



Test
TS EN ISO/IEC 17025
AB-0342-T

AB-0342-T

144307746

09/20

TÜRKAK
TÜRK AKREDİTASYON KURUMU
TURKISH ACCREDITATION AGENCY
tarafından akredite edilmiştir.



TÜVRheinland®
Precisely Right.

TÜV Rheinland Uluslararası Standartlar Sertifikasyon ve Denetim A.Ş.

Saniye Ermutlu Sokak Çolakoğlu Plaza B Blok No: 12 Kozyatağı-İSTANBUL
Tel: 0 216 665 32 00 - Fax: 0 216 665 32 99
email : info@tr.tuv.com web: www.tr.tuv.com

Deney Raporu
Test report

Müşterinin adı/adresi Customer name/address	TBLOC Elektrik Elektronik San. ve Tic. A.Ş. / 29 Ekim Mhl. 10001 Sok. No:50/4 35663, Menemen, İzmir, Turkey
Alıcı Adı Buyer name	/
Sipariş/Artikel Numarası Order/Article No.	/
Numunenin adı ve tarifi Name and identity of test item	Plastic Cable Tie
Numunenin kabul tarihi Date of receipt of test item	2020-09-10(p.m.)
Açıklamalar Remarks	The results given in this test report belong to the received sample by vendor.
Proje tarihi Project date	2020-09-11 to 2020-09-17
Raporun Sayfa Sayısı Number of pages of the Report	5
Test Kapsamı Test Scope	RoHS Directive in electrical and electronic equipment 2011/65/EU & Amendment Directive (EU) 2015/863 by following EN 62321 and its parts
Test Sonucu Test Result	PASS

Türk Akreditasyon kurumu (TÜRKAK) deney raporlarının tanınması konusunda Avrupa Akreditasyon Birliği (EA) ve Uluslar arası Laboratuvar Akreditasyon Birliği (ILAC) ile karşılıklı tanınma anlaşmasını imzalamıştır.

The Turkish Accreditation Agency (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 recognition 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
Assistant Manager**

2020-09-17

Tomris Hasançebi

Kivanç Karataş

Bu rapor, laboratuvarın yazılı izni olmadan kısmen kopyalanıp çoğaltılamaz. Bu rapor e-imza ile onaylanmıştır.

This test report shall not be reproduced other than in full except with the permission of the laboratory. This test report is signed by e-signature.

Doc No: MS-0010140_en

1. Photo



2. List of Materials

Material List:

Material No.	Material	Color	Location
M001	Plastic	White	Cable
M002	Plastic	Black	Cable

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+AMD1:2017 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 62321-7-2:2017
- For Leather material - Ref. to EN ISO 17075-1:2017

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

Material List:

Material No.	Material	Color	Location	Remark	Test plan
					A = Test HM only B = Test FR only C = Test HM + FR
M001	Plastic	White	Cable	D	D
M002	Plastic	Black	Cable	D	D

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 + M002	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

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

Remark:

- (*1) The total chromium content in Metal sample was found to be exceeded the maximum permissible limit (1000mg/kg). Thus, the Chromium (VI) content in surface layer have been confirmed with reference to IEC 62321-7-1:2015 Annex.

	Chromium (VI) concentration	Qualitative result
Negative	<0.1µg/cm ²	The sample is negative (-ve) for Cr(VI). The Cr(VI) concentration is below the limit of quantification. The coating is considered a non-Cr(VI) based coating
Inconclusive	≥0.1µg/cm ² and ≤0.13 µg/cm ²	The result is considered to be inconclusive. Unavoidable coating variations may influence the determination. Recommendation: if additional samples are available, perform a total of 3 trials to increase sampling surface area. Use the averaged result of the 3 trails for the final determination.
Positive	>0.13 µg/cm ²	The sample is positive (+ve) for Cr(VI). Concentration is above the limit of quantification and the statistical margin of error. The sample coating is considered to contain Cr(VI).

- (*2) The total chromium content in plastic sample or electronic sample was found to be exceeded the maximum permissible limit (0.1%). Thus, the Chromium (VI) content have been confirmed with reference to IEC 62321-7-2:2017.
- (*3) The total chromium content in leather sample was found to be exceeded the maximum permissible limit (0.1%). Thus, the Chromium (VI) content have been confirmed with reference to EN ISO 17075-1:2017.
- (*4) The result was found to be more than the maximum permissible limit.
- (*5) The plating / coating of all the metal sample(s) is not confirmed, it cannot be further mechanically disjoined into different materials.
- (*6) For this mixed sample, the result was found to be more than the maximum permissible limit. It's recommended that individual sample should be tested separately.
- (*7) Due to the lack of samples the client submitted, the reporting limit is scaled up to 0.005/0.01/0.05/0.1%.

3. BBP, DBP, DEHP, DIBP content

Test Method: IEC 62321-8:2017

Test Result:

	BBP	DBP	DEHP	DIBP
Maximum permissible Limit (%)	0.1	0.1	0.1	0.1

Test No.	Material No.	RL (%)			
		BBP	DBP	DEHP	DIBP
		0.005	0.005	0.005	0.005
T001	M001 + M002	n.d.	n.d.	n.d.	n.d.

Products

AB-0342-T
144307746
09/20

Abbreviation: BBP= Benzylbutyl phthalate
DBP= Dibutyl phthalate
DEHP= Bis(2-ethylhexyl) phthalate
DIBP= Diisobutyl phthalate
< = less than
RL = Reporting Limit
N.A. = Not Applicable
%= percentage

- END -