



EFFECTIS ERA AVRASYA TEST VE BELGELENDİRME A.Ş.

Fire Test Laboratory

Accredited Body

Nr: AB-0556-T



CLASSIFICATION OF REACTION TO FIRE

IN ACCORDANCE WITH EN

13501-1:2018

Sponsor	: HİS YALITIM İZOLASYON İNŞAAT MADENCİLİK SAN. VE TİC. LTD. ŞTİ. İncesu O.S.B. Sultansazı Mah. 2. Cad. No: 11, Melikgazi, Kayseri, TURKEY
Prepared by	: EFFECTIS ERA AVRASYA TEST VE BELGELENDİRME A.Ş. DİLOVASI OSB MAH. FIRAT CAD. NO: 18 DİLOVASI, KOCAELİ, TURKEY
Product name	: Terrawool Air Conditioner Plate (AFK) 70 kg/m ³ – 50 mm
Classification report No.	: ERA – 20 – 218
Issue Number	: 1/2
Date of issue	: 26.12.2020

This classification report consists of 5 pages and may only be used or reproduced in its entirety.

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1. INTRODUCTION

This classification report defines the classification assigned to “Terrawool Air Conditioner Plate (AFK) 70 kg/m³ – 50 mm” in accordance with the procedures given in EN 13501-1:2018

2. DETAILS OF CLASSIFIED PRODUCT

2.1. General:

Terrawool Air Conditioner Plate (AFK) 70 kg/m³ – 50 mm is defined as a “type of classified product“. Its classification is valid for the following end use application:

EN 14303:2009+A1:2013: Thermal insulation products for building equipment and industrial installations - Factory made mineral wool (MW) products - Specification

2.2. Description:

Terrawool Air Conditioner Plate (AFK) 70 kg/m³ – 50 mm is fully described in the test reports in support of the classification listed in clause 3.

Manufactured Plant: HİS YALITIM İZOLASYON İNŞAAT MADENCİLİK SAN. VE TİC. LTD. ŞTİ.
İncesu O.S.B. Sultansazı Mah. 2. Cad. No: 11, Melikgazi, Kayseri, TURKEY

Tested product types:

Product Name	Density [kg/m ³]	Thickness [mm]	Surface coating			
			Type	Mass per unit area [g/m ²]	Thickness [mm]	
Terrawool Air Conditioner Plate (AFK)	70	50	Al foil (front side)	Fibre-glass scrim	6	0,9
				PE film	25	
				Craft paper	40	

3. REPORTS AND RESULTS IN SUPPORT OF CLASSIFICATION

3.1. Reports

Name of laboratory	Name of sponsor	Report ref. no.	Test method and date Field of application rules and date
EFFECTIS ERA AVRASYA TEST VE BELGELENDİRME A.Ş.	HİS YALITIM İZOLASYON İNŞAAT MADENCİLİK SAN. VE TİC. LTD. ŞTİ.	FTST20767	EN 13823:2020
		FTST20768	EN ISO 11925-2:2020
		FTST20769	EN ISO 11925-2:2020

EFFECTIS

3.2. Results

Test method	Parameter	Number of test	Results	
			Continuous parameter mean	Compliance parameters
EN 13823	FIGRA _{0,2 MJ} (W/s)	3	126,5	(-)
	FIGRA _{0,4 MJ} (W/s)	3	81,6	No
	LFS > edge	3	(-)	(-)
	THR _{600 s} (MJ)	3	1,1	(-)
	SMOGRA (m ² /s ²)	3	0,0	(-)
	TSP _{600 s} (m ²)	3	5,6	(-)
	Flaming droplet(s)/particle (s)	3	None	None
EN ISO 11925-2 Flame exposition: 30 s	F _s ≤ 150 mm ⁽¹⁾	6	(-)	Yes
	ignition of filter paper ⁽¹⁾	6	(-)	No
	F _s ≤ 150 mm ⁽²⁾	6	(-)	Yes
	ignition of filter paper ⁽²⁾	6	(-)	No
(-): Not applicable (1): Surface flame attack (2): Edge flame attack				

