TÜRKAK

TÜRK AKREDİTASYON KURUMU

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Test
TS EN ISO/IEC 17025
AB-0330-T

ERA LABORATUVARLARI A.Ş.

TOSB TAYSAD Organize San. Böl. 1. CD. ,15. Yol No: 1

Şekerpınar – Çayırova, KOCAELİ

AB-0330-T
FTST14277
26.08.2014

DENEY RAPORU

TEST REPORT

Müşterinin adı/adresi : ALAZ AHŞAP TEKNOLOJİLERİ SAN. VE TİC.LTD.ŞTİ.
Customer name/address Ferhatpaşa Mah.Ferhatpaşa Cad.No:5
Ataşehir, İSTANBUL / TÜRKİYE

İstek numarası : ERA-14-000138
Order No.

Numunenin adı ve tarifi : Technowoodsiding ALU
Name and identity of test sample

Numunenin kabul tarihi : 15.04.2014
The date of receipt of sample

Açıklamalar :
Remarks

Deneyin yapıldığı tarih : 12.08.2014
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 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 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*
ERA LABORATUVARLARI A.Ş. ERA	26.08.2014	Gülden YÜZER	Onur DAĞ

Phone: +902626581662 Fax.: +902626581669 E-mail: info@erayonetim.com Web: www.erayonetim.com

TEST REPORT

on Fire and Technical Characteristics

Our ref.: ERA-14-000138

Sponsor: ALAZ AHŞAP TEKNOLOJİLERİ SAN. VE TİC.LTD.ŞTİ.
Ferhatpaşa Mah.Ferhatpaşa Cad.No:5 Ataşehir, İSTANBUL / TURKEY

TEST ITEM

Product name : Technowoodsiding ALU

Manufacturing Plant: ALAZ AHŞAP TEKNOLOJİLERİ SAN. VE TİC.LTD.ŞTİ.
Ferhatpaşa Mah.Ferhatpaşa Cad.No:5 Ataşehir, İSTANBUL / TURKEY

Composition: Teak, fleece, polyurethane adhesive, aluminum plate

Appearance : Density of exterior coating material is 2,7 g/cm^3, thickness is 18 mm.Front side of test sample is covered with wooden which have a mass per unit area of 160 g/m^2, thickness of 0,40 mm. The front side of wooden veneer is covered with varnish which has a mass per unit area of 110 g/m^2. There is used polyurethane based adhesive between aluminium plate and wooden veneer which has a mass per unit area of 100 g/m^2.

Date of receipt of the sample: 15.04.2014 **Sampling:** The samples were delivered by the sponsor
Date of realization of tests: 12.08.2014

TEST METHOD: TS EN ISO 1716
Conditioning: TS EN 13238 Madde 4.3.b , (23 ± 2) °C and % (50 ± 5) relative humidity
Water equivalent of the calorimeter: 2392,1822 MJ/K

MEASURED VALUES AND THE TEST RESULTS

The masses per unit area used for the calculations:
product as a whole: 5388,97 g/m^2 adhesive: 100 g/m^2 varnish: 110 g/m^2 wooden veneer: 160 g/m^2

Fire technical characteristics	Measured values 1st	2nd	3rd	Results	Expanded uncertainty
PCS [MJ/kg](1)	0,00	0,00	0,00	0,00	(-)
PCS [MJ/ kg] (2)	22,73	22,80	22,72	22,75	0,20
PCS [MJ/ m^2](2)	3,64	3,65	3,64	3,64	0,16
PCS [MJ/kg] (3)	26,76	26,65	26,71	26,71	0,20
PCS [MJ/m^2](3)	2,68	2,66	2,67	2,67	0,20
PCS [MJ/kg] (4)	29,17	29,30	29,23	29,23	0,18
PCS [MJ/m^2](4)	3,21	3,22	3,22	3,22	0,20
PCS [MJ/kg] (5)	1,77	1,77	1,77	1,77	0,16

(-): not applicable	(1):Aluminium substantial component (2):Wooden component (3): Adhesive component (4):Varnish component (5):Product as whole

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.

