

# TEST REPORT

KOTITI NO. : 1614000051  
APPLICANT : KOLON PLASTIC CO., LTD.  
DATE IN : January 08, 2016  
DATE OUT : January 15, 2016

Sample Description	KP3855FB, KP3855FBBL
Sample Quantity	One (1) Sample(s)
Color(s) Submitted	Not Submitted
Buyer	Not Submitted
Item Number	Not Submitted
Material	KOPEL
Testing Period	January 08, 2016 ~ January 15, 2016
Test Result	For further details, please refer to the following page(s).

AUTHORIZED by :

*Young R. Kim*

DR. YOUNG RYUL KIM / PRESIDENT

REMARK: SEE ENCLOSED WORKSHEET(S) RESULT

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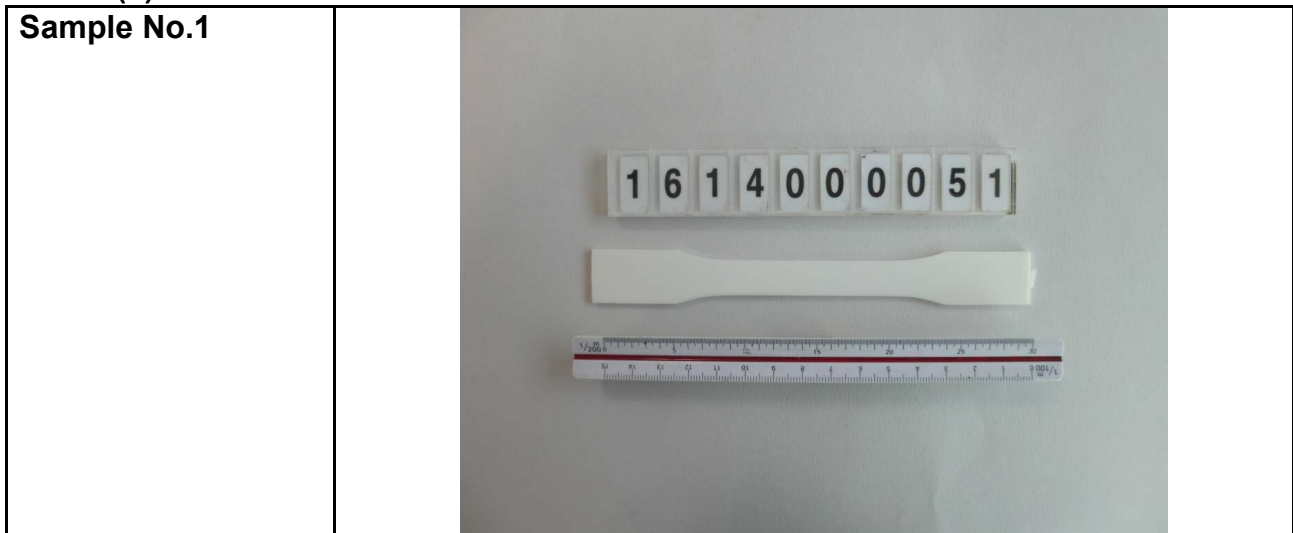
Tested Sample List:		
Sample No.	Sample Description	Material
1	KP3855FB, KP3855FBBL	KOPEL

Restriction of Hazardous Substances (EU Directive 2011/65/EU), Unit: mg/kg		
Test Item(s)	RL	Sample No.
		1
Lead (Pb)	5	N.D.
Mercury (Hg)	2	N.D.
Cadmium (Cd)	2	N.D.
Hexavalent Chromium (Cr <sup>6+</sup> )	1	N.D.

Test Item(s)	CAS-No.	RL	Sample No.
			1
Polybrominated Biphenyls (PBBs)			
Bromobiphenyl	92-66-0	5	N.D.
Dibromobiphenyl	92-86-4	5	N.D.
Tribromobiphenyl	59080-36-3	5	N.D.
Tetrabromobiphenyl	60044-24-8	5	N.D.
Pentabromobiphenyl	59080-39-6	5	N.D.
Hexabromobiphenyl	59080-40-9	5	N.D.
Heptabromobiphenyl	88700-06-5	5	N.D.
Octabromobiphenyl	32536-52-0	5	N.D.
Nonabromobiphenyl	248-637-5	5	N.D.
Decabromobiphenyl	13654-09-6	5	N.D.
Sum of PBBs	-	-	N.D.
Polybrominated Diphenyl Ethers (PBDEs)			
Bromodiphenyl ether	101-55-3	5	N.D.
Dibromodiphenyl ether	2050-47-7	5	N.D.
Tribromodiphenyl ether	41318-75-6	5	N.D.
Tetrabromodiphenyl ether	5436-43-1	5	N.D.
Pentabromodiphenyl ether	60348-60-9	5	N.D.
Hexabromodiphenyl ether	207122-15-4	5	N.D.
Heptabromodiphenyl ether	189084-67-1	5	N.D.
Octabromodiphenyl ether	337513-72-1	5	N.D.
Nonabromodiphenyl ether	63936-56-1	5	N.D.
Decabromodiphenyl ether	1163-19-5	5	N.D.
Sum of PBDEs	-	-	N.D.