Test method	Parameter	Parameter	Compliance parameters
EN 13823	FIGRA _{0,4 MJ} [W/s]	81,6	≤ 250 (C)
	LFS < edge	(-)	Yes (C)
	THR _{600s} [MJ]	1,1	≤ 15 (C)
	SMOGRA [m ² /s ²]	0,0	≤ 30 (s1)
EN ISO 11925-2	TSP _{600s} [m ²]	5,6	≤ 50 (s1)
	Flaming droplet(s)/particle (s)	None	None (d0)
EN ISO 11925-2	F _s ≤ 150 mm	Yes	Yes (B – D)
	ignition of filter paper	No	No (d0)
(-): Not applicable			

EFLTS

4. CLASSIFICATION AND FIELD OF APPLICATION

4.1. Reference of classification

This classification has been carried out in accordance with the clauses 11.5, 11.9.2, 11.10.1 of EN 13501-1:2018

4.2. Classification

Terrawool Air Conditioner Plate (AFK) 70 kg/m³ – 50 mm, in relation to its reaction to fire behaviour is classified:

C

The additional classification in relation to smoke production is:

s1

The additional classification in relation to flaming droplets / particles is:

d0

The format of the reaction to fire classification for *Terrawool Air Conditioner Plate (AFK) 70 kg/m³ – 50 mm* is:

Fire behaviour		Smoke production			Flaming droplets	
C	-	s	1	,	d	0

Reaction to fire classification: C-s1,d0

4.3. Field of application

This classification is valid for the following product parameters:

Product Name	Density [kg/m ³]	Thickness [mm]	Surface coating			
			Type	Mass per unit area [g/m ²]	Thickness [mm]	
<i>Terrawool Air Conditioner Plate (AFK)</i>	70	50	Al foil (front side)	Fibre-glass scrim	6	0,9
				PE film	25	
				Craft paper	40	

EFK

5. LIMITATIONS

5.1. Restrictions

This classification report is valid provided that the technical specifications of product are within the limits in accordance with the field of application clause 4.3.

5.2. Warning

This classification document does not represent type approval or certification of the product.

Signed:

.....

Uğur ÇAVAŞ
Person in the charge of tests



Approved:

.....

Ali BAYRAKTAR
Laboratory Manager



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EFFECTIS ERA AVRASYA TEST VE BELGELENDİRME A.Ş.
Dilovası OSB Mah. Fırat Cad. No: 18 Dilovası / KOCAELİ

DENEY RAPORU
TEST REPORT

AB-0556-T

FTST20768

26.12.2020

Müşterinin adı/adresi : HİS YALITIM İZOLASYON İNŞAAT MADENCİLİK SAN. VE TİC. LTD. ŞTİ.
Customer name/address İncesu O.S.B. Sultansazı Mah. 2. Cad. No: 11, Melikgazi, Kayseri, TURKEY

İstek numarası : EEA-20-000706-REV
Order No.

Numunenin adı ve tarifi : Terrawool Air Conditioner Plate (AFK) 70 kg/m³ – 50 mm
Name and identity of test sample

Numunenin kabul tarihi : 02.10.2020
The date of receipt of sample

Açıklamalar :
Remarks

Deneyin yapıldığı tarih : 09.12.2020
Date of test

Raporun sayfa sayısı : 3
Number of pages of the Report

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 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

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

Laboratuvar Müdürü
Head of Testing Laboratory

26.12.2020

Uğur ÇAVAŞ

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-20-000706-REV

Sponsor: HİS YALITIM İZOLASYON İNŞAAT MADENCİLİK SAN. VE TİC. LTD. ŞTİ.
İncesu O.S.B. Sultansazı Mah. 2. Cad. No: 11, Melikgazi, Kayseri, TURKEY

TEST ITEM

Product name : Terrawool Air Conditioner Plate (AFK) 70 kg/m³– 50 mm

Manufacturing Plant : HİS YALITIM İZOLASYON İNŞAAT MADENCİLİK SAN. VE TİC. LTD. ŞTİ.
İncesu O.S.B. Sultansazı Mah. 2. Cad. No: 11, Melikgazi, Kayseri, TURKEY

Composition : Stone wool, binders, Aluminium foil, Craft paper, PE film, Fibre-glass scrim

Appearance : Density of the stone wool insulation board is 70 kg/m³ and thickness is 50 mm. One side of the board is faced with aluminium foil. Aluminium foil coating is reinforced with craft paper, fibre-glass scrim, PE film. Mass per unit area of each components are: craft paper; 40 g/m², fibre-glass scrim; 6 g/m², PE film; 25 g/m². The total thickness of aluminium foil coating is 0,9 mm.

