TEST REPORT

GÖKERMAK ELEKTROTEKNİK SAN. LTD. ŞTİ
FINDIKLI MAH BASIBUYUK YOLU CAD NO 133 DAIRE 7 8 34854 MALTEPE İSTANBUL
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To the attention of Yavuz Selim Goktug

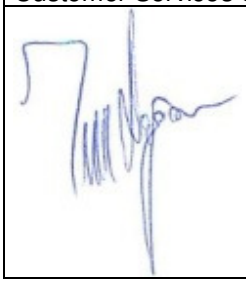
The following sample(s) was /were submitted and identified by/on behalf of the clients as:

Sample Submitted By	:	GÖKERMAK ELEKTROTEKNİK SAN. LTD. ŞTİ
Sample Description	:	KABLO BAĞLANTI ELEMANI
Article No.	:	Not Provided
Model No.	:	K 012 N,K 012 A, K 012 N DS,K 012 A DS, KS 112 N,KS 112 A, KS 112 N DS,KS 112 A DS, KS 212 N,KS 212 A, KS 212 N DS,KS 212 A DS, KG 63 D, KG 63 E, KG 16 D/3 ,KG 16 E/3
PO / Order No.	:	Not Provided
Reference No.	:	Not Provided
Client	:	Not Provided
End Use	:	Not Provided
Sample Receiving Date	:	3 October 2018
Testing Period	:	3 October 2018 ~ 12 October 2018
Service Type	:	NORMAL
Test Requested	:	Selected test(s) as requested by client.
Test Method	:	Please refer to next page(s)
Test Result(s)	:	Please refer to next page(s)

Conclusion	:	Based on the performed tests on selected part of submitted sample(s), the result does not comply with the limits in Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

The test results relate to the tested items only.
Test reports without SGS seal and authorized signatures are invalid.
Reported results do not include uncertainties.

Issued in Istanbul
Signed for and on behalf of
SGS Supervise Gözetme Etüd
Kontrol Servisleri A.Ş.

Tuğrul Doğan Customer Services Supervisor	Ayşe Gönen Customer Services Team Leader
	

Test Part Description :

A1 White plastic main
A2 Black metal screw
A3 Silver metal screw
A4: Silver metal inside body
B1: Brown plastic main
B2 Silver metal inside body
B3 Silver metal screw
B4 Silver metal inside spring
C1 Plastic Light grey plastic main
C2 Silver metal inside body
C3 Silver metal screw
C4: Silver metal inside spring
D1 Black plastic main
D2 Gold metal inside body
D3 Silver metal screw

Flame Retardants (ROHS)[1]

Test Method: With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.

Test Item(s):	Unit	Results				MDL	Limit
		A1	**B1**	**C1**	**D1**		
Sum of PBBs	mg/kg	n.d.	n.d.	n.d.	n.d.	-	1000
Monobromobiphenyl	mg/kg	n.d.	n.d.	n.d.	n.d.	5	-
Dibromobiphenyl	mg/kg	n.d.	n.d.	n.d.	n.d.	5	-
Tribromobiphenyl	mg/kg	n.d.	n.d.	n.d.	n.d.	5	-
Tetrabromobiphenyl	mg/kg	n.d.	n.d.	n.d.	n.d.	5	-
Hexabromobiphenyl	mg/kg	n.d.	n.d.	n.d.	n.d.	5	-
Pentabromobiphenyl	mg/kg	n.d.	n.d.	n.d.	n.d.	5	-
Heptabromobiphenyl	mg/kg	n.d.	n.d.	n.d.	n.d.	5	-
Octabromobiphenyl	mg/kg	n.d.	n.d.	n.d.	n.d.	5	-
Nonabromobiphenyl	mg/kg	n.d.	n.d.	n.d.	n.d.	5	-
Decabromobiphenyl	mg/kg	n.d.	n.d.	n.d.	n.d.	5	-