The protocol shall not be reproduced except in full without the written approval of the testing laboratory.

ERA LABORATUVARLARI A.Ş.

ERA Fire Test Laboratory

Accredited Body
No: AB-0330-T

CLASSIFICATION OF REACTION TO FIRE IN ACCORDANCE WITH EN 13501-1:2007+A1:2009

Sponsor	: ALAZ AHŞAP TEKNOLOJİLERİ SAN. VE TİC.LTD.ŞTİ. Ferhatpaşa Mah.Ferhatpaşa Cad.No:5 Ataşehir, İSTANBUL / TURKEY
Prepared by	: ERA LABORATUVARLARI A.Ş. TOSB TAYSAD Organize San. Böl. 1. CD. 15. Yol No: 1 Şekerpınar - Çayırova KOCAELİ, TURKEY
Product name	: Technowoodsiding ALU
Classification report No.	: ERA - 14 - 073
Issue Number	: 1/2
Date of issue	: 27.08.2014

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

1. INTRODUCTION

This classification report defines the classification assigned to "*Technowoodsiding ALU*" in accordance with the procedures given in EN 13501-1:2007+A1:2009

2. DETAILS OF CLASSIFIED PRODUCT

2.1. General:

The product *Technowoodsiding ALU is* defined as a „type of classified product". Its classification is valid for the following end use application:

2.2. Description:

The product *Technowoodsiding ALU* is fully described in the test reports in support of the classification listed in clause 3.

Product Name	Density [kg/m^3]	Wooden veneer		Thickness of panel (mm)	Adhesive (g/m^2)	Varnish (g/m^2)
		Thickness (mm)	Mass per unit area (g/m^2)			
Technowoodsiding ALU	2,7	0,40	160	18	100	110

3. REPORTS AND RESULTS IN SUPPORT OF CLASSIFICATION

3.1. Reports

Name of laboratory	Name of sponsor	Test report ref. no.	Test method
ERA LABORATUVARLARI A.Ş.	ALAZ AHŞAP TEKNOLOJİLERİ SAN. VE TİC.LTD.ŞTİ.	FTST14276	TS EN 13823
		FTST14277	TS EN ISO 1716

3.2. Results

Test method	Parameter	Number of test	Results	
			Continuous parameter mean (m)	Compliance parameters
TS EN ISO 1716	PCS [MJ/kg] (1)	(-)	0,00	(-)
	PCS [MJ/ m^2] (2)	3	3,64	(-)
	PCS [MJ/m^2] (3)	3	2,67	(-)
	PCS [MJ/m^2] (4)	3	3,22	(-)
	PCS [MJ/kg] (5)	3	1,77	(-)
TS EN 13823	$FIGRA_{0,2\ MJ}$ (W/s)	3	98,0	(-)
	LFS > edge	3	(-)	No
	$THR_{600\ s}$ (MJ)	3	2,1	(-)
	SMOGRA (m^2/s^2)	3	6,4	(-)
	$TSP_{600\ s}$ (m^2)	3	45,7	(-)
	Flaming droplet(s)/particle (s)	3	(-)	No

(-): Not applicable

(1):Aluminium substantial component
(2):Wooden cmponent
(3): Adhesive component
(4):Varnish component
(5):Product as whole

Test method	Parameter	Parameter	Compliance parameters
TS EN ISO 1716	PCS [MJ/kg] (1)	0,00	≤ 3 MJ/kg
	PCS [MJ/ m^2] (2)	3,64	≤ 4 MJ/ m^2
	PCS [MJ/m^2] (3)	2,67	≤ 4 MJ/m^2
	PCS [MJ/m^2] (4)	3,22	≤ 4 MJ/m^2
	PCS [MJ/kg] (5)	1,77	≤ 3 MJ/KG
TS EN 13823	$FIGRA_{0,2MJ}$ [W/s]	98,0	**≤ 120(A2)**
	THR_{600s} [MJ]	2,1	≤ 7,5 (A2)
	LFS < edge	yes	Yes (A2)
	SMOGRA [m^2/s^2]	6,4	≤ 30 (s1)
	TSP_{600s} [m^2]	45,7	**≤ 50 (s1)**
	Burning time of flaming droplets/particles [s]	no	No (d0)

