



TÜRK STANDARLARI 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

329006

10-22

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](http://www.tse.org.tr)

MUAYENE VE DENEY RAPORU  
TEST REPORT

<b>Deneysel Talep Eden/Firma :</b> (Adı, Adresi, Şehir vb.) Requesting/Customer (Name, Address, City etc.)	TEPE BETOPAN YAPI MALZEMELERİ SANAYİ VE TİCARET ANONİM ŞİRKETİ BİLKENT BEYTEPE KÖYÜ YOLU NO:5 ÇANKAYA
<b>Deneysel Talep Tarihi / No :</b> Order Date/No.	18.05.2022 / 2022-86227
<b>Numunenin Tanımı :</b> (Cins, Marka, Sınıf, Tip, Tür, Model vb.) Sample Description (Type, Mark, Class, Model etc.)	2022-132071, fireEx Ultra, giydirme cephe duvar sistemi (curtain wall system), 1.00, adet
<b>Numune Kabul Tarihi :</b> Sample Receipt Date	21.06.2022
<b>Deneysel Yapıldığı Tarih :</b> Date of Test	27.06.2022 / 19.10.2022
<b>Uygulanan Standart Metot :</b> Applied Standard/Method	TS EN 13501-2/TS EN 13501-2 Yapı mamulleri ve yapı elemanları - Yangın sınıflandırması - Bölüm 2: Yangına dayanım deneylerinden elde edilen veriler kullanılarak sınıflandırma
<b>Raporun Sayfa Sayısı :</b> Number of pages of the report	4
<b>Deneysel Sonucu :</b> Test Result	-
<b>Açıklamalar :</b> Remarks	TS EN 13501-2 : 2016-12 Fire classification of construction products and building elements - Part 2: Classification using data from fire resistance tests, excluding ventilation services

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.

Deneysel 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.

Deneysel ve/veya ölçüm sonuçları, genişletilmiş ölçüm belirsizlikleri (olması halinde) ve deneysel 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.

Karekod QR Code	Tarih Date	Deneysel Sorumlusu Person in charge of test	Kontrol Eden Reviewer	Onaylayan Head of Laboratory
	19.10.2022	AHMET BUMİN BAYRAM	AHMET FAZIL KARA	SENCER GÜVEN

Bu rapor, hazırlayan laboratuvarın yazılı izni olmadan kısmen kopyalanıp çoğaltılamaz. İmzasız ve karekodsuz raporlar geçersizdir. Bu rapor, sadece deneysel 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.

**Bu doküman elektronik ortamda imzalanmıştır.**

Doğrulama adresi: <https://basvuru.tse.org.tr/uye/QRKodDogrulama?code=7FDC2C>



## MUAYENE - DENEY SONUÇLARI TEST RESULTS

### TS EN 13501-2:2016 CLASSIFICATION REPORT OF CONSTRUCTION PRODUCTS AND BUILDING ELEMENTS

#### 1. INTRODUCTION

This classification report defines fire resistance classification of Non-Loadbearing Partition Wall System, which belongs TEPE BETOPAN YAPI MALZEMELERİ SAN. ve TİC. A.Ş. company in accordance with TS EN 13501-2:2016.

#### 2. DETAILS OF THE CLASSIFIED SPECIMEN

##### 2.1 General

FireEx Ultra brand curtain wall system which is product of TEPE BETOPAN YAPI MALZEMELERİ SAN. ve TİC. A.Ş. was tested as per TS EN 1364-1:2015 on 27th June 2022 at TSE Construction Materials Fire and Acoustics Laboratory.

##### 2.2 Specification

All details about the specimen are given in test report.

#### 3. TEST REPORT FOR CLASSIFICATION

##### 3.1. Test Report

Laboratory	Sponsor	Report Number	Test Method
TSE Construction Materials Fire and Acoustic Laboratory	TEPE BETOPAN YAPI MALZEMELERİ SAN. ve TİC. A.Ş.	329000 / 10-22	TS EN 1364-1:2015

## MUAYENE - DENEY SONUÇLARI TEST RESULTS

### 3.2. Test Results

<p><b>INTEGRITY (E)</b></p> <p>Sustained Flaming Gap Gauges</p> <p style="padding-left: 100px;">-Φ6 (150mm) -Φ25</p> <p>Cotton Pad</p>	<p>No failure in 150 minutes.</p> <p>No failure in 150 minutes.</p> <p>No failure in 150 minutes.</p> <p>No failure in 150 minutes.</p>
<p><b>INSULATION (I<sub>2</sub>)</b></p>	<p>Failure in 147th minute.</p>
<p><b>RADIATION (W)</b></p>	<p>No measurement.*</p>

**Test Duration:** The test was terminated at 151st minute as per client request.

**Test Date:** 27th June 2022

\*As long as the insulation criterion is valid, the Radiation (W) criterion is also valid.

## 4. CLASSIFICATION AND FIELD OF APPLICATION

### 4.1 Reference of Classification

This classification has been carried out in accordance with Clause 7 of TS EN 13501-2+A1:2016.

### 4.2 Classification

The specimen, "FireEx Ultra brand curtain wall system" is classified according to the performance parameters stated in TS EN 13501-2+A1:2016 as shown below.

R	E	I	W		t	-	M	C	S	IncSlow	sn	ef	r
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### CLASSIFICATION OF FIRE RESISTANCE

**EI 120**

**E 120**

**EW 120**

### 4.3 Field of Direct Application of Test Results

The results of the fire test are directly applicable to similar constructions where one or more of the changes listed below are made and the construction continues to comply with the appropriate design code for its stiffness and stability.



## MUAYENE - DENEY SONUÇLARI TEST RESULTS

- a) Decrease in height,
- b) Increase in the thickness of the wall
- c) Increase in the thickness of component materials
- d) Decrease in linear dimensions of board for panels but not thickness
- e) Decrease in stud spacing
- f) Decrease in distance of fixing centers
- g) Increase in the number of horizontal joints
- h) Increase in number of vertical joints
- j) Horizontal and/or vertical joints, of the type tested

### 4.3.1. Extension of Width

For test specimens tested without a supporting construction, the width of an identical construction may be increased if the specimen was tested at a minimum of nominally 3 m wide with one vertical edge without restrained. Since the Wall System is tested with one vertical free edge, the specimen width can be increased.

### 4.3.2. Extension of Height

The height of the construction may be increased by 1.0 m under following conditions

- a) Minimum tested width is 3 m (without a supporting construction)
- b) Maximum deflection of the test specimen was not in excess of 100 mm
- c) The expansion allowances are increased pro-rata

Since maximum deflection measurement is 7.54 mm during maximum classification period, height of the tested specimen can be extended up to 4 meters.

### 4.3.3. Standard Supporting Construction

For specimens tested in a test frame without any supporting construction, the result is applicable to high-density rigid supporting constructions with at least the same fire resistance as the test specimen.

### 4.3.4. Non-Standard Supporting Construction

The result of a test on a non-loadbearing wall tested in a non-standard supporting construction is only applicable to that construction.

## 5. LIMITATIONS

This report does not represent type approval or its certificate.

**Prepared By**

**Approved By**

**Ahmet Bumin BAYRAM**  
**Testing Expert (Mechanical Engineer)**

**Sencer GÜVEN**  
**Laboratory Manager**

This document was signed electronically.