



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

AB-0342-T
0111683744
03/19

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Deney Raporu
Test report

Müşterinin adı/adresi
Costumer name/address

Tork Bağlantı Elemanları San. ve Tic. Ltd. Şti. / Makine İhtisas OSB Mah.
27.Sok.,No:6/A,Dilovası-Kocaeli,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

2019-03-20 (p.m)

Açıklamalar
Remarks

The results given in this test report belong to the received sample by vendor.

Proje tarihi
Project date

2019-03-21 to 2019-03-27

Raporun Sayfa Sayısı
Number of pages of the Report

6

Test Kapsamı
Test Scope

RoHS Directive in electrical and electronic equipment 2011/65/EU &
Amendment Directive (EU) 2015/863

Test Sonucu
Test Result

PASS

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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

Non-textile Projects Team
Leader

Chemical Laboratory Manager

2019-03-27

Nalan Aslantas

Duygu Ozturk

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Channel 1



Products

AB-0342-T
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Material List:

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

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 HM + FR C = Test 4P only D = Test HM + FR + 4P E = Test HM + 4P F = Test FR + 4P G = Test FR only
M001	Plastic	Black	Plastic Cable Tie	D	D
M002	Plastic	White	Plastic Cable Tie	D	D

Abbreviation: HM (Heavy metal) = Cd, Pb, Hg, Cr (VI)
 FR (Flame Retardant) = PBBs, PBDEs
 4P=BBP,DBP,DEHP,DIBP

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 ^{VI}	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	$<0.1\mu\text{g}/\text{cm}^2$	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	$\geq 0.1\mu\text{g}/\text{cm}^2$ and $\leq 0.13\mu\text{g}/\text{cm}^2$	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 trials for the final determination.
Positive	$>0.13\mu\text{g}/\text{cm}^2$	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 disjointed 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 (mg/kg)	1000	1000	1000	1000

Test No.	Material No.	(mg/kg)			
		BBP	DBP	DEHP	DIBP
		RL (mg/kg)			
		50	50	50	50
T001	M001 + M002	n.d.	n.d.	n.d.	n.d.

Abbreviation: BBP= Benzylbutyl phthalate
 DBP= Dibutyl phthalate
 DEHP= Bis(2-ethylhexyl) phthalate
 DIBP= Diisobutyl phthalate
 n.d.= Not Detected (< Reporting Limit)
 RL = Reporting Limit
 N.A. = Not Applicable
 %= percentage
 #This test is out of the scope of TURKAK accreditation.

- END -