

**TEST REPORT**

NUMBER : DELH22006562  
DATE: : 31<sup>ST</sup> MAY, 2022



**ORIGINAL SAMPLE**

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NUMBER : DELH22006562  
DATE: : 31<sup>ST</sup> MAY, 2022

**APPLICANT: VISHAL PAPER MILLS PVT. LTD.**  
SANGRUR ROAD, MALERKOTLA- 148023

**ATTN: Ms. FARHEEN**

**SAMPLE DESCRIPTION : THE SUBMITTED SAMPLE SAID TO BE – EMPEROR GREY**

TESTED COMPONENT:  
[1] EMPEROR GREY

DATE RECEIVED : 25<sup>TH</sup> MAY, 2022  
TEST PERFORMANCE DATE : 26<sup>TH</sup> MAY, 2022 TO 30<sup>TH</sup> MAY, 2022  
BUYER'S NAME : --  
BUYING AGENT/ CONTACT : --  
ARTICLE/REF NO : --  
GRADE : --  
COLOR : GREY GREY  
REMARK : --  
MANUFACTURER'S NAME : --  
RAW MATERIAL SUPPLIER : --

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**TESTS CONDUCTED:** AS PER THE REQUEST BY THE APPLICANT.  
RoHS-10  
FOR FURTHER DETAILS PLEASE REFER TO THE ENCLOSED PAGE (S).

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STANDARD	RESULT
(1) (A) ROHS DIRECTIVE (2011/65/EU) RESTRICTION OF THE USE OF CERTAIN HAZARDOUS SUBSTANCES IN ELECTRICAL AND ELECTRONIC EQUIPMENT	<b>PASS</b>
(2) ROHS DIRECTIVE (2011/65/EU) AND AMENDMENT COMMISSION DELEGATED DIRECTIVE (EU) 2015/863 WITH EFFECTIVE FROM 22 JULY 2019 - PHTHALATE CONTENT	<b>PASS</b>

AUTHORIZED BY  
FOR INTERTEK INDIA PVT. LTD.



KAMAL SARDHANA  
ASST. MANAGER - HARDLINE

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**TEST CONDUCTED**

**Test Result Summary:**

Test Item	Unit	Test Method	Result	RL
			(1)	
<b>Heavy Metal</b>				
Cadmium (Cd) Content	ppm	With reference to IEC 62321-5: 2013, by microwave or acid digestion and determined by ICP-OES.	ND	5
Lead (Pb) Content	ppm	With reference to IEC 62321-5: 2013, by microwave or acid digestion and determined by ICP-OES.	22	5
Mercury (Hg) Content	ppm	With reference to IEC 62321-4:2013+AMD1:2017, by microwave or acid digestion and determined by ICP-OES.	ND	5
Chromium VI (Cr6+) Content	ppm	With reference to IEC 62321-7-2: 2017, organic solvent was used to dissolve or swell sample matrix, followed by alkaline digestion and determined by UV-Vis Spectrophotometer.	ND	5
Chromium VI (Cr6+) Content @	µg/ cm2	With reference to IEC 62321-7-1: 2015, by boiling water extraction and determined by UV-Vis Spectrophotometer or visual observation.	--	0.10

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Test Item	Unit	Test Method	Result	RL
			(1)	
<b>Polybrominated Biphenyls (PBBs)</b>				
Monobrominated Biphenyls (MonoBB)	ppm	With reference to IEC 62321-6: 2015, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.	ND	5
Dibrominated Biphenyls (DiBB)	ppm		ND	5
Tribrominated Biphenyls (TriBB)	ppm		ND	5
Tetrabrominated Biphenyls (TetraBB)	ppm		ND	5
Pentabrominated Biphenyls (PentaBB)	ppm		ND	5
Hexabrominated Biphenyls (HexaBB)	ppm		ND	5
Heptabrominated Biphenyls (HeptaBB)	ppm		ND	5
Octabrominated Biphenyls (OctaBB)	ppm		ND	5
Nonabrominated Biphenyls (NonaBB)	ppm		ND	5
Decabrominated Biphenyl (DecaBB)	ppm		ND	5
<b>Polybrominated Diphenyl Ethers (PBDEs)</b>				
Monobrominated Diphenyl Ethers (MonoBDE)	ppm	With reference to IEC 62321-6: 2015, by solvent extraction and determined by GC-MS and further HPLC-DAD confirmation when necessary.	ND	5
Dibrominated Diphenyl Ethers (DiBDE)	ppm		ND	5
Tribrominated Diphenyl Ethers (TriBDE)	ppm		ND	5
Tetrabrominated Diphenyl Ethers (TetraBDE)	ppm		ND	5
Pentabrominated Diphenyl Ethers (PentaBDE)	ppm		ND	5
Hexabrominated Diphenyl Ethers (HexaBDE)	ppm		ND	5
Heptabrominated Diphenyl Ethers (HeptaBDE)	ppm		ND	5
Octabrominated Diphenyl Ethers (OctaBDE)	ppm		ND	5
Nonabrominated Diphenyl Ethers (NonaBDE)	ppm		ND	5
Decabrominated Diphenyl Ether (DecaBDE)	ppm		ND	5

