

TEST REPORT

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REPORT NUMBER : TURT190049152
APPLICANT NAME : Kabkom Kimya San.Tic.A.Ş.
ADDRESS : Barbaros Mah. Dereboyu Cad. Varyap Meridian E Blok D:185
Ataşehir İstanbul / TURKEY

SAMPLE DESCRIPTION : One sample of HFFR SHEAT COMPOUND Granulle item
DATE IN : 15 March ,2019 (10:59:00)
DATE OUT : 20 March ,2019
REQUEST. RoHS Test was performed according to 2015/863/EU Directive.
RESULTS: See attachment

		CONCLUSION
PART	DESCRIPTION	
Sample 1	Sample	Pass

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PP



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(A) TEST RESULT SUMMARY ACCORDING TO IEC 62321

Electrotechnical Products-Determination of Levels of Six Regulated Substances

TESTING ITEM	RESULT
	Sample 1
	Part
Cadmium (Cd) Content	ND
Chromium VI (Cr+6) Content (ppm) (for non- metal)	ND
Chromium VI (Cr+6) Content (µg/cm ²) (for metal)	NA
Lead (Pb) Content	ND
Mercury (Hg) Content	ND
Flame Retardants	
Polybrominated Biphenyls (PBB)	ND
Monobromobiphenyl (MonoBB)	ND
Dibromobiphenyl (DiBB)	ND
Tribromobiphenyl (TriBB)	ND
Tetrabromobiphenyl (TetraBB)	ND
Pentabromobiphenyl (PentaBB)	ND
Hexabromobiphenyl (HexaBB)	ND
Heptabromobiphenyl (HeptaBB)	ND
Octabromobiphenyl (OctaBB)	ND
Nonabromobiphenyl (NonaBB)	ND
Decabromobiphenyl (DecaBB)	ND
Polybrominated Diphenyl Ethers (PBDE)	ND
Monobromodiphenyl Ether (MonoBDE)	ND
Dibromodiphenyl Ether (DiBDE)	ND
Tribromodiphenyl Ether (TriBDE)	ND
Tetrabromodiphenyl Ether (TetraBDE)	ND
Pentabromodiphenyl Ether (PentaBDE)	ND
Hexabromodiphenyl Ether (HexaBDE)	ND
Heptabromodiphenyl Ether (HeptaBDE)	ND
Octabromodiphenyl Ether (OctaBDE)	ND
Nonabromodiphenyl Ether (NonaBDE)	ND
Decabromodiphenyl Ether (DecaBDE)	ND

Remarks : ppm=Parts per million based on dry weight of sample

µg/cm²=Microgram per square centimetre

mg/kg with 50 cm²=Milligram per kilogram with 50 square centimetre

ND =Not detected NA =Not applicable NR =Not requested

Estimated Total Uncertainty = ((Heavy Metal: ±7% , PBB/PBDE: ±6%, Phthalates: ±6%))

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TESTING ITEM	RESULT
	Sample 1
	Part
Phthalates	
Dibutyl phthalate (DBP) (84-74-2)	ND
Di(2-ethylhexyl) phthalate (DEHP) (117-81-7)	ND
Benzyl butyl phthalate (BBP) (85-68-7)	ND
Diisobutyl Phthalate (DIBP) (84-69-5)	ND

Remarks : ppm=Parts per million based on dry weight of sample

µg/cm²=Microgram per square centimetremg/kg with 50 cm²=Milligram per kilogram with 50 square centimetre

ND =Not detected NA =Not applicable NR =Not requested

Estimated Total Uncertainty = ((Heavy Metal: ±7% , PBB/PBDE: ±6%, Phthalates: ±6%))

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(B) REQUIREMENT:

SUBSTANCE	LIMITS	
Cadmium (Cd) Content	0.01 % (100 ppm)	
Chromium VI (Cr+6) Content (ppm) (for non metal)	0.1 % (1000 ppm)	
Chromium VI (Cr+6) Content ($\mu\text{g}/\text{cm}^2$) (for metal)	<u>Colorimetric result</u>	<u>Qualitative Result</u>
	< 0.10 $\mu\text{g}/\text{cm}^2$	Negative
	$\geq 0.10 \mu\text{g}/\text{cm}^2$ and $\leq 0.13 \mu\text{g}/\text{cm}^2$	Inconclusive
	> 0.13 $\mu\text{g}/\text{cm}^2$	Positive
Lead (Pb) Content	0.1 % (1000 ppm)	
Mercury (Hg) Content	0.1 % (1000 ppm)	
Flame Retardants	0.1 % (1000 ppm)	
Dibutyl Phthalate (DBP)	0.1 % (1000 ppm)	
Diethyl Hexyl Phthalate (DEHP)	0.1 % (1000 ppm)	
Benzyl Butyl Phthalate (BBP)	0.1 % (1000 ppm)	
Diisobutyl Phthalate (DIBP)	0.1 % (1000 ppm)	

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(C) TEST METHOD :

Testing Item	Testing Method	Reporting Limit
Cadmium (Cd) Content	With reference to IEC 62321-5:2013, by microwave or acid digestion and determined by ICP-OES	Plastic : 2.5 ppm, Metal : 5 ppm, Ceramic : 1.25 ppm
Lead (Pb) Content	With reference to IEC 62321-5:2013, by microwave or acid digestion and determined by ICP-OES	Plastic : 5 ppm, Metal : 10 ppm, Ceramic : 2.5 ppm
Mercury (Hg) Content	With reference to IEC 62321-4:2017, by microwave or acid digestion and determined by ICP-OES	Plastic : 5 ppm, Metal : 10 ppm, Ceramic : 2.5 ppm
Chromium VI (Cr6+) (For non-metal)	With reference to IEC 62321-7-2:2017, by alkaline digestion and determined by UV-VIS spectrophotometer	Plastic : 25 ppm (PVC based) /8.33 ppm (other), Ceramic : 8.33 ppm
Chromium VI (Cr6+) (For metal)	With reference to IEC 62321-7-1:2015 , by boiling water extraction and determined by UV-VIS spectrophotometer	0.1 mg/kg with 50 cm ² (IN TESTING SOLUTION)
PBBs/PBDEs	With reference to IEC 62321-6:2015, by solvent extraction and determined by GC/MS and HPLC	5 ppm
Phthalates	With reference to IEC 62321-8 (111/321/CD), by solvent extraction and determined by GC-MS.	50 ppm

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Sample 1



END OF TEST REPORT