(-): Not applicable

(1):Aluminium substantial component
(2):Wooden cmponent
(3): Adhesive component
(4):Varnish component
(5):Product as whole

4. CLASSIFICATION AND FIELD OF APPLICATION

4.1. Reference of classification

This classification has been carried out in accordance with the clauses 11.7, 11.9.3 and 11.10.1 o EN 13501-1:2007+A1:2009

4.2. Classification

The product, *Technowoodsiding ALU*, in relation to its reaction to fire behaviour is classified:

A2

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 *Technowoodsiding ALU* is:

Fire behaviour		Smoke production			Flaming droplets	
A2	-	s	1	,	d	0

Reaction to fire classification: A2-s1-d0

4.3. Field of application

This classification is valid for the following product parameters:

Product Name	Density [kg/m^3]	Wooden veneer		Thickness of panel (mm)	Adhesive (g/m^2)	Varnish (g/m^2)
		Thickness (mm)	Mass per unit area (g/m^2)			
Technowoodsiding ALU	2,7	0,40	160	18	100	110

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:

ERA LABORATUVARLARI A.Ş. ERA

Approved:

.....

Gülden YÜZER
Person in the charge of tests

.....

Onur DAĞ
Laboratory Manager

TÜRKAK

TÜRK AKREDİTASYON KURUMU

TURKISH ACCREDITATION AGENCY

tarafından akredite edilmiştir

TÜRKAK

Test
TS EN ISO/IEC 17025
AB-0330-T

ERA LABORATUVARLARI A.Ş.

TOSB TAYSAD Organize San. Böl. 1. CD. ,15. Yol No: 1

Şekerpınar – Çayırova, KOCAELİ

AB-0330-T
FTST14276
26.08.2014

DENEY RAPORU

TEST REPORT

Müşterinin adı/adresi : ALAZ AHŞAP TEKNOLOJİLERİ SAN. VE TİC.LTD.ŞTİ.
Customer name/address Ferhatpaşa Mah.Ferhatpaşa Cad.No:5
Ataşehir, İSTANBUL / TURKEY

İstek numarası : ERA-14-000093
Order No.

Numunenin adı ve tarifi : Technowoodsiding ALU
Name and identity of test sample

Numunenin kabul tarihi : 15.04.2014
The date of receipt of sample

Açıklamalar :
Remarks

Deneyin yapıldığı tarih : 09.06.2014
Date of test

Raporun sayfa sayısı : 4
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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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*
ERA LABORATUVARLARI A.Ş. ERA	26.08.2014	Gülden YÜZER	Onur DAĞ

Phone: +902626581662 Fax.: +902626581669 E-mail: info@erayonetim.com Web: www.erayonetim.com

TEST REPORT

on Fire and Technical Characteristics

Our ref.: ERA-14-000093

Sponsor: ALAZ AHŞAP TEKNOLOJİLERİ SAN. VE TİC.LTD.ŞTİ.
Ferhatpaşa Mah.Ferhatpaşa Cad.No:5 Ataşehir, İSTANBUL / TURKEY

TEST ITEM

Product name : Technowoodsiding ALU
Manufacturing Plant : ALAZ AHŞAP TEKNOLOJİLERİ SAN. VE TİC.LTD.ŞTİ.
Ferhatpaşa Mah.Ferhatpaşa Cad.No:5 Ataşehir, İSTANBUL / TURKEY
Composition : Teak, fleece, polyurethane adhesive, aluminum plate
Appearance : Density of exterior coating material is 2,7 g/cm^3, thickness is 18 mm.Front side of test sample is covered with wooden which have a mass per unit area of 160 g/m^2,thickness of 0,40 mm. The front side of wooden veneer is covered with varnish which has a mass per unit area of 110 g/m^2.There is used polyurethane based adhesive between aluminium plate and wooden veneer which has a mass per unit area of 100 g/m^2. The product fixed on the standard calcium silicate board substrates in accordance with TS EN 13238– thickness of calcium silicate board is 12 mm and nominal density is 870 kg/m^3.