Date of receipt of the sample: 02.10.2020 **Date of realization of tests:** 09.12.2020

Sampling: The samples were delivered by the sponsor.

TEST METHOD: EN ISO 11925 – 2:2020

The flame application time: 30 s

Conditioning: According to the EN 13238:2010, Article 4.3.c, (23 ± 2) °C and % (50 ± 5) relative humidity.

MEASURED VALUES AND THE TEST RESULTS

SURFACE FLAME ATTACK

Sample No.:	Lengthwise			Crosswise		
	1	2	3	1	2	3
Ignition of the sample:	yes	yes	yes	yes	yes	yes
Reaching the mark:	no	no	no	no	no	no
Reaching the mark (s):	(-)	(-)	(-)	(-)	(-)	(-)
Ignition of the filter paper:	no	no	no	no	no	no

Observation during the test: No flaming droplets were observed.



Bu rapor, laboratuvarın yazılı izni olmadan kısmen kopyalanıp çoğaltılamaz.

İmzasız ve mühürsüz raporlar geçersizdir.

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Conclusion:

The test results relate to the behaviour of the test specimen of a product under the particular 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).



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Dilovası OSB Mah. Fırat Cad. No: 18 Dilovası / KOCAELİ

DENEY RAPORU
TEST REPORT

AB-0556-T

FTST20767

26.12.2020

Müşterinin adı/adresi : HİS YALITIM İZOLASYON İNŞAAT MADENCİLİK SAN. VE TİC. LTD. ŞTİ.
Customer name/address İncesu O.S.B. Sultansazı Mah. 2. Cad. No: 11, Melikgazi, Kayseri, TURKEY

İstek numarası : EEA-20-000706-REV
Order No.

Numunenin adı ve tarifi : Terrawool Air Conditioner Plate (AFK) 70 kg/m³ – 50 mm
Name and identity of test sample

Numunenin kabul tarihi : 02.10.2020
The date of receipt of sample

Açıklamalar :
Remarks

Deneyin yapıldığı tarih : 08.12.2020, 09.12.2020
Date of test

Raporun sayfa sayısı : 4 (7 pages including appendixes)
Number of pages of the Report

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



Mühür
Seal

Tarih
Date

Deney Sorumlusu
Person in charge of test

Laboratuvar Müdürü
Head of Testing Laboratory

26.12.2020

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TEST REPORT

on Fire and Technical Characteristics

Ref. No.: EEA-20-000706-REV

Sponsor: HİS YALITIM İZOLASYON İNŞAAT MADENCİLİK SAN. VE TİC. LTD. ŞTİ.
İncesu O.S.B. Sultansazı Mah. 2. Cad. No: 11, Melikgazi, Kayseri, TURKEY

TEST ITEM

Product name : Terrawool Air Conditioner Plate (AFK)70 kg/m³ – 50 mm

Manufacturing Plant : HİS YALITIM İZOLASYON İNŞAAT MADENCİLİK SAN. VE TİC. LTD. ŞTİ.
İncesu O.S.B. Sultansazı Mah. 2. Cad. No: 11, Melikgazi, Kayseri, TURKEY

Composition : Stone wool, binders, Aluminium foil, Craft paper, PE film, Fibre-glass scrim

Appearance : Density of the stone wool insulation board is 70 kg/m³ and thickness is 50 mm. One side of the board is faced with aluminium foil. Aluminium foil coating is reinforced with craft paper, fibre-glass scrim, PE film. Mass per unit area of each components are: craft paper; 40 g/m², fibre-glass scrim; 6 g/m², PE film; 25 g/m². The total thickness of aluminium foil coating is 0,9 mm. The samples are fixed on the standard calcium silicate board substrate according to EN 13238:2010 – calcium silicate board of thickness 12 mm and nominal density of 870 kg/m³. The long wing of test specimen consists of 4 parts separated by horizontal joint at distance 500 mm from lower edge and vertical joints at distance 200 and 800 mm from the corner line.

Date of receipt of the sample: 02.10.2020 **Date of realization of tests:** 08.12.2020, 09.12.2020

Sampling: The samples were delivered by the sponsor.