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Test Item(s):	Unit	Results				MDL	Limit
		A1	**B1**	**C1**	**D1**		
Sum of PBDEs	mg/kg	n.d.	n.d.	n.d.	n.d.	-	1000
Monobromodiphenyl ether	mg/kg	n.d.	n.d.	n.d.	n.d.	5	-
Dibromodiphenyl ether	mg/kg	n.d.	n.d.	n.d.	n.d.	5	-
Tribromodiphenyl ether	mg/kg	n.d.	n.d.	n.d.	n.d.	5	-
Tetrabromodiphenyl ether	mg/kg	n.d.	n.d.	n.d.	n.d.	5	-
Hexabromodiphenyl ether	mg/kg	n.d.	n.d.	n.d.	n.d.	5	-
Pentabromodiphenyl ether	mg/kg	n.d.	n.d.	n.d.	n.d.	5	-
Heptabromodiphenyl ether	mg/kg	n.d.	n.d.	n.d.	n.d.	5	-
Octabromodiphenyl ether	mg/kg	n.d.	n.d.	n.d.	n.d.	5	-
Nonabromodiphenyl ether	mg/kg	n.d.	n.d.	n.d.	n.d.	5	-
Decabromodiphenyl ether	mg/kg	n.d.	n.d.	n.d.	n.d.	5	-

(a) mg/kg = ppm ; 0.1wt % = 1000 ppm
(b) n.d. = Not Detected
(c) MDL = Method Detection Limit
(d) " - " = Not Regulated
The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
IEC 62321 series is equivalent to EN 62321 series
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Heavy Metals (ROHS)[1]

Test Method:

1) With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.
2) With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.
3) With reference to IEC 62321-4:2013+A1:2017, determination of Mercury by ICP-OES.

Test Item(s):	Unit	Results			MDL	Limit
		A1	**C1**	**D1**		
Cadmium (Cd)	mg/kg	n.d.	n.d.	n.d.	2	100
Lead (Pb)	mg/kg	n.d.	n.d.	n.d.	2	1000
Mercury (Hg)	mg/kg	n.d.	n.d.	n.d.	2	1000
Hexavalent Chromium (CrVI)	mg/kg	n.d.*	n.d.*	n.d.*	8	1000

(a) mg/kg = ppm ; 0.1wt % = 1000 ppm
(b) n.d. = Not Detected
(c) MDL = Method Detection Limit
(d) " * " = Test result for Chromium VI is considered as "n.d" since Total Chromium is not found by IEC 62321 test method.
(e) " - " = Not Regulated

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2) With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.
3) With reference to IEC 62321-4:2013+A1:2017, determination of Mercury by ICP-OES.
4) With reference to IEC 62321-7-2:2017, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis.

Test Item(s):	Unit	Results	MDL	Limit
		B1		
Cadmium (Cd)	mg/kg	n.d.	2	100
Lead (Pb)	mg/kg	5,7 mg/kg	2	1000
Mercury (Hg)	mg/kg	n.d.	2	1000
Hexavalent Chromium (CrVI)	mg/kg	n.d.	8	1000

(a) mg/kg = ppm ; 0.1wt % = 1000 ppm
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4) With reference to IEC 62321-7-1:2015, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis.

Test Item(s):	Unit	Results		MDL	Limit
		A2	**A3**		
Cadmium (Cd)	mg/kg	n.d.	n.d.	2	100
Lead (Pb)	mg/kg	n.d.	16 mg/kg	2	1000
Mercury (Hg)	mg/kg	n.d.	n.d.	2	1000
Hexavalent Chromium (CrVI)	$\mu g/cm^2$	7,9 $\mu g/cm^2$	n.d.	0.10	#

(a) mg/kg = ppm ; 0.1wt % = 1000 ppm
(b) n.d. = Not Detected
(c) MDL = Method Detection Limit
(d) # = a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 $\mu g/cm^2$. The sample coating is considered to contain CrVI

b. The sample is negative for CrVI if CrVI is n.d. (concentration less than 0.10 $\mu g/cm^2$). The coating is considered a non-CrVI based coating

c.The result between 0.10 $\mu g/cm^2$ and 0.13 $\mu g/cm^2$ is considered to be inconclusive - unavoidable coating variations may influence the determination

Information on storage conditions and production date of the tested sample is unavailable and thus results of Cr(VI) represent status of the sample at the time of testing represent status of the sample at the time of testing

(e) - = not regulated

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3) With reference to IEC 62321-4:2013+A1:2017, determination of Mercury by ICP-OES.
4) With reference to IEC 62321-7-1:2015, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis.

