TÜRKAK
Test
TS EN ISO/IEC 17025
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Deney Raporu
Test report

Müşterinin adı/adresi Costumer name/address	IŞIK MADENCİLİK SAN.VE TİC. LTD.ŞTİ. / BAKSAN SAN. BÖL. 73/8 ESKİŞEHİR
Alıcı Adı Buyer name	/
Sipariş/Artikel Numarası Order/Article No.	/
Numunenin adı ve tarifi Name and identity of test item	TALK 93 SUPER EXTRA
Numunenin kabul tarihi Date of receipt of test item	2017-08-04
Açıklamalar Remarks	The results given in this test report belong to the received sample by vendor.
Proje tarihi Project date	2017-08-08 - 2017-08-14
Raporun Sayfa Sayısı Number of pages of the Report	8
Test Kapsamı Test Scope	RoHS Directive in electrical and electronic equipment 2011/65/EU & Turkish Official Journal (issue 26891) Waste Electrical and Electronic Equipment Directive (issue 28300 Official Journal)
Test Sonucu Test Result	PASS

Türk Akreditasyon kurumu (TÜRKAK) deney raporlarının tanınması konusunda Avrupa Akreditasyon Birliği (EA) ve Uluslar arası Laboratuar Akreditasyon Birliği (ILAC) ile karşılıklı tanınma anlaşmasını imzalamıştır.
The Turkish Accreditation Acency (TÜRKAK) is signatory to the multilateral agreements of the European co-operation for the Accreditation (EA) and of the International Laboratory Accreditation (ILAC) for the Mutual recognation of the test reports.
Deney ve /veya ölçüm sonuçları, genişletilmiş ölçüm belirsizlikleri (olması halinde) ve deney metodları bu sertifikanın tamamlayıcı kısmı olan takip eden sayfalarda verilmiştir.
The test and/or measurement results, the uncertainties (if applicable) with confidence probability and test methods are given on the following, pages which are part of this report.

Tarih Date	***Customer Relations Manager***	***Chemical Laboratory Manager***
2017-08-14	Tomris Hasançebi	Duygu Ozturk

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Material List:

Material No.	Material	Color	Location
M001	Powder	-	TALK 93 SUPER EXTRA

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1.(HM) Cadmium, Lead, Chromium (VI), Mercury, Polybrominated biphenyls (PBB) and Polybrominated diphenyl ethers (PBDE)

Test Method: Total Cadmium, Lead, Mercury, Chromium
- Ref. to IEC 62321-4:2013 and IEC 62321-5:2013

Chromium (VI)
- For Metal material - Ref. to IEC 62321-7-1:2015
- For Plastic or Electronic material - Ref. to IEC 62321:2008 Annex C
- For Leather material - Ref. to ISO 17075:2007

PBBs, PBDEs - Ref. to IEC 62321-6:2015

Material List:

Material No.	Material	Color	Location	Test plan A = Test HM only B = Test FR only C = Test HM + FR
M001	Powder	-	TALK 93 SUPER EXTRA	C

Abbreviation: HM (Heavy metal) = Cd, Pb, Hg, Cr (VI)
FR (Flame Retardant) = PBBs, PBDEs

Remark :

1. Component(s)/ materials(s) with an area of less than 2mm x2 mm will not be selected for testing according to RoHS Directive 2011/65/EU due to technical reason.
2. For the test sample does not have detail materials information provided by client, visually identical materials (e.g. wire insulation, solder points, etc.) will be considered as the same material.
3. Solder points on a printing circuit board will be examined several times based on optical anomalies or discoloration of the solder point(s) unless the solder point(s) is obviously generated automatically during production.
4. All other materials will be sampled and tested at one test point representatively.

Test Result:

	Cd	Cr(VI)	Pb	Hg	PBBs (*)	PBDEs (*)
Maximum Permissible Limit (mg/kg)	100	1000	1000	1000	1000	1000

Material No.	(mg/kg)					
	Cd	Cr^	Pb	Hg	PBBs (*)	PBDEs (*)
	RL (mg/kg)					
	10	10	10	10	100	100
M001	n.d.	115.9	20.6	n.d.	n.d.	n.d.