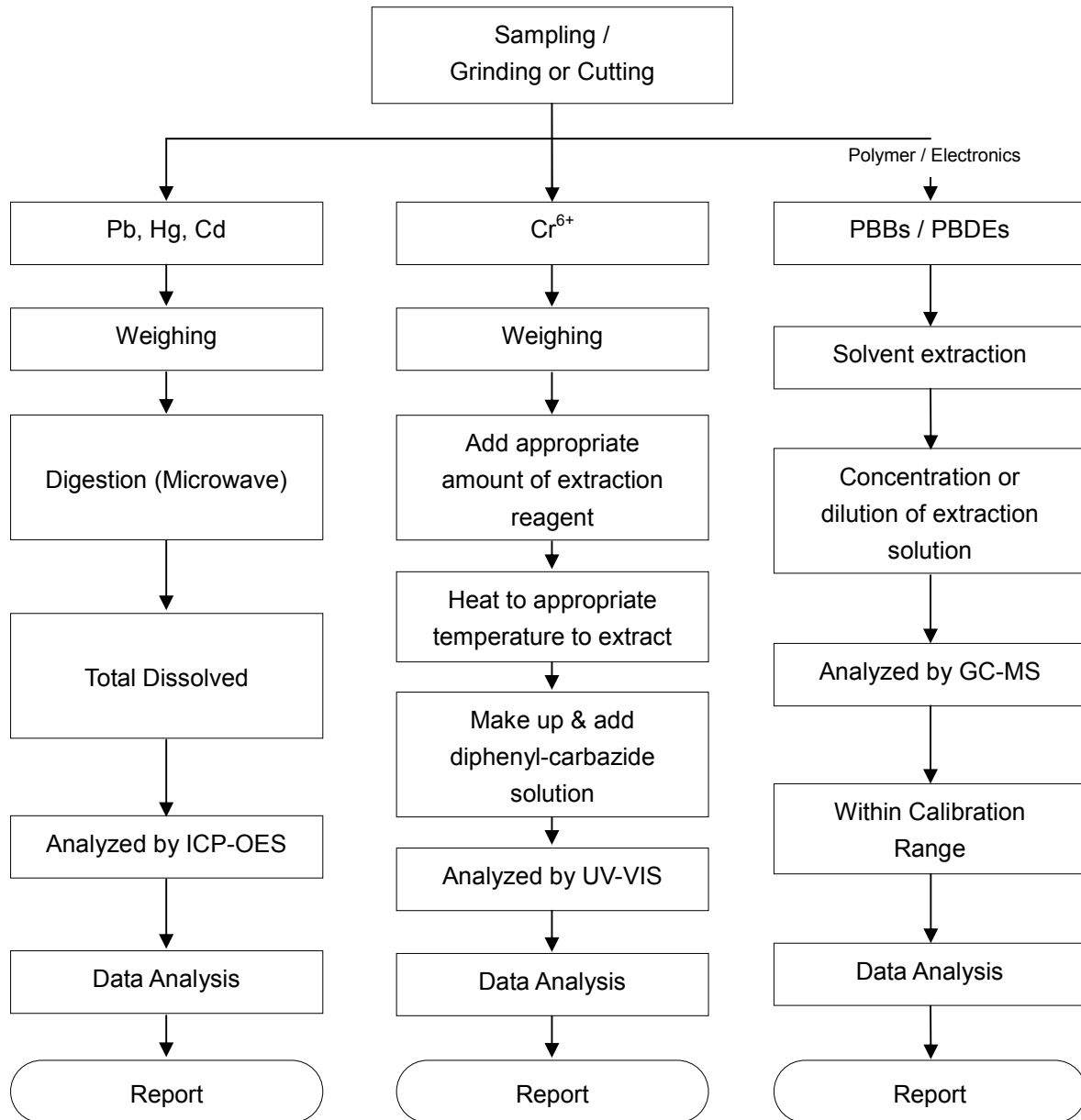
**Remark** 1) N.D. : Not Detected [< RL(Report Limit)]  
2) N.A. : Not Applicable  
3) Requirement : Pb, Hg, Cr<sup>6+</sup>, PBBs, PBDEs <1000 mg/kg  
Cd <100 mg/kg

**Test Method** 1) IEC 62321-5:2013 by acid digestion and determined by ICP-OES (Pb, Cd)  
2) IEC 62321-4:2013 by acid digestion and determined by ICP-OES (Hg)  
3) IEC 62321:2008 (Annex C) by alkaline digestion and determined by UV-VIS (Cr<sup>6+</sup>)  
4) IEC 62321:2008 (Annex B) by boiling water extraction and determined by UV-VIS (Cr<sup>6+</sup>)  
5) IEC 62321:2008 (Annex A) by solvent extraction and determined by GC-MS (PBBs, PBDEs)

**Picture(s)**

Flow Chart

**1. RoHS (Pb, Hg, Cd, Cr<sup>6+</sup>, PBBs/PBDEs)**



Material	Digestion Acid
Polymers	HNO <sub>3</sub> , HCl, HF, H <sub>2</sub> O <sub>2</sub> , H <sub>2</sub> SO <sub>4</sub> , etc.
Metals	HNO <sub>3</sub> , HCl
Electronics	HNO <sub>3</sub> , HCl, HF, H <sub>2</sub> O <sub>2</sub> , H <sub>2</sub> SO <sub>4</sub> , etc.