TEST METHOD: EN 13823:2020

Conditioning: According to the EN 13238:2010, Article 4.3.c, (23 ± 2) °C and % (50 ± 5) relative humidity



Bu rapor, laboratuvarın yazılı izni olmadan kısmen kopyalanıp çoğaltılamaz.

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MEASURED VALUES AND THE TEST RESULTS					
Test specimen no.	1	2	3	Ø	Expanded uncertainty
Date of test	08.12	09.12	09.12		
LFS > edge	no	no	no	no	(-)
FIGRA _{0,2} MJ [W/s]	104,7	100,5	174,4	126,5	47,9
FIGRA _{0,4} MJ [W/s]	0,0	96,5	148,4	81,6	87,0
THR _{600 s} [MJ]	1,4	0,8	1,2	1,1	0,5
SMOGRA [m ² /s ²]	0,0	0,0	0,0	0,0	0,4
TSP _{600 s} [m ²]	4,8	6,6	5,3	5,6	1,2
Flaming droplets/particles	no	no	no	no	(-)
Time of flaming [s]	(-)	(-)	(-)	(-)	(-)
Observation during the test :	No flaming droplets were observed				



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

The mentioned expanded uncertainty is obtained by multiplying the standard uncertainty by a coverage factor $k=2$, which corresponded to a level of confidence of 95 %.

The test results relate to the behaviour of the test specimen of a product under the particular 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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Annotation:

(-): data was not determined/measured

Appendixes:

Appendix No. 1: The photographs of the exposed surface of the test specimens



Appendix No. 2: The graphs of the measured and calculated values



Bu rapor, laboratuvarın yazılı izni olmadan kısmen kopyalanıp çoğaltılamaz.