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Test Item	Unit	Test Method	Result	RL
			(1)	
<b>Phthalates</b>				
Di(2-ethylhexyl) Phthalate (DEHP)	ppm	With reference to IEC 62321-8:2017, by solvent extraction and determined by GC-MS.	ND	50
Dibutyl Phthalate (DBP)	ppm		ND	50
Benzyl Butyl Phthalate (BBP)	ppm		ND	50
Di isobutyl Phthalate (DIBP)	ppm		ND	50

Remarks: ppm = Parts per million based on weight of tested sample = mg/kg  
 ND = Not detected  
 RL = Reporting limit, quantitation limit of analyte in sample

@ The explanation of Chromium VI (Cr6+) analysis results

Colorimetric result	Qualitative Result	Explanation
< 0.10 µg/cm <sup>2</sup>	Negative	The result of sample is negative for Cr(VI). The sample coating is considered a non-Cr(VI) based coating.
≥ 0.10 µg/cm <sup>2</sup> and ≤ 0.13 µg/cm <sup>2</sup>	Inconclusive	The result of sample is considered to be inconclusive. If addition samples are available, recommend to add trials and get the average result for the final determination.
> 0.13 µg/cm <sup>2</sup>	Positive	The result of sample is positive for Cr(VI). The sample coating is considered to contain Cr(VI). A result expresses as Positive, while not an actual value, which indicates a visual observation was used.

**RoHS Limit**

Restricted Substances	Limits
Cadmium (Cd) content	0.01% (100ppm)
Lead (Pb) content	0.1% (1000ppm)
Mercury (Hg) content	0.1% (1000ppm)
Chromium VI (Cr6+) content	0.1% (1000ppm)
Polybrominated Biphenyls (PBBs)	0.1% (1000ppm)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000ppm)
Di(2-ethylhexyl) Phthalate (DEHP)	0.1% (1000ppm)
Dibutyl Phthalate (DBP)	0.1% (1000ppm)
Benzyl Butyl Phthalate (BBP)	0.1% (1000ppm)
Di isobutyl Phthalate (DIBP)	0.1% (1000ppm)

The limits were quoted from Annex II of 2011/65/EU and Amendment (EU) 2015/863 for homogeneous material.

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Measurement Flowchart:

