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The results relate only to the item tested.

TEST REPORT

Number: BKKH13101468

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 16, 2013

Sample description:

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

M00001AN	M24004AN	M90079WN	R40127BN
M00024TN	M30118AN	M90079BN	R50185AN
M00035AN	M40092AN	M90126BN	R60487CN
M00049AN	M48011AN	M90127AN	R60493AN
M00166AN	M50015AN	M90209CN	R70511BN
M00259AN	M50078AN	M90246WN	R70573BN
M04002AN	M50087AN	M90249BN	R70664BN
M04006AN	M50088AN	M90328WN	R70678CN
M04007AN	M50088GN	M90515AN	R84006AN
M04170AN	M50170AN	M90552WN	R91046AN
M04251BN	M54023AN	M90621BN	
M08172BN	M60411AN	M94014AN	
M10001AN	M60262TN	M94022AN	
M10003TN	M70010AN	M94058AN	
M10062AN	M70094AN	M98659BN	
M10065TN	M70460CN	R00075BN	
M10080AN	M80041AN	R00140AN	
M10103TN	M89021BN	R00256AN	
M14001AN	M89024AN	R10001BN	
M18032AN	M89028AN	R10051TN	
M18035AN	M89032AN	R10055DN	
M20004AN	M89110CN	R10084CN	
M20006AN	M89119TN	R20145AN	
M20179AN	M90051WN	R20188AN	
M20201AN	M90058AN	R40119CN	

Total 85 codes

Date sample received: May 10, 2013
Testing period: May 10, 2013 to May 15, 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	<2
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: Gray/Red 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

TEST REPORT

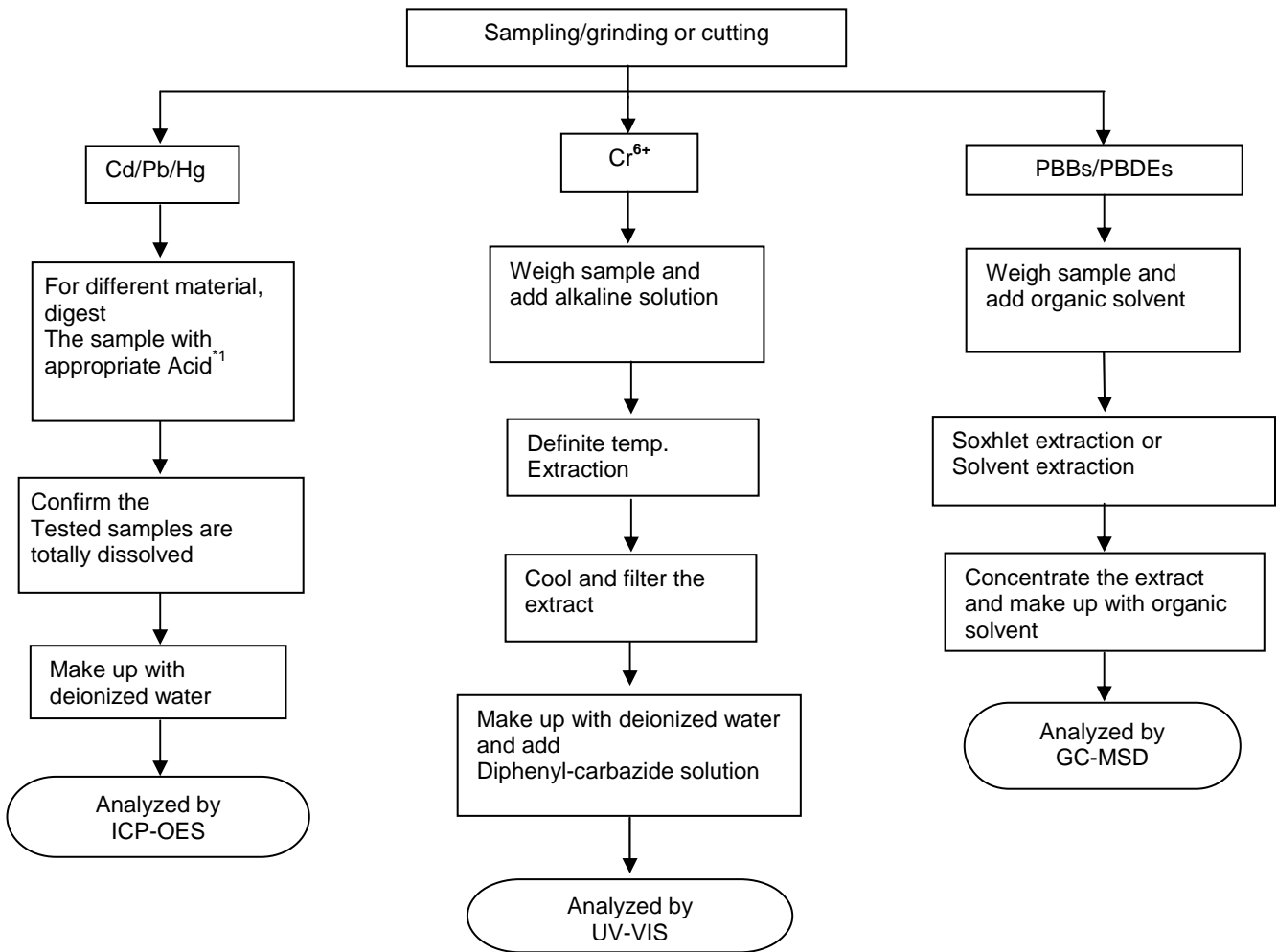
Number: BKKH13101468

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/NAS
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