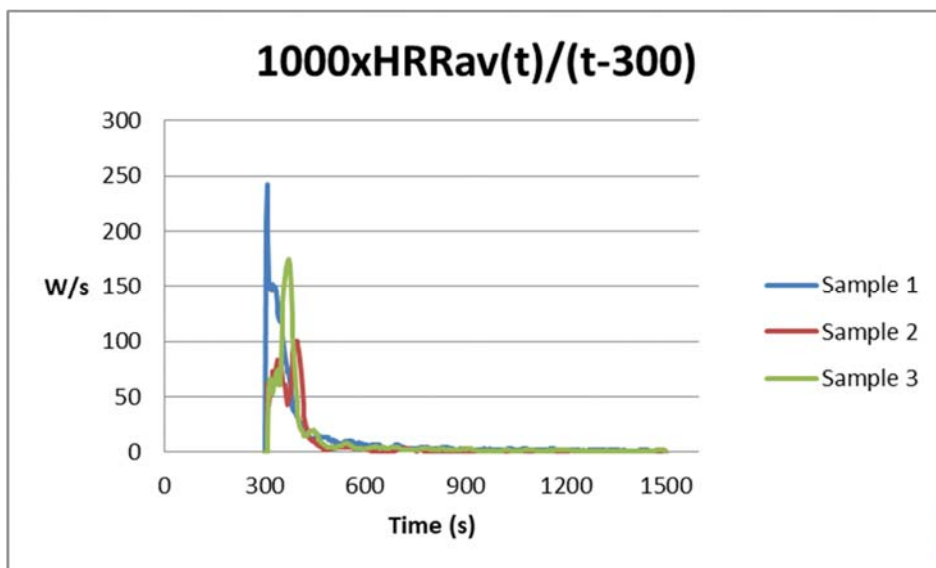
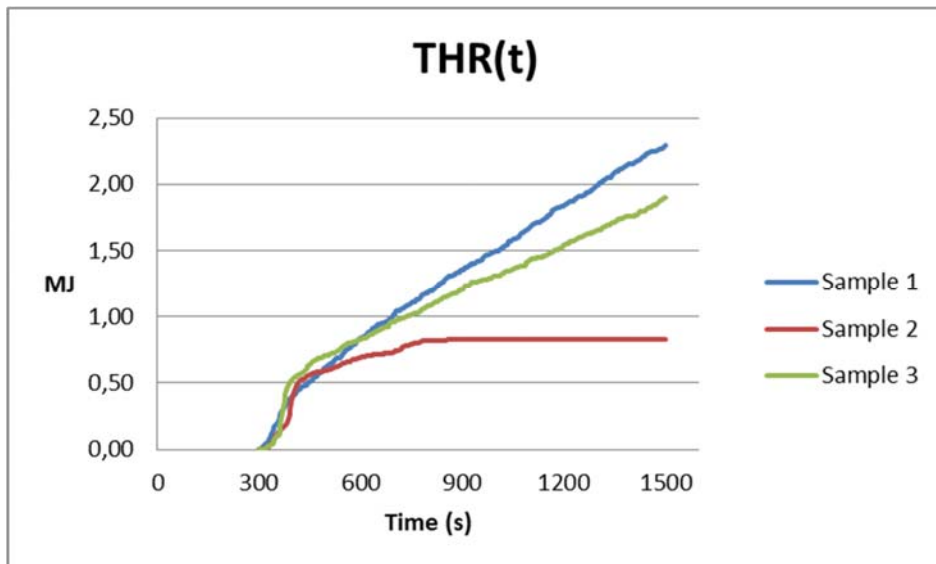
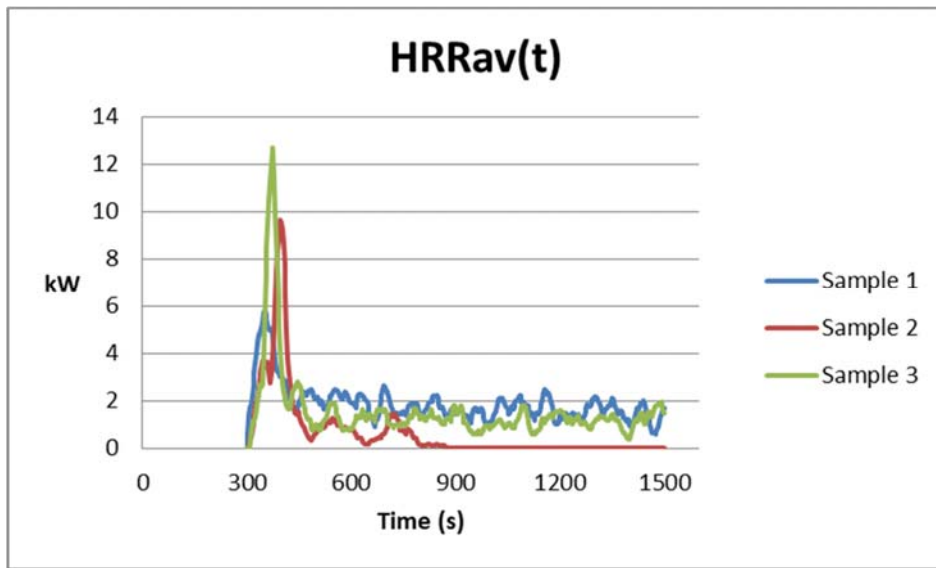
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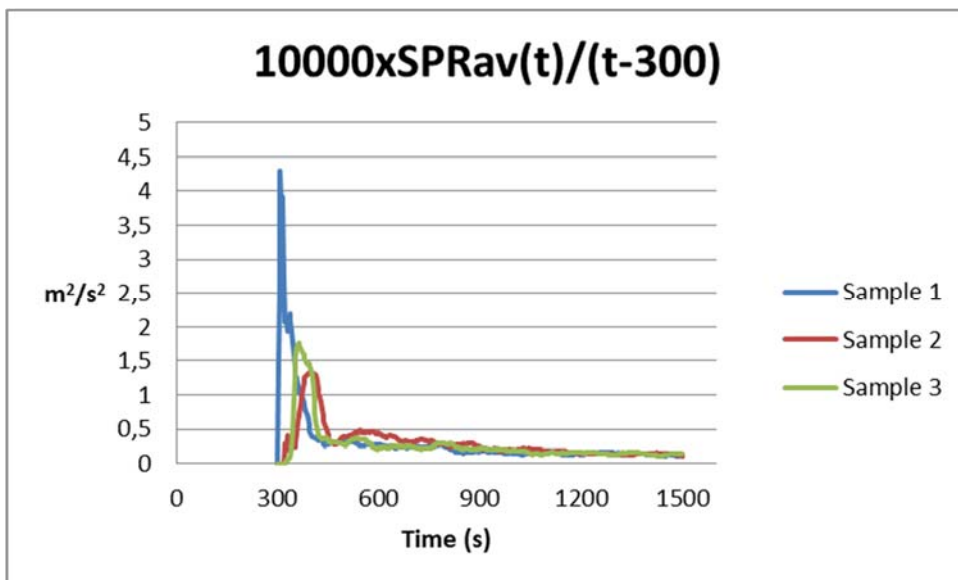
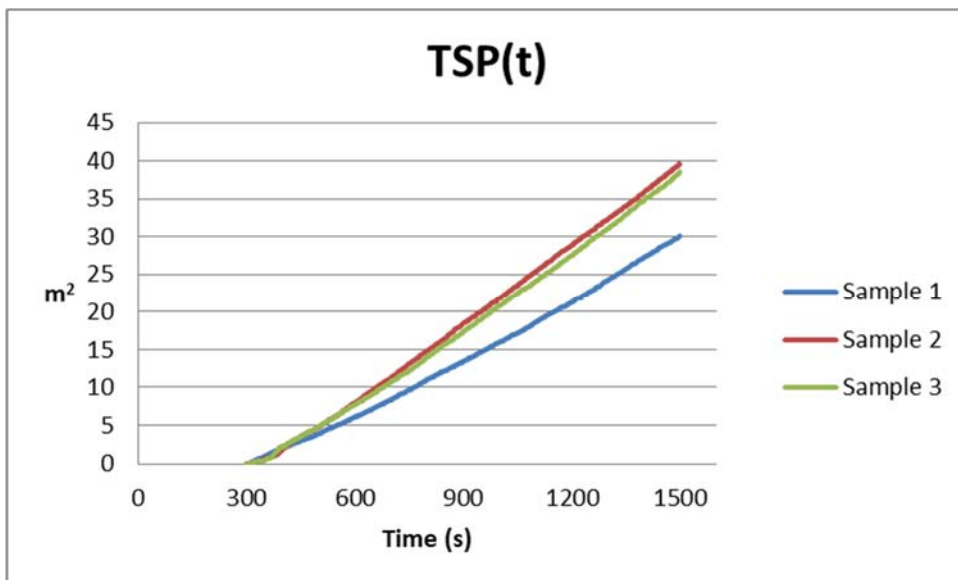
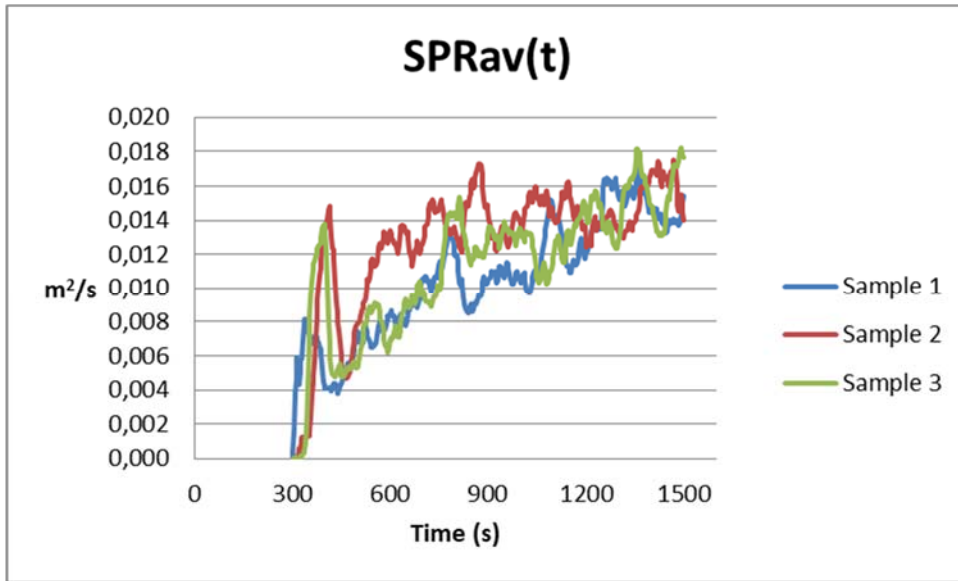
<p>“The photograph of the exposed surface of long wing</p>	<p>The photograph of the exposed surface of short wing</p>
	

<p>The photograph of the exposed surface taken from the opposite of corner line</p>


EFKTS



EFRT/s



E. F. K. S.