

**TEST REPORT**


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**REPORT NUMBER :** TURT190008148\_REVISED01  
**APPLICANT NAME :** Elsan Elektrik Gereçleri San. ve Tic. A.Ş.  
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**Attention :** İlyas Çağırın ( ilyas.cagiran@elsan-tr.com )  
**SAMPLE DESCRIPTION :** One sample of ALF120-ALF180H-ALF200HC-ALF200HCB-ALR180H-  
ALR200H-ALR200HC-ALR200HCB Metal wire  
**DATE IN :** 15 January ,2019 ( 11:29:00)  
**DATE OUT :** 18 January ,2019 /4 March ,2019  
**BUYER'S REGION :** EUROPE/AFRICA/ASIA/AMERICA  
**COUNTRY OF ORIGIN :** TURKEY  
**NOTE :** In this revised 01 report, Request information was corrected.  
This report replaced the report no TURT190008148 dated on 18 January, 2019 and must be used instead of it.  
Report no TURT190008148 dated on 18 January, 2019 is invalid.  
**REQUEST.** RoHS Test was performed according to 2015/863/EU Directive.  
**RESULTS:** See attachment


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

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

µg/cm<sup>2</sup>=Microgram per square centimetre

mg/kg with 50 cm<sup>2</sup>=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
<b>Phthalates</b>	
Dibutyl phthalate (DBP) (84-74-2)	NA
Di(2-ethylhexyl) phthalate (DEHP) (117-81-7)	NA
Benzyl butyl phthalate (BBP) (85-68-7)	NA
Diisobutyl Phthalate (DIBP) (84-69-5)	NA

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

µg/cm<sup>2</sup>=Microgram per square centimetremg/kg with 50 cm<sup>2</sup>=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 <sup>2</sup> (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



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##### END OF TEST REPORT ###