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Abbreviation: Pb = Lead
Cd = Cadmium
Hg = Mercury
Cr = Chromium
Cr (VI) = Chromium (VI)
PBBs = Total Polybrominated Biphenyls
PBDEs = Total Polybrominated Diphenyl Ethers
n.d. = Not Detected (<RL)
RL = Reporting Limit
n.a. = Not Applicable
^ = The total Chromium have been determined
mg/kg = milligram per kilogram

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Remark:

*1 The reporting limit is scaled up to 50mg/kg due to sample size < 0.1 g.

*2 The reporting limit is scaled up to 1000mg/kg due to sample size < 0.5 g.

*3 According to 2012/50/EU and Annex III of directive 2011/65/EU, Lead in the following electrical & electronic components is exempted from requirement.
1. Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound.
2. Dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher .
3. PZT based dielectric ceramic materials for capacitors being part of integrated circuits or discrete semiconductors. (Expires on 21 July 2016)
4. Cermet-based trimmer potentiometer elements capacitors.

*4 The plating / coating of all the metal sample(s) is not confirmed, it cannot be further mechanically disjointed into different materials.

*5 According to Annex III of directive 2011/65/EU, Lead as an alloying element in steel containing up to 0,35 % lead by weight, aluminium containing up to 0,4 % lead by weight and as a copper alloy containing up to 4 % lead by weight are exempted from requirement

* The reporting limit for each individual PBBs and individual PBDEs are :

Reporting Limit (mg/kg)		
PBBs	Bromobiphenyl	1
	Dibromobiphenyl	1
	Tribromobiphenyl	1
	Tetrabromobiphenyl	1
	Pentabromobiphenyl	2
	Hexabromobiphenyl	2
	Heptabromobiphenly	2
	Octabromobiphenyl	5
	Nonabromobiphenyl	5
	Decabromobiphenyl	5
PBDEs	Bromodiphenylether	1
	Dibromodiphenyl ether	1
	Tribromodiphenyl ether	1
	Tetrabromodiphenyl ether	1
	Pentabromodiphenyl ether	2
	Hexabromodiphenyl ether	2
	Heptabromodiphenyl ether	2
	Octabromodiphenyl ether	5
	Nonabromodiphenyl ether	5
	Decabromodiphenyl ether	5

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2.(FR) Cadmium, Lead, Chromium (VI), Mercury, Polybrominated biphenyls (PBB) and Polybrominated diphenyl ethers (PBDE)

Test Method: Total Cadmium, Lead, Mercury, Chromium
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Remark :

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Test Result:

	Cd	Cr(VI)	Pb	Hg	PBBs (*)	PBDEs (*)
Maximum Permissible Limit (mg/kg)	100	1000	1000	1000	1000	1000

Material No.	(mg/kg)					
	Cd	Cr^	Pb	Hg	PBBs (*)	PBDEs (*)
	RL (mg/kg)					
	10	10	10	10	5	5
M001	n.d.	115.9	20.6	n.d.	n.d.	n.d.

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RL = Reporting Limit
n.a. = Not Applicable
^ = The total Chromium have been determined
mg/kg = milligram per kilogram

Remark:

The reporting limit for each individual PBBs and individual PBDEs are :

The plating / coating of all the metal sample(s) is not confirmed, it cannot be further mechanically disjointed into different materials.

(*1) The total chromium content in sample was found to be exceeded the maximum permissible limit (1000ppm). Thus, the Chromium (VI) content in surface layer have been confirmed with reference to EN 62321:2009 Annex.

(*2) The total chromium content in plastic sample or electronic sample was found to be exceeded the maximum permissible limit (1000ppm).Thus, the Chromium (VI) content have been confirmed with reference to EN62321:2009 Annex.

(*3) The total chromium content in leather sample was found to be exceeded the maximum permissible limit (1000mg/kg).Thus, the Chromium (VI) content have been confirmed with reference to ISO 17075: 2007.

(*5) The plating / coating of all the metal sample(s) is not confirmed, it cannot be further mechanically disjointed into different materials.

- END -

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