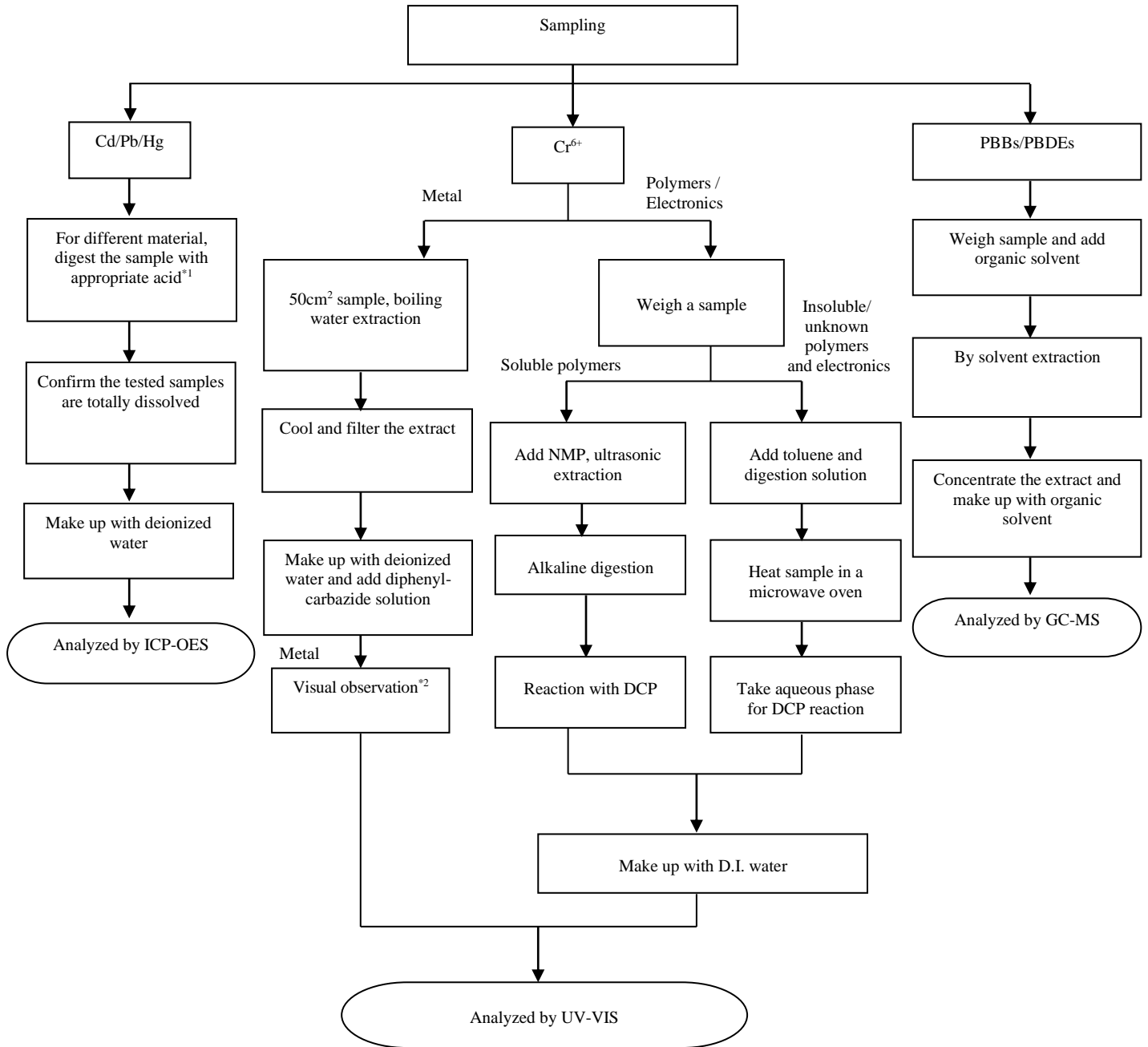
Test for Cd/Pb/Hg/Chromium (VI)/PBBs/PBDEs Content

Reference Standard : Cd/Pb: IEC 62321-5:2013; Hg: IEC 62321-4:2013+AMD1:2017;

Chromium (VI): IEC 62321-7-1:2015 (boiling water extraction);

Chromium (VI): IEC 62321-7-2:2017 (solvent and alkaline extraction);

PBBs/PBDEs: IEC 62321-6:2015



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**Remarks:**

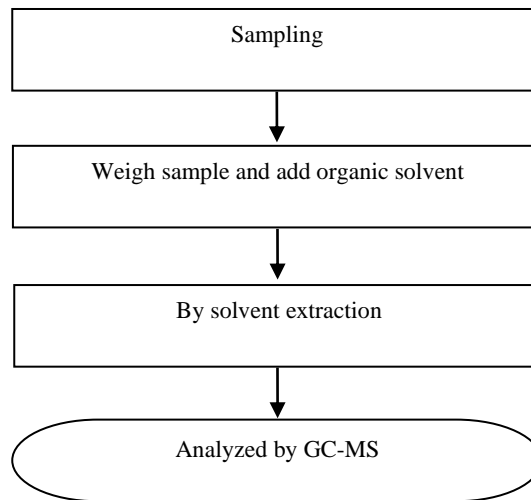
**\*1: List of Appropriate Acid :**

Material	Acid Added for Digestion
Polymers	HNO <sub>3</sub> ,HCl,HF,H <sub>2</sub> O <sub>2</sub> ,H <sub>3</sub> BO <sub>3</sub>
Metals	HNO <sub>3</sub> ,HCl,HF
Electronics	HNO <sub>3</sub> ,HCl,H <sub>2</sub> O <sub>2</sub> ,HBF <sub>4</sub>

\*2: If sample solution is significantly more intense than 0.13 µg/cm<sup>2</sup> equivalent comparison standard, Chromium VI would be determined as detected, the result of visual observation is positive.

**Measurement Flowchart:**

Test for Phthalates Content  
Reference Method: IEC 62321-8:2017



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**# END OF TEST REPORT #**  
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*This report is made solely on the basis of your instructions and/or information and materials supplied by you. It is not intended to be a recommendation for any particular course of action Intertek does not accept a duty of care or any other responsibility to any person other than the Client in respect of this report and only accepts liability to the Client insofar as is expressly contained in the terms and conditions governing Intertek's provision of services to you. Intertek makes no warranties or representations either express or implied with respect to this report save as provided for in those terms and conditions. We have aimed to conduct the Review on a diligent and careful basis and we do not accept any liability to you for any loss arising out of or in connection with this report, in contract, tort, by statute or otherwise, except in the event of our gross negligence or wilful misconduct.*