Date of receipt of the sample: 15.04.2014 **Sampling:** The samples were delivered by the sponsor
Date of realization of tests: 09.06.2014

TEST METHOD: TS EN 13823
Conditioning: According to the TS EN 13238, Article 4.3.b, (23 ± 2) °C and % (50 ± 5) relative humidity

MEASURED VALUES AND THE TEST RESULTS					
Test specimen no.	**1**	**2**	**3**	**∅**	**Expanded uncertainty**
Date of test	09.06	09.06	09.06		
LFS > edge	no	no	no	no	(-)
$FIGRA_{0,2}$ MJ [W/s]	93,9	99,7	100,4	98,0	4,2
$FIGRA_{0,4}$ MJ [W/s]	82,6	98,6	100,4	93,8	11,3
$THR_{600\,s}$ [MJ]	1,9	2,3	2,2	2,1	0,5
SMOGRA [m^2/s^2]	6,0	7,3	5,8	6,4	1,1
$TSP_{600\,s}$ [m^2]	51,6	40,7	44,7	45,7	6,4
Flaming droplets/particles	no	no	no	no	(-)
Time of flaming [s]	(-)	(-)	(-)	(-)	(-)
Observation during the test :	No flaming droplets were observed				

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:

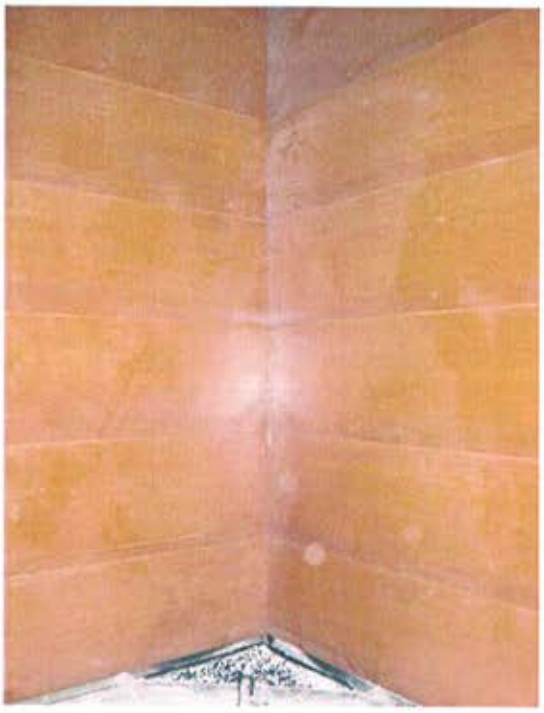
(-): data was not determined/measured

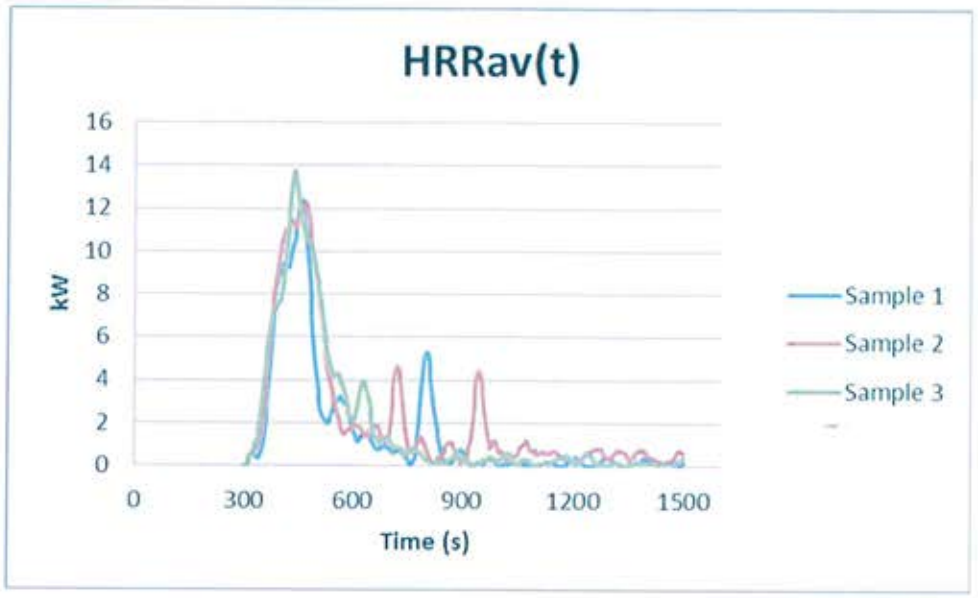
Appendixes:

