EFECTIS ERA AVRASYA
TEST VE BELGELENDİRME A.Ş.

Dilovası Organize San. Böl. 5.Kısım Fırat Cad.No:18 41455

Dilovası, Kocaeli / TÜRKİYE

TÜRKAK
Test
TS EN ISO/IEC 17025
AB-0556-T

DENEY RAPORU
TEST REPORT

AB-0556-T
FTST25168
03-25

Müşterinin adı/adresi *Customer name/address*	:	TEPE BETOPAN YAPI MALZEMELERİ SAN. VE TİC. A.Ş. Beytepe Köyü Yolu No:5 Bilkent, Ankara / TÜRKİYE
İstek numarası *Order No.*	:	EEA-24-001100-REV5
Numunenin adı ve tarifi *Name and identity of test sample*	:	tepePAN® Brand Fiber Cement Board - 8 mm
Numunenin kabul tarihi *The date of receipt of sample*	:	15.01.2025
Açıklamalar *Remarks*	:	
Deneyin yapıldığı tarih *Date of test*	:	21.01.2025
Raporun sayfa sayısı *Number of pages of the Report*	:	4 (6 pages including appendixes)

Deney laboratuvarı* olarak *faaliyet gösteren Efectis Era Avrasya Test ve Belgelendirme A.Ş, TÜRKAK'tan AB-0556-T ile TS EN ISO/IEC 17025:2017 standardına göre akredite edilmiştir.

Efectis Era Avrasya Test ve Belgelendirme A.Ş. accredited by TÜRKAK under registration number AB-0556-T for EN ISO/IEC 17025:2017 as test laboratory"

Türk Akreditasyon Kurumu (TÜRKAK) deney raporlarının tanınması konusunda Avrupa Akreditasyon Birliği (EA) ve Uluslararası Laboratuvar Akreditasyon Birliği (ILAC) ile karşılıklı tanınma antlaşmasını imzalamıştır.

The Turkish Accreditation Acency (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 recognation of test reports

Deney ve/veya ölçüm sonuçları, genişletilmiş ölçüm belirsizlikleri (olması halinde) ve deney metotları 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

Mühür *Seal*	**Tarih** *Date*	**Deney Sorumlusu** *Person in charge of test*	**Onaylayan** *Approval*
Efectis	19.03.2025	*e-signed* Uğur ÇAVAŞ	*e-signed* Ali BAYRAKTAR

Bu rapor, laboratuvarın yazılı izni olmadan kısmen kopyalanıp çoğaltılamaz.
İmzasız ve mühürsüz raporlar geçersizdir.
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TEST REPORT

on Fire and Technical Characteristics

Our ref.: EEA-24-001100-REV5

Sponsor: TEPE BETOPAN YAPI MALZEMELERİ SAN. VE TİC. A.Ş.
Beytepe Köyü Yolu No:5 Bilkent, Ankara / TÜRKİYE

TEST ITEM

Product name: tepePAN® Brand Fiber Cement Board - 8 mm

Manufacturing Plant: TEPE BETOPAN YAPI MALZEMELERİ SAN. VE TİC. A.Ş.

Alcı Mahallesi 2. VE 3. OSB 2026. Cadde No:12 Sincan, Ankara / TÜRKİYE

Composition: Fiber Cement Board

Appearance: Thickness of the fiber cement board is 8 mm and unit volume weight is 1150 kg/m^3'tür.

Mounting of the samples: Three pieces flat fiber cement board samples with a width of 590 mm and a length of 2400 mm were placed along the tunnel length. No additional support was used.

Date of receipt of the sample: 15.01.2025 **Date of realization of tests:** 21.01.2025

Sampling: Samples were delivered by the sponsor.

Test Method: ASTM E84 – 24

Conditioning: ASTM E84 – 24, clause 6.4 (23 ºC ± 2.8 ºC) temperature & (50% ± 5%) RH

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MEASURED VALUES AND THE TEST RESULTS	
FSI [m.min] **FSI [ft.min]** **SDI [%.min]**	0,97 3,14 0,22
Rounded FSI [ft.min] **Rounded SDI [%.min]**	5 0
Observation during the test: No specific conditions were observed during the test.	

