

TEST REPORT

KOTITI NO. : 1614000044 R
APPLICANT : KOLON PLASTIC CO., LTD.
DATE IN : January 08, 2016
DATE OUT : January 15, 2016

Sample Description	KN333HI2, KN333HI4, KN333HI5, KN333HI5OR , KN333HI5BL, KN333HI5BL1, KN333HI5GA, KN353HIBL, KN333HI5FA, KN333HI3BL-KF, KN333HI4BK, KN333HI4BKL, KN333HI4YE, KN333HIHSYE, KN333HI4BK1
Sample Quantity	One (1) Sample(s)
Color(s) Submitted	Not Submitted
Buyer	Not Submitted
Item Number	Not Submitted
Material	NYLON
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

Contact information for technical questions and general inquiries.

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Tested Sample List:		
Sample No.	Sample Description	Material
1	KN333HI2, KN333HI4, KN333HI5, KN333HI5OR , KN333HI5BL, KN333HI5BL1, KN333HI5GA, KN353HIBL, KN333HI5FA, KN333HI3BL-KF, KN333HI4BK, KN333HI4BKL, KN333HI4YE, KN333HIHSYE, KN333HI4BK1	NYLON

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 ⁶⁺)	1	N.D.

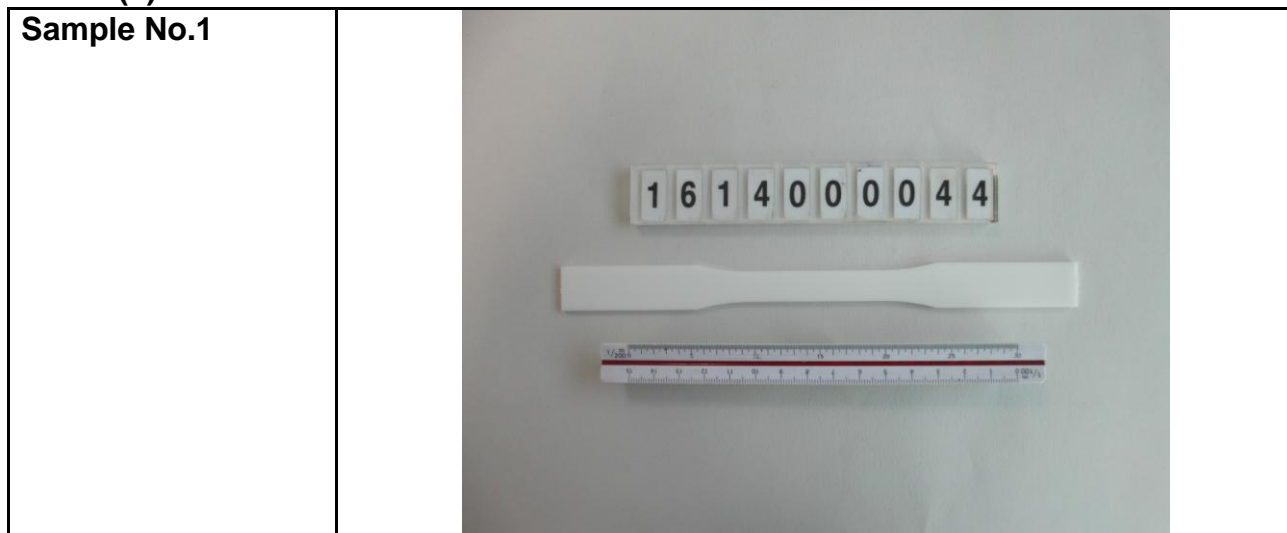
Test Item(s)	CAS-No.	RL	Sample No.
			1
Polybrominated Biphenyls (PBBs)			
Bromobiphenyl	92-66-0	5	N.D.
Dibromobiphenyl	92-86-4	5	N.D.
Tribromobiphenyl	59080-36-3	5	N.D.
Tetrabromobiphenyl	60044-24-8	5	N.D.
Pentabromobiphenyl	59080-39-6	5	N.D.
Hexabromobiphenyl	59080-40-9	5	N.D.
Heptabromobiphenyl	88700-06-5	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