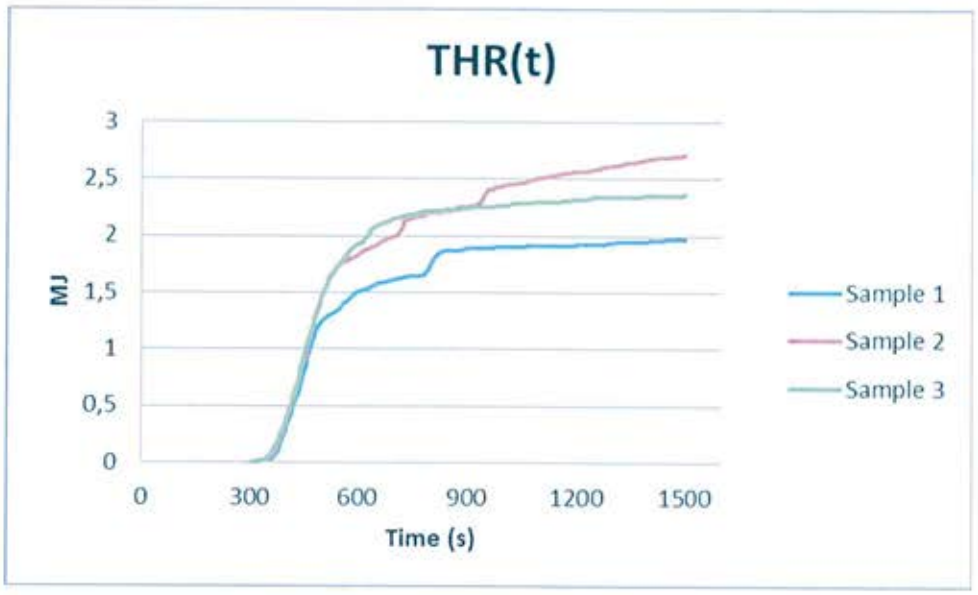
Appendix No. 1: The photographs of the exposed surface of the test specimens

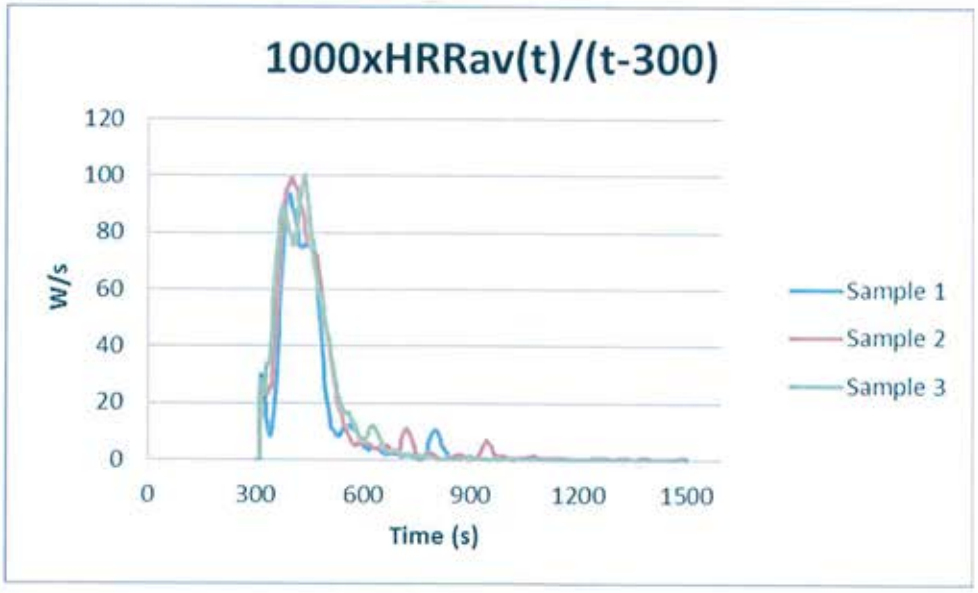
Appendix No. 2: The graphs of the measured and calculated values

