

**EKOTEKS LABORATUVAR ve GÖZETİM
HİZMETLERİ A.Ş.**
Esenyurt Firuzköy Bulvarı No:29 34325 Avcılar
İstanbul/ TÜRKİYE



Test
TS EN ISO/IEC 17025
AB-0583-T

TEST REPORT
DENEY RAPORU

AB-0583-T

22034264-
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01-23

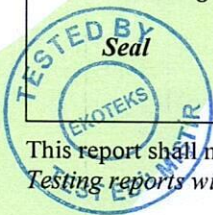
Customer name: TEKSEL TEKSTİL ÜRÜN PAZ. SAN. VE TİC. A.Ş.
Address: 15 TEMMUZ MAH. BAHAR CAD. POLAT İŞ MERKEZİ B BLOK KAT:4 D:41
GÜNEŞLİ/BAĞCILAR/İSTANBUL
Buyer name: -
Contact Person: DOĞUKAN ÖMER ÇELİK
Order No: -
Article No: -
Name and identity of test item: Sample 1: Grey bobbin yarn.
Sample 2: Grey socks.
(claimed to be;Color: 60% UMOFİL %35 COTTON 5 % SILVER)
The date of receipt of test item: 19.12.2022
Re-submitted/re-confirmation date: -
Date of test: 19.12.2022-10.01.2023/Home Textile
Remarks: -
Sampling: The results given in this report belong to the received sample by vendor.
End-Use: -
Care Label: Woman's/Men's/Kid's Wear

Number of pages of the report: 5

The Turkish Accreditation Agency (TURKAK) 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 test reports.

EKOTEKS LABORATUVAR ve GÖZETİM HİZMETLERİ A.Ş. accredited by TÜRKAK under registration number [AB-0583-T] for ISO 17025:2017 as test laboratory.

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.



Date
10.01.2023

Customer Representative
Servin YURKSEVEN

Head of Testing Laboratory
Sevim A. RAZAK
10.01.2023

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REQUIRED TESTS	EVALUATION	COMMENTS
MICROBIOLOGICAL TESTS		
Determination of Antibacterial Activity	-	
Determination of Antifungal Activity	-	
PHYSICAL PROPERTIES TESTS		
Surface Resistivity	-	
ECOLOGICAL TESTS⁽¹⁾		
Heavy Metals	P	
Formaldehyde	P	
P:Pass F:Fail R:Refer to Technologist No requirement was given by the vendor. ⁽¹⁾ Test results were given according to eco-textile limit values.		

REMARK: Original samples are kept for 3 months and all technical records are kept for 5 years unless otherwise specified. If requested, measurement uncertainty will be reported. But unless otherwise specified, measurement uncertainty is not considered while stating compliance with specification or limit values. The reported uncertainty is based on a standard uncertainty multiplied by a coverage factor $k=2$, providing a level of confidence of approximately 95 %. The declaration of conformity was given in accordance with the Simple Acceptance Decision Rule. (without considering the level of confidence and measurement uncertainty, evaluation of suitability or non-conformity based on whether the test result obtained is only within the specified limits) Tests marked (*) in this report are not included in the accreditation schedule



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Sample 2

Sample 1

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AB-0583-T

22034264-
ing

01-23

TEST RESULTS

Method: ASTM E2149: 2020 Standard Test Method for Determining the Antimicrobial Activity of Antimicrobial Agents Under Dynamic Contact Conditions

Sample details

Sample 1

Type of material tested	Fabric
Weight or size of test specimen	1 g

Untreated test specimen (If present)	-
--------------------------------------	---

Test conditions

Temperature (°C)	35 ± 2
Contact time	24 hours

Microorganism

Species and strain number	<i>Staphylococcus aureus</i> ATCC 6538(Gram (+))
Bacterial concentration of test solution at the "0" time (CFU/mL)	2.73 x 10 ⁵

Results of viable counts

Number of viable bacteria recovered from the flask containing the treated specimen after contact time CFU/mL (A) log CFU/mL (log A)	3.32 x 10 ³ 3.52
Number of viable bacteria recovered from the flask containing the untreated specimen after contact time CFU/mL (B) log CFU/mL (log B)	1.33 x 10 ⁵ 5.12
Is the difference between B and C values less than 15% of each other?	No

Antibacterial activity (R)

If the difference between the control sample and the 'inoculum only' is within 15%, it is calculated according to B.