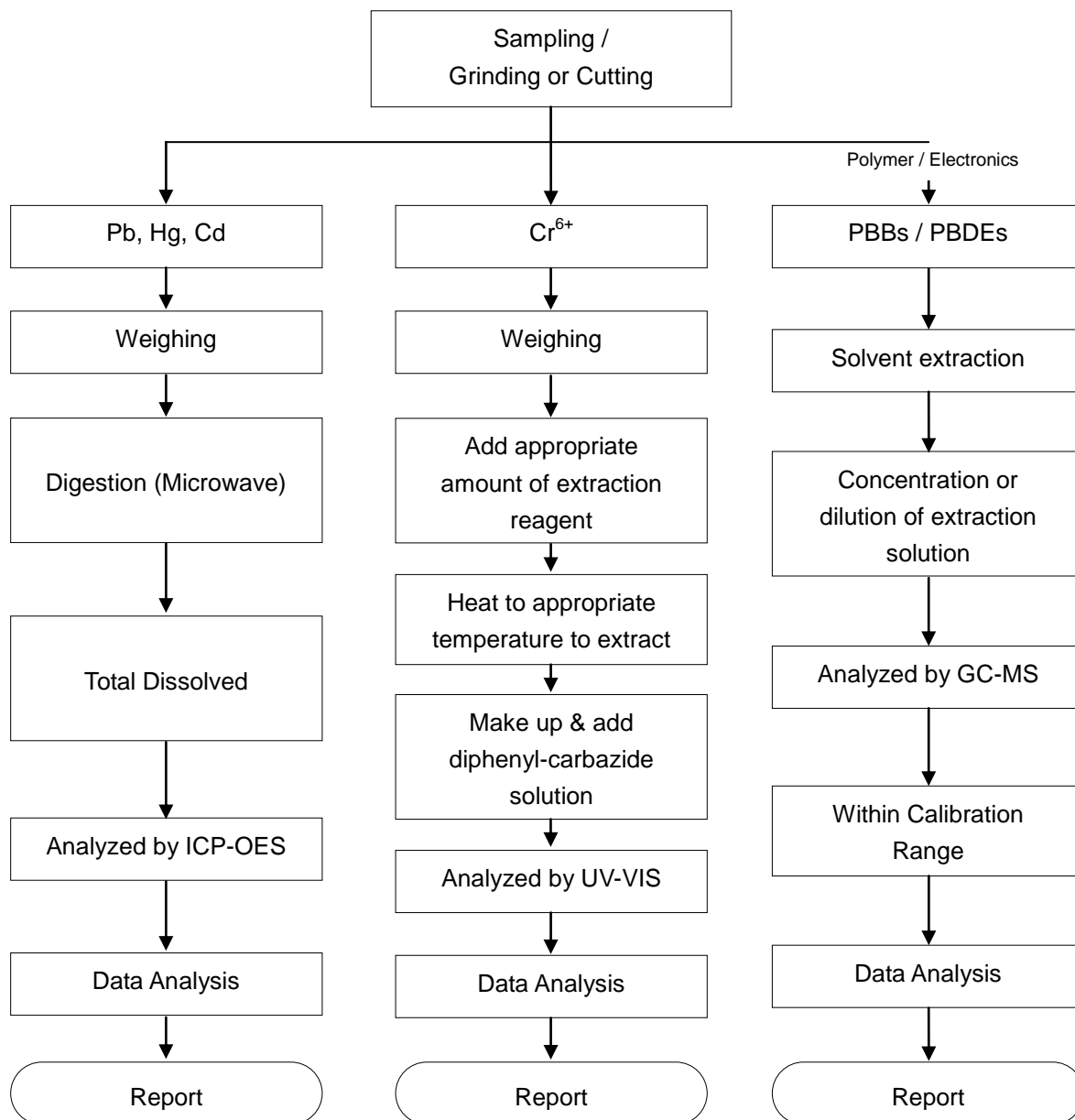
- 1) N.D. : Not Detected [$<$ RL(Report Limit)]
- 2) N.A. : Not Applicable
- 3) Requirement : Pb, Hg, Cr⁶⁺, PBBs, PBDEs $<$ 1000 mg/kg
Cd $<$ 100 mg/kg

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 (Cr⁶⁺)
- 4) IEC 62321:2008 (Annex B) by boiling water extraction and determined by UV-VIS (Cr⁶⁺)
- 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, Cr⁶⁺, PBBs/PBDEs)

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