



TÜRK STANDARDLARI ENSTİTÜSÜ
DENEY ve KALİBRASYON
MERKEZİ BAŞKANLIĞI
YAPI MALZEMELERİ YANGIN VE AKUSTİK
LABORATUVAR MÜDÜRLÜĞÜ



Test
TS EN ISO/IEC 17025
AB-0001-T

AB-0001-T

77939

03-23

TURKISH STANDARDS INSTITUTION
HEADSHIP OF TSE TEST and CALIBRATION CENTER
CONSTRUCTION MATERIALS FIRE AND ACOUSTICS LABORATORY

AYDINLI MAH. ULUS SOK. NO:7/1 TUZLA/İSTANBUL

Tel: +902165600561

Faks:

e-mail: yalitim@tse.org.tr

www.tse.org.tr

MUAYENE VE DENEY RAPORU
TEST REPORT

Deneyi Talep Eden/Firma : (Adı, Adresi, Şehir vb.) Requesting/Customer (Name, Address, City etc.)	MEK İNŞAAT SANAYİ VE TİCARET ANONİM ŞİRKETİ
Deney Talep Tarih / No : Order Date/No.	10.02.2023 / 2023-30661
Numunenin Tanımı : (Cins, Marka, Sınıf, Tip, Tür, Model vb.) Sample Description (Type, Mark, Class, Model etc.)	2023-043910, Selüloz Elyafı (Cellulose Fiber), ECI, Standart doku, Selüloz, 25mm. kalınlık, 100kg./m ³ yoğunluk, 6.00, adet
Numune Kabul Tarihi : Sample Receipt Date	14.02.2023
Deneylerin Yapıldığı Tarih : Date of Test	15.02.2023 / 13.03.2023
Uygulanan Standart Metot : Applied Standard/Method	TS EN ISO 10534-2/-
Raporun Sayfa Sayısı : Number of pages of the report	5
Deney Sonucu : Test Result	-
Açıklamalar : Remarks	

Yukarıda tanımlanan numune için laboratuvarımızda yapılan muayene ve deneylerden elde edilen sonuçlar müteakip sayfalarda verilmiştir.
The testing and /or measurement results are given on the following pages which are part of this report.

Deney laboratuvarları olarak faaliyet gösteren TSE Deney ve Kalibrasyon Merkezi Başkanlığı Deney Laboratuvarları TÜRKAK'tan AB-0001-T ile TS EN ISO/IEC 17025:2017 standardına göre akredite edilmiştir.
TSE Headship of Test and Calibration Center Testing Laboratories accredited by TÜRKAK under registration number AB-0001-T for TS EN ISO/IEC 17025:2017 as test laboratory.

TÜRKAK deney raporlarının tanınırlığı konusunda Avrupa Akreditasyon Birliği (EA) ile Çok Taraflı Anlaşma ve Uluslararası Laboratuvar Akreditasyon Birliği (ILAC) ile karşılıklı tanıma anlaşması imzalamıştır.

TURKAK is a signatory to the European co-operation for Accreditation (EA) Multilateral Agreement (MLA) and to the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA) for the recognition of test reports.

Deney ve/veya ölçüm sonuçları, genişletilmiş ölçüm belirsizlikleri (olması halinde) ve deney metodları bu raporun 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	Deney Sorumlusu Person in charge of test	Kontrol Eden Reviewer	Onaylayan Head of Laboratory
13.03.2023	İBRAHİM ÖZKAYA	MEHMET HÜDAİ BAŞTÜRK	SENCER GÜVEN

Bu rapor, hazırlayan laboratuvarın yazılı izni olmadan kısmen kopyalanıp çoğaltılamaz. İmzasız ve karekodsuz raporlar geçersizdir. Bu rapor, sadece deneyi yapılan numune için geçerlidir ve "Ürün Belgesi" yerine geçmez.

This test report shall not be reproduced other than in full except with the written permission of the laboratory. Test reports without signature and seal are not valid. This test report represents only tested sample(s), and shall not be used as Product Certificate.



MUAYENE - DENEY SONUÇLARI TEST RESULTS
TS EN ISO 10534-2:2003

Name And Address Of The Test Laboratory	TSE Construction Materials Fire And Acoustics Laboratory Acoustics Department Aydınlı Mah. Ulus Sokak No:7/1 Tuzla/İSTANBUL Tel: 0(216) 560 0 500
Name And Address Of The Client	Mek İnşaat Sanayi Ve Ticaret Anonim Şirketi Kültür Mah. 1375 Sk. Didim Dış Kapı No:5 İç Kapı No:9 KONAK İZMİR
Type Of The Sample	ECI Selüloz Elyafı (Cellulose Fiber)

1. Introduction

For the test demand of **MEK İNŞAAT SANAYİ VE TİCARET ANONİM ŞİRKETİ** to determine the absorption coefficient of “**ECI Selüloz Elyafı (Cellulose Fiber)**”, tests were performed according to “**TS EN ISO 10534-2:2003 Acoustics - Determination of sound absorption coefficient and impedance in impedances tubes - Part 2: Transfer-function method**” on **24.02.2023** in TSE Construction Materials Fire And Acoustics Laboratory Acoustics Department.

2. Test Sample

Test sample was chosen and sent to our laboratory by the client.
Arrival date of the sample in the laboratory: -/2022

2.1 Description Of The Test Sample

Definition Of The Sample: ECI Selüloz Elyafı (Cellulose Fiber), Standard texture 25mm thickness, 100kg/m³ density

Number Of The Test Samples: 3 test samples of each in ≈100 mm and ≈28 mm diameters

Diameter(mm)	Thickness (mm)	Mass (gr) ((for the test samples of 100/28)mm diameters)		Density(kg/m ³)
100 mm	≈25,60	≈16,53	≈1,5	≈100,5
28mm	≈25,43			

*Client's declaration was taken into consideration in sample definitons.

2.2 Mounting Of The Test Sample

The samples were prepared by the customer with diameters of 28mm and 100mm, respectively. Photographs of the sample are given at the end of the report. In the experiment to determine the sound absorption coefficient, the sample is mounted inside the tube with a gasket so that it does not protrude with the front face of the sample holder and does not leak air around it.