If the difference between the control sample and the 'inoculum only' is not within 15%, it is calculated according to C.

log R = log B - log A	1.6	± measurement of uncertainty (95% CI)	0.49
R % = ((B - A)/(B)) x 100	97.50		1.225

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AB-0583-T

22034264-
ing

01-23

TEST RESULTS

DETERMINATION OF ANTIFUNGAL ACTIVITY: AATCC 30:2017 (Test III- Agar Plate)

Sample 1

Zone of inhibition ⁽¹⁾	Growth of microorganisms ⁽²⁾
Was not observed	Not observed

(1) Inhibition area around the width of clear zone surrounding test specimen (mm)

(2) Growth microorganisms on the fabric not observed

Microorganism	<i>Aspergillus niger</i> (ATCC 6275)
Incubation conditions	28±1°C
Incubation periods	7 days
Diameter of test specimens	3.8 cm ± 0,5 cm
Culture medium	Mineral Salt Agar with 3% ± 0.1% glucose
Number of parallels	3
Control sample	Sample with antifungal properties

SURFACE RESISTIVITY; EN 1149-1:2006(*)

Sample 2

Ohm meter (METRISO 3000) was used.

Original sample was tested as the client's request

Pre-Treatment -

Atmosphere for conditioning and testing (23± 1)°C, (25± 5)%RH

Conditioning time ≥ 24 hours

Applied voltage 100 Volt

Number of samples tested 5

Measurement

1	2.40 x 10 ¹⁰ Ohms
2	2.90 x 10 ¹⁰ Ohms
3	2.48 x 10 ¹⁰ Ohms
4	2.55 x 10 ¹⁰ Ohms
5	2.91 x 10 ¹⁰ Ohms
Geometrical Mean	2.63 x 10 ¹⁰ Ohms

Surface Resistance

RESULT

Surface Resistivity

0.47 x 10 ¹² Ohms
0.57x 10 ¹² Ohms
0.49 x 10 ¹² Ohms
0.50x 10 ¹² Ohms
0.57 x 10 ¹² Ohms
0.51 x 10 ¹² Ohms

REQUIREMENT

-

The resistivity is calculated by: $\rho = k \times R$, and $k = 19.8$

AB-0583-T

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TEST RESULTS

HEAVY METALS; DIN 54233-3:2010 (W)

(Ref: DIN EN 16711-2:2016)

Extractable heavy metals are extracted at 37(±2)°C in artificial acidic perspiration solution (pH=5.5). and determined using ICP-MS.

Sample 1

	<u>RESULT</u>	<u>REQUIREMENT</u>
Antimony (Sb)	N.D. ⁽¹⁾	< 30 mg/kg
Arsenic (As)	N.D. ⁽¹⁾	< 1,0 mg/kg
Lead (Pb)	N.D. ⁽¹⁾	<1,0 mg/kg
Cadmium (Cd)	N.D. ⁽¹⁾	< 0,1 mg/kg
Mercury (Hg)	N.D. ⁽¹⁾	< 0,02 mg/kg
Copper (Cu)	N.D. ⁽¹⁾	< 50 mg/kg
Total Chromium (Cr)	N.D. ⁽¹⁾	< 2,0 mg/kg
Chromium VI (Cr VI)	N.D. ⁽¹⁾	< 0,5 mg/kg
Cobalt (Co)	N.D. ⁽¹⁾	< 4 mg/kg
Nickel (Ni)	N.D. ⁽¹⁾	< 4 mg/kg
Barium (Ba)	N.D. ⁽¹⁾	< 1000 mg/kg
Selenium (Se)	N.D. ⁽¹⁾	< 100 mg/kg

⁽¹⁾ N.D: Not detected.

* **W**: Withdrawn Method

FORMALDEHYDE; ISO 14184-1:2011

Formaldehyde is extracted from a textile sample with distilled water and the amount of formaldehyde released in the water is determined colorimetrically using UV-VIS spectrophotometer at the wavelength of 412 nm.

Sample 1

	<u>RESULT</u>	<u>REQUIREMENT</u>
	N.D. ⁽¹⁾	<75 mg/g

N.D ⁽¹⁾: Not detected

Total uncertainty:15.6 %