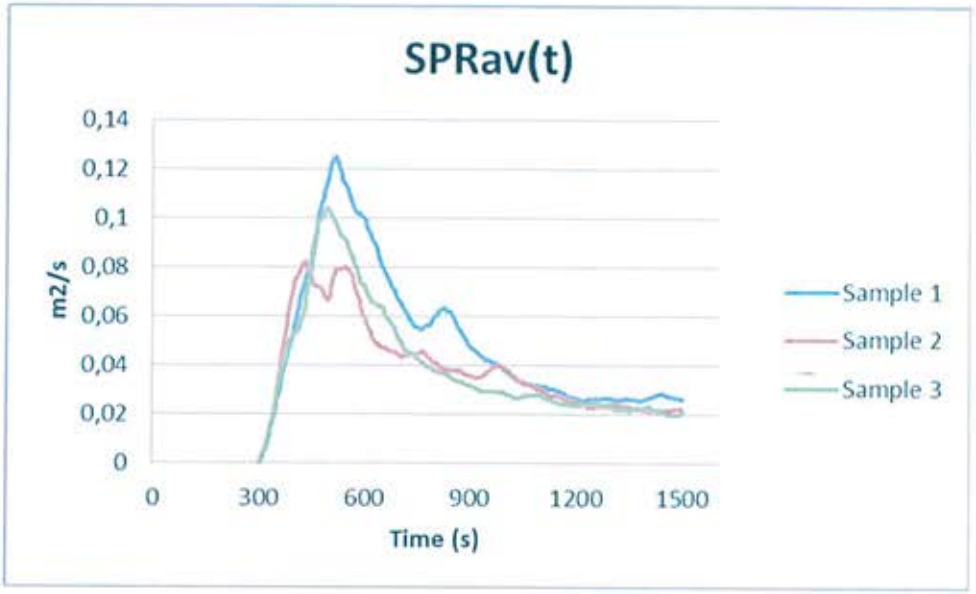
The photograph of the exposed surface of long wing	The photograph of the exposed surface of short wing
	

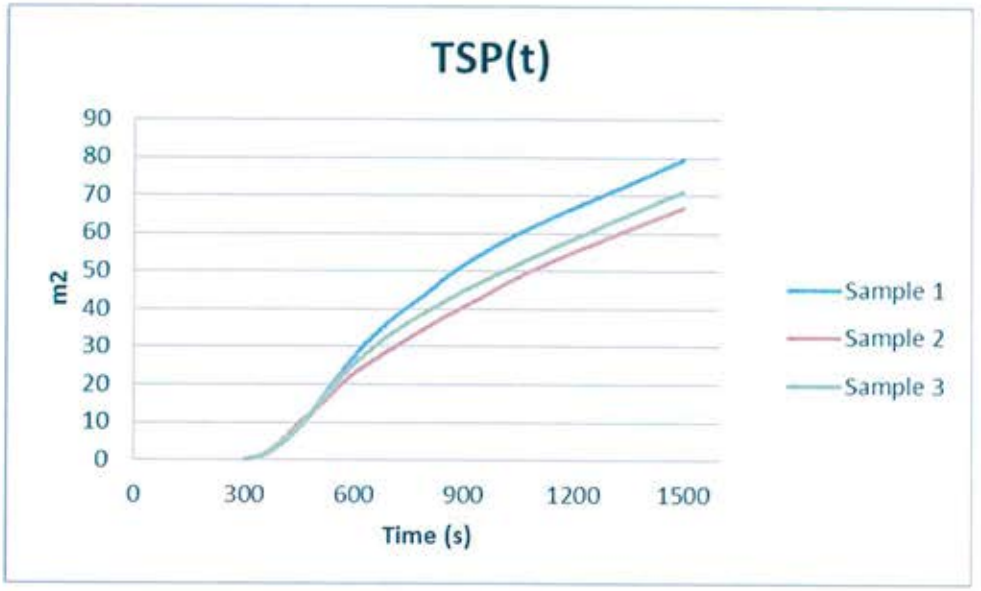
The photograph of the exposed surface taken from the opposite of corner line