Conclusion:

The test results relate to the behaviour of the test specimen of a product under the conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product of use. The results of tests are concerned only with the subject of testing.

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Brand, type, quality and dimension information of the components, when it is not possible to be verified by the laboratory, are given according to the sponsor's declaration and the responsibility belongs to the sponsor. The test specimens are tested as received from the sponsor (when the laboratory does not carry out sampling).

Bu rapor, laboratuvarın yazılı izni olmadan kısmen kopyalanıp çoğaltılamaz.
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Classification:

The International Building Code® (IBC), NFPA 101 and NFPA 5000 all describe a set of classification criteria required for wall and ceiling finish materials based on FSI and SDI when tested in accordance with ASTM E84 or UL 723.

The classification criteria for all three standard is the same:

Class	Rounded FSI [ft.min]	Rounded SDI [%.min]
A	0-25	0-450
B	26-75	0-450
C	76-200	0-450

Appendix 1:

The graphs of the measured and calculated values

Appendix 2:

The photograph of the samples before the test

The photograph of the samples after the test

- *FSI: Flame spread index*
- *SDI: Smoke developed index*

Bu rapor, laboratuvarın yazılı izni olmadan kısmen kopyalanıp çoğaltılamaz.
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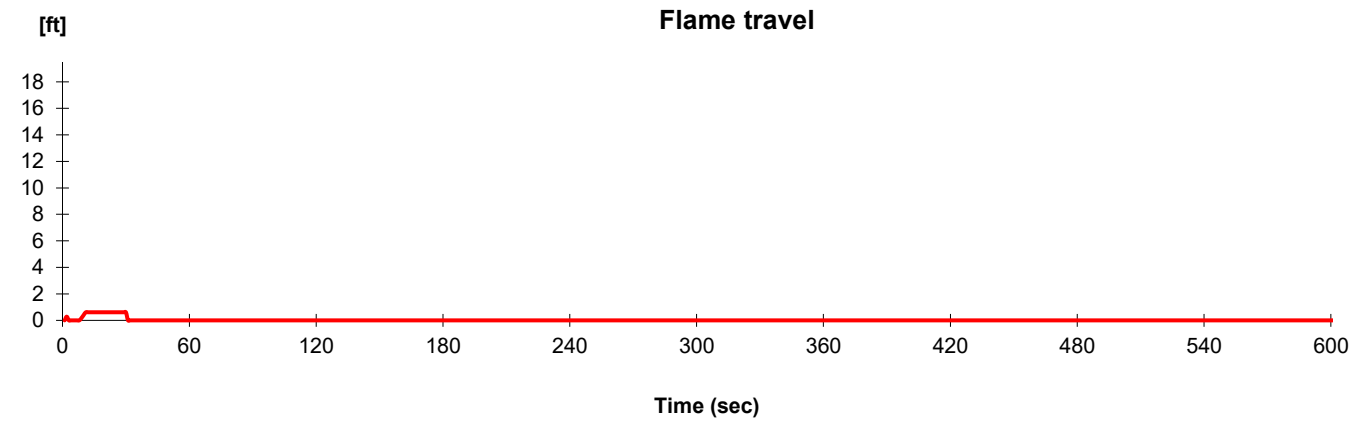
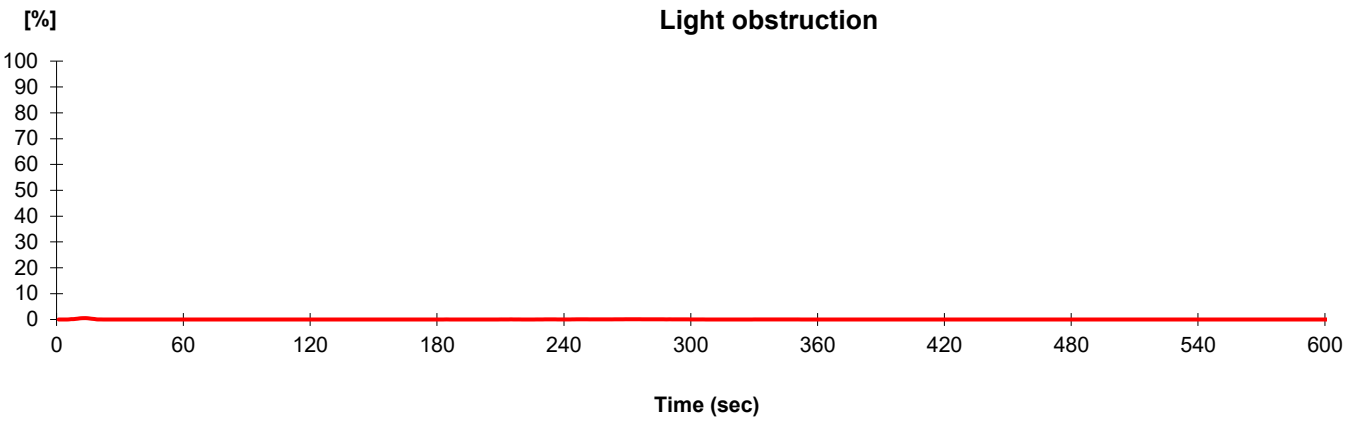
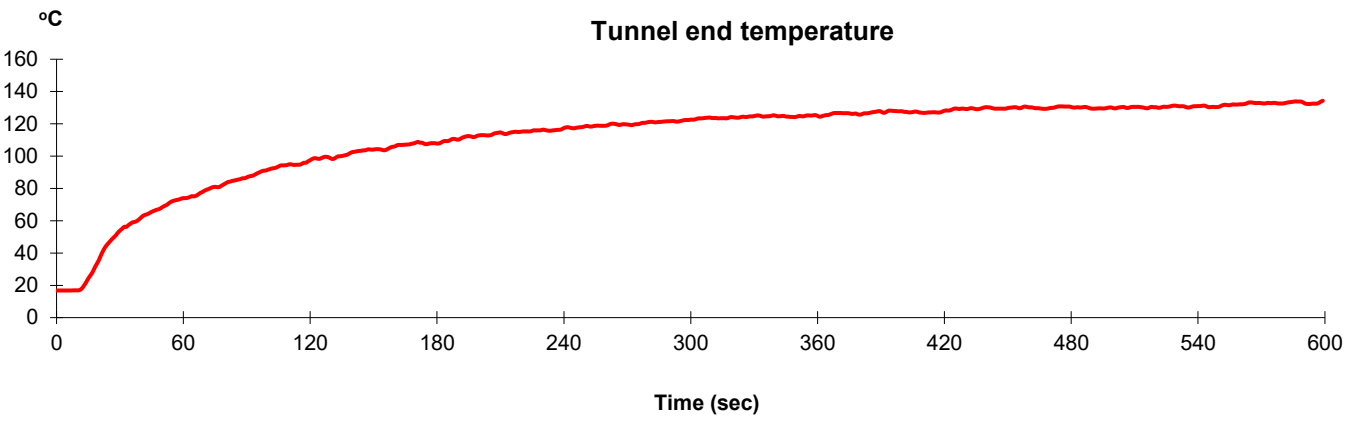

Flame travel
[ft]
18
16
14
12
10
8
6
4
2
0
0
60
120
180
240
300
360
420
480
540
600
Time (sec)


Light obstruction
[%]
100
90
80
70
60
50
40
30
20
10
0
0
60
120
180
240
300
360
420
480
540
600
Time (sec)


Tunnel end temperature
°C
160
140
120
100
80
60
40
20
0
0
60
120
180
240
300
360
420
480
540
600
Time (sec)

- Photograph of the samples prior to the test:

- Photograph of the samples after the test: