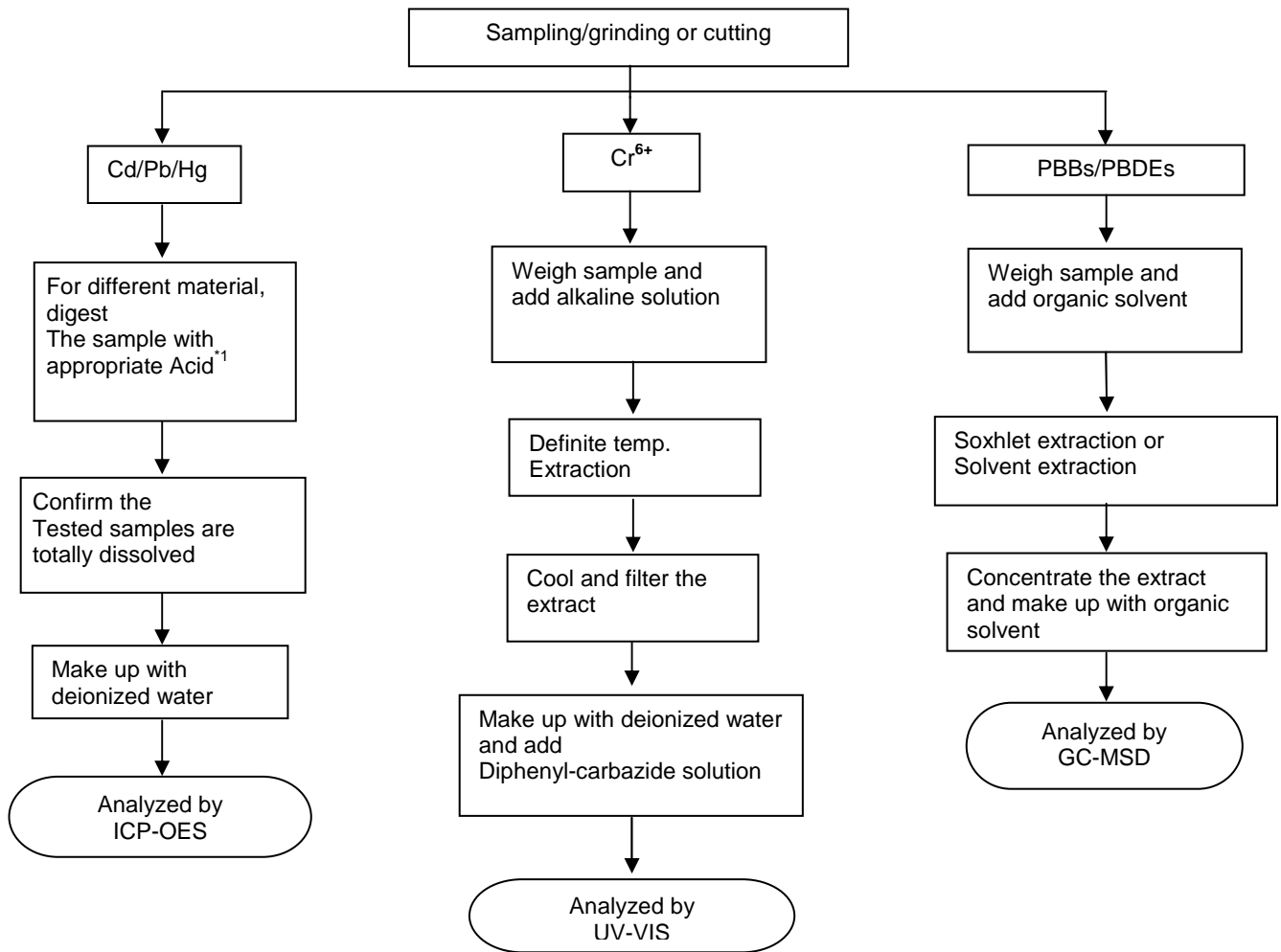
Number: BKKH13101467

Test conducted:

(D) Measurement Flowchart

Test for Cd/Pb/Hg/Chromium VI/PBBs/PBDEs Contents

Reference Standard: IEC 62321 - Edition 1.0: 2008



Remark:

*1: list of appropriate Acid:

Material	Acid added for digestion
Polymers	HNO ₃ , HCl, H ₂ O ₂

***** E N D *****/NS/NK
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