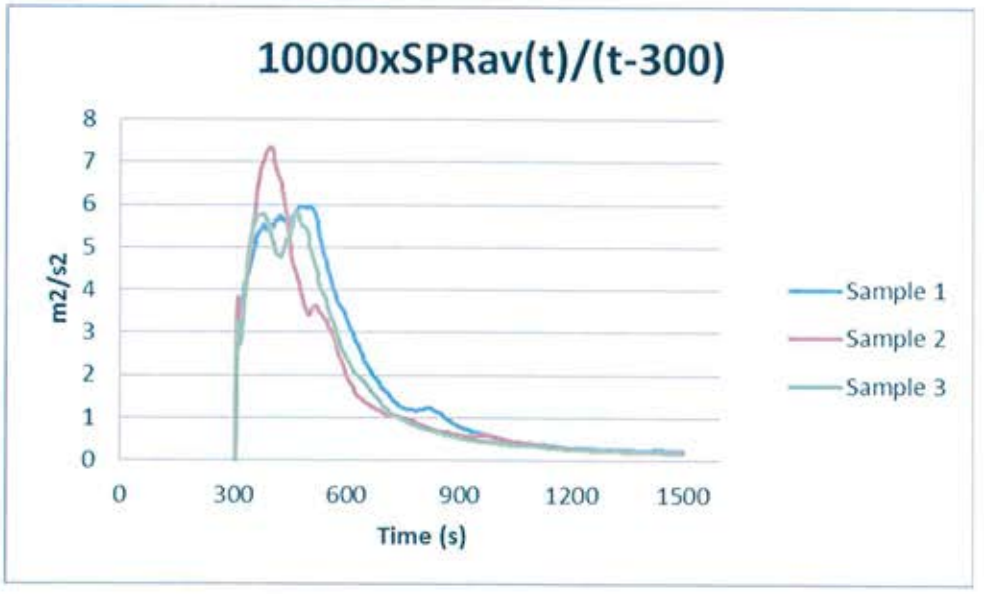

HRRav(t)
kW
16
14
12
10
8
6
4
2
0
0
300
600
900
1200
1500
Time (s)
Sample 1
Sample 2
Sample 3


THR(t)
MJ
3
2,5
2
1,5
1
0,5
0
0
300
600
900
1200
1500
Time (s)
Sample 1
Sample 2
Sample 3


1000xHRRav(t)/(t-300)
W/s
120
100
80
60
40
20
0
0
300
600
900
1200
1500
Time (s)
Sample 1
Sample 2
Sample 3


SPRav(t)
0,14
0,12
0,1
0,08
0,06
0,04
0,02
0
m2/s
0
300
600
900
1200
1500
Time (s)
Sample 1
Sample 2
Sample 3


TSP(t)
90
80
70
60
50
40
30
20
10
0
m2
0
300
600
900
1200
1500
Time (s)
Sample 1
Sample 2
Sample 3


10000xSPRav(t)/(t-300)
8
7
6
5
4
3
2
1
0
m2/s2
0
300
600
900
1200
1500
Time (s)
Sample 1
Sample 2
Sample 3