Test Item(s):	Unit	Results		MDL	Limit
		B3	**B4**		
Cadmium (Cd)	mg/kg	n.d.	n.d.	2	100
Lead (Pb)	mg/kg	n.d.	2,4 mg/kg	2	1000
Mercury (Hg)	mg/kg	n.d.	n.d.	2	1000
Hexavalent Chromium (CrVI)	$\mu g/cm^2$	n.d.	n.d.	0.10	#

(a) mg/kg = ppm ; 0.1wt % = 1000 ppm
(b) n.d. = Not Detected
(c) MDL = Method Detection Limit
(d) # = a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 $\mu g/cm^2$. The sample coating is considered to contain CrVI

b. The sample is negative for CrVI if CrVI is n.d. (concentration less than 0.10 $\mu g/cm^2$). The coating is considered a non-CrVI based coating

c.The result between 0.10 $\mu g/cm^2$ and 0.13 $\mu g/cm^2$ is considered to be inconclusive - unavoidable coating variations may influence the determination

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3) With reference to IEC 62321-4:2013+A1:2017, determination of Mercury by ICP-OES.
4) With reference to IEC 62321-7-1:2015, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis.

Test Item(s):	Unit	Results		MDL	Limit
		C3	**C4**		
Cadmium (Cd)	mg/kg	n.d.	n.d.	2	100
Lead (Pb)	mg/kg	4,3 mg/kg	n.d.	2	1000
Mercury (Hg)	mg/kg	n.d.	n.d.	2	1000
Hexavalent Chromium (CrVI)	$\mu g/cm^2$	n.d.	n.d.	0.10	#

(a) mg/kg = ppm ; 0.1wt % = 1000 ppm
(b) n.d. = Not Detected
(c) MDL = Method Detection Limit
(d) # = a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 $\mu g/cm^2$. The sample coating is considered to contain CrVI

b. The sample is negative for CrVI if CrVI is n.d. (concentration less than 0.10 $\mu g/cm^2$). The coating is considered a non-CrVI based coating

c.The result between 0.10 $\mu g/cm^2$ and 0.13 $\mu g/cm^2$ is considered to be inconclusive - unavoidable coating variations may influence the determination

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3) With reference to IEC 62321-4:2013+A1:2017, determination of Mercury by ICP-OES.
4) With reference to IEC 62321-7-1:2015, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis.

Test Item(s):	Unit	Results	MDL	Limit
		D3		
Cadmium (Cd)	mg/kg	n.d.	2	100
Lead (Pb)	mg/kg	2,3 mg/kg	2	1000
Mercury (Hg)	mg/kg	n.d.	2	1000
Hexavalent Chromium (CrVI)	$\mu g/cm^2$	n.d.	0.10	#

(a) mg/kg = ppm ; 0.1wt % = 1000 ppm
(b) n.d. = Not Detected
(c) MDL = Method Detection Limit
(d) # = a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 $\mu g/cm^2$. The sample coating is considered to contain CrVI
b. The sample is negative for CrVI if CrVI is n.d. (concentration less than 0.10 $\mu g/cm^2$). The coating is considered a non-CrVI based coating
c.The result between 0.10 $\mu g/cm^2$ and 0.13 $\mu g/cm^2$ is considered to be inconclusive - unavoidable coating variations may influence the determination

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4) With reference to IEC 62321-7-1:2015, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis.

Test Item(s):	Unit	Results				MDL	Limit
		A4*	**B2***	**C2***	**D2***		
Cadmium (Cd)	mg/kg	20 mg/kg	16 mg/kg	16 mg/kg	9,9 mg/kg	2	100
Lead (Pb)	mg/kg	28100 mg/kg	30500 mg/kg	30900 mg/kg	30700 mg/kg	2	40000
Mercury (Hg)	mg/kg	n.d.	n.d.	n.d.	n.d.	2	1000
Hexavalent Chromium (CrVI)	$\mu g/cm^2$	n.d.	n.d.	n.d.	n.d.	0.10	#

(a) mg/kg = ppm ; 0.1wt % = 1000 ppm
(b) n.d. = Not Detected
(c) MDL = Method Detection Limit
(d) # = a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 $\mu g/cm^2$. The sample coating is considered to contain CrVI

b. The sample is negative for CrVI if CrVI is n.d. (concentration less than 0.10 $\mu g/cm^2$). The coating is considered a non-CrVI based coating

c.The result between 0.10 $\mu g/cm^2$ and 0.13 $\mu g/cm^2$ is considered to be inconclusive - unavoidable coating variations may influence the determination

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*6(c) - Copper alloy containing up to 4 % lead by weight.

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* * * End of Test Report * * *

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