MUAYENE - DENEY SONUÇLARI TEST RESULTS

TS EN ISO 10534-2:2003

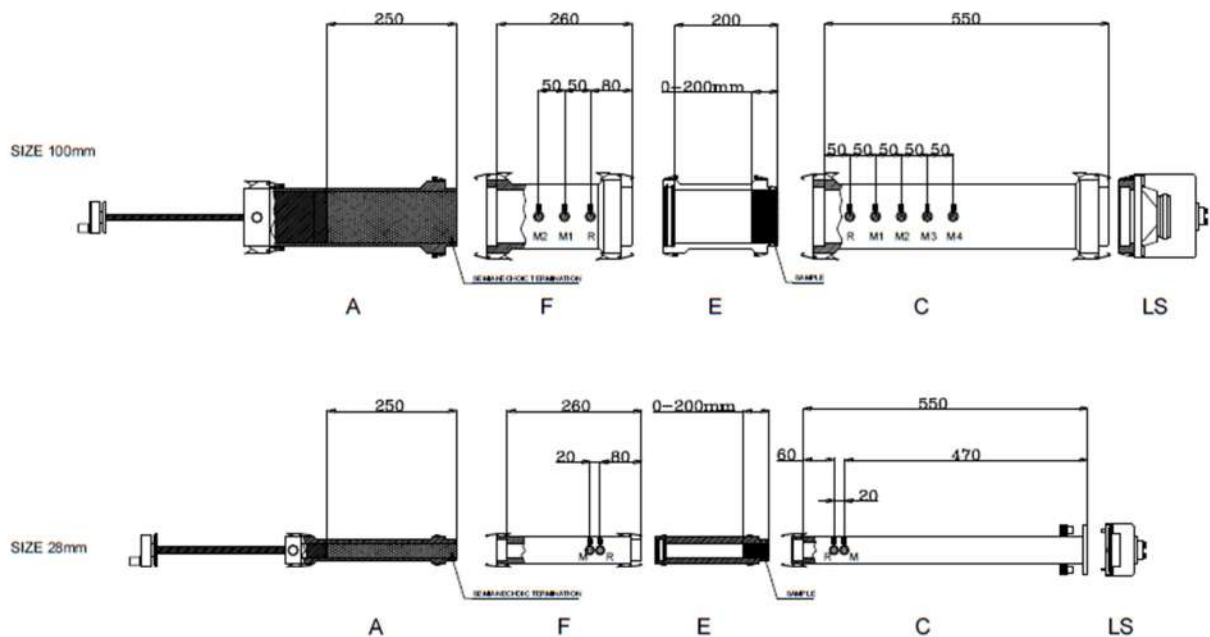
3. Environmental Conditions

Temperature [$^{\circ}$ C]	Relative Humidity [%]	Pressure [kPa]
22,8	43,6	100,2

4. Method

The equipment which was used in the test was controlled before the test by performing a test series. Before the measurements, loudspeaker had run for 10 minutes to get a stable temperature. After the pre-test and the measurements, test sample was situated in the tube by sticking to the mounting conditions given above. For both diameters measurements for 3 samples were performed. After ensuring the connection between the signal generator and the impedance tube, signal was created in the related frequency interval for every 1/3 octave band center frequencies and the results were obtained via the proper software.

4.1 Test equipment



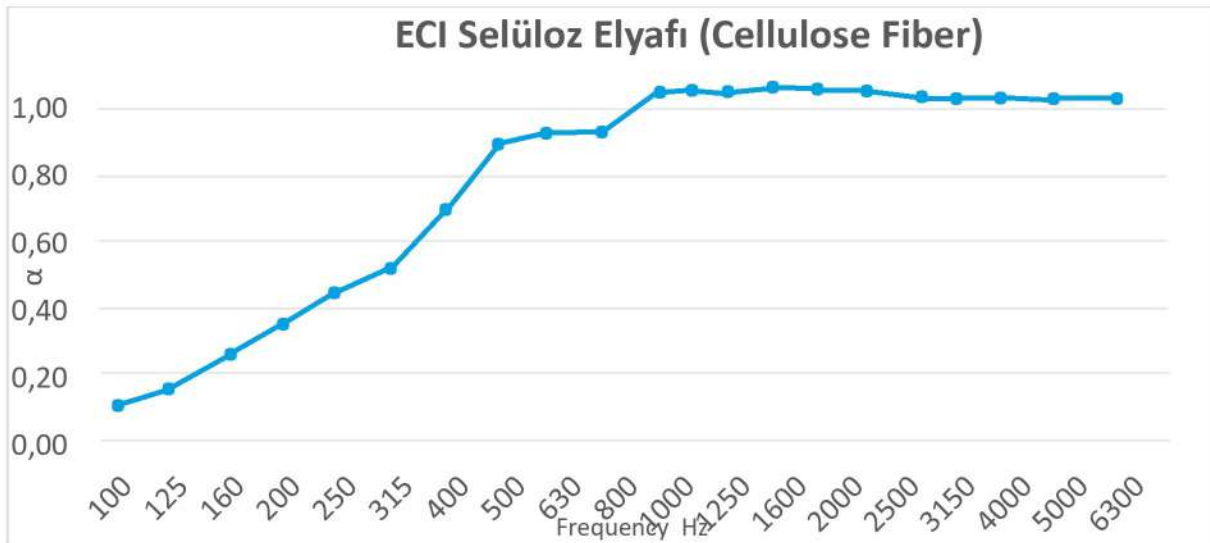
MUAYENE - DENEY SONUÇLARI TEST RESULTS
TS EN ISO 10534-2:2003**5. Results**

The result was obtained by taking the arithmetic average of the measurement results made on the sample. The sound absorption coefficient (α) value in the 1/3 frequency band is given in the following pages.

Sound absorption coefficient (α),

Frequencies Hz	ALPHA			ALPHA AVERAGE.
100	0,13	0,12	0,13	0,12
125	0,20	0,13	0,14	0,16
160	0,29	0,24	0,20	0,24
200	0,34	0,37	0,35	0,36
250	0,49	0,44	0,45	0,46
315	0,57	0,55	0,58	0,57
400	0,71	0,73	0,71	0,71
500	0,93	0,90	0,91	0,92
630	0,93	0,93	0,92	0,93
800	0,95	0,97	0,96	0,96
1000	1,04	1,06	1,05	1,05
1250	1,06	1,05	1,06	1,06
1600	1,05	1,06	1,06	1,06
2000	1,05	1,06	1,06	1,06
2500	1,02	1,04	1,04	1,04
3150	1,06	1,05	1,06	1,06
4000	1,03	1,04	1,03	1,03
5000	1,02	1,03	1,02	1,02
6300	1,06	1,06	1,06	1,00

*Results are out of measurement equipment's reliable range





MUAYENE - DENEY SONUÇLARI *TEST RESULTS*
TS EN ISO 10534-2:2003

PHOTO REGARDING TEST SAMPLE

