Test Report Issue To:
SAMRAT PLYWOOD LIMITED.
VILLAGE BIR PLASSI, NALAGARH ROAD, TEHSIL - NALAGARH, Solan, Himachal Pradesh, 174103

Test Report No : I251202007-1
Date of Issue: 10/12/2025
Sample Booking/Receipt : 02/12/2025
Date of Start of Testing: 05/12/2025
Date of Completion of Test: 05/12/2025

Customer Relationship Number : **A1120893**

Sample Description :
Red color cladding Sample (3202)

Kind Attention: Mr. Puneet Singhal
E-Mail: puneetsinghal@samratply.in
Contact No: 9915440040

Customer Reference Number :

Sample Drawn By : Test Sponsor

Laboratory certified by CERTIFER

ilac-MRA

TC-10383

ULR No: TC1038326000000026F

IGNITO LABS PVT. LTD. Authorised Signatory Faridabad, Haryana

Kaushal Kumar Thakur
Reviewed & Authorized By

This is Digitally Signed Report and hence doesn't require Physical Signature

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Sandeep Kumar Yadav
(Tested By)

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1. INTRODUCTION

Determination of the compliance of **Red color cladding Sample (3202)** for **B S1 D0** classification according to **EN 13501-1:2018;** Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests.

2. TEST METHODS & REFERENCES

EN 13501-1:2018; Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests.

BS EN 13823:2020+A12022; Reaction to fire tests for building products. Building products excluding floorings exposed to the thermal attack by a single burning item.

BS EN 13238:2010; Reaction to fire tests for building products. Conditioning procedures and general rules for selection of substrates.

ISO 11925-2: 2020; Reaction to fire tests — Ignitability of products subjected to direct impingement of flame — Part 2: Single-flame source test.

3. DATE OF TEST

Specimen Installation Date	05.12.2025
Installed By	Test Laboratory
Testing Date	05.12.2025

4. SPECIMEN DETAIL

Specimen Detail (Declared by test sponsor)	
Product Type	**Cladding**
Manufacturer Name	Samrat Plywood Limited. Village-Bir Plassi, Nalagarh Road, Tehsil-Nalagarh, Solan, Himachal Pradesh, 174103
Generic Name	High Pressure Laminate
Product Name	**Red Color Cladding Sample (3202)**
Design Number	**3202**
Specimen Size	1000x1500mm, 500x1500mm and 90X250mm-6 specimens
Thickness, After Compression	6 mm
Mass Per Unit Area, After Compression	8.4 Kg/m^2
Density, After Compression	1350-1450 Kg/m^3
Color & Finish	Red-Highly Pigmented Color, Matt surface finish
Exposed Face	Both faces were similar, one of the faces was exposed to fire.
Form of Construction of Specimen	Sheet
Substrate Used & Method of fixing to substrate	Specimens were tested on as received basis. No substrate used.
Resin System	Phenolic Melamine Resin

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Specimen Construction (Declared by test sponsor)

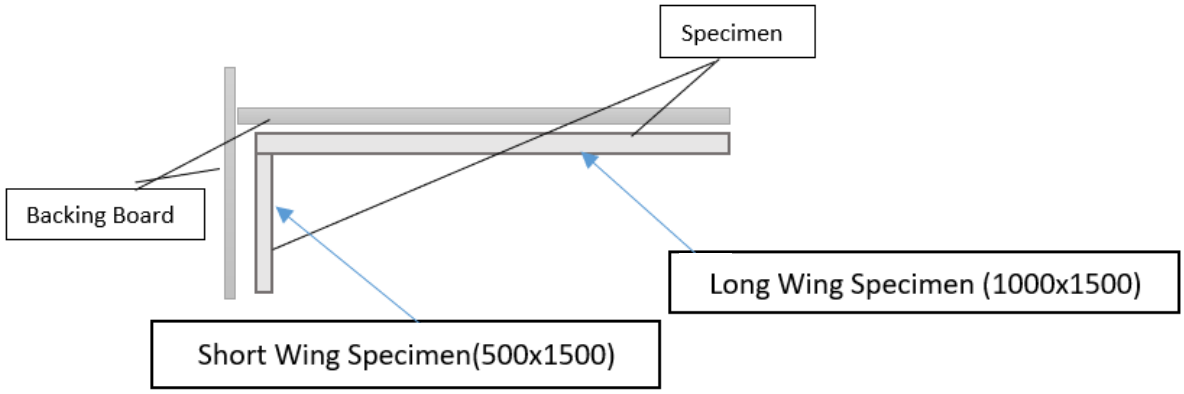
Material	Thickness (mm)	Mass Per Unit Area (g/m²)	Density (Kg/m³)	Manufacturer
Top Layer- (Design Paper layers impregnated with Melamine resin)	0.1	75	700-800	Technocell, Burg Gretesch 49086 Osnabruck Niedersachsen Germany
Core Layers – (Multiple (50) kraft Paper layers impregnated with phenolic resin)	9.18	130	650-750	Haripur Papers, Village-Batehar, near Haripur Road, Barotiwala, Distt. Solan, Himachal Pradesh, 174103
Backside Layer – (Design Paper layers impregnated with phenolic resin)	0.1	75	700-800	Technocell, Burg Gretesch 49086 Osnabruck Niedersachsen Germany

5. SPECIMEN INSTALLATION

Test specimen has been installed and mounted by testing laboratory, Installation and mounting is done as per clause 5.2.1 of EN 13823 as decided by test sponsor.

Mounting of specimen (*Mounting as in end use application as per clause 5.2.1 of EN 13823/standard mounting as per clause 5.2.2 of EN 13823*)	Mounting as in end use application as per clause 5.2.1 of EN 13823
Any product specification/standard followed for installation of test specimen (Yes/No), *if yes please specify*	No
Vertical Joint simulated in test (Yes/No)	No
Horizontal joint simulated in test (Yes/No)	No

Test specimens of size 500mm in width and 1500mm in length for short wing and 1000mm in width and 1500mm in length for long wing were supplied by test sponsor. Test specimen was installed in the test rig as shown in Figure 1 without any airgap.



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6. PRE-TEST PROCEDURE

6.1. Verification of the Test Specimen

Ignito Labs was not involved in the selection or sampling of the specimen. Test specimen was supplied by the sponsor of test.

6.2. Conditioning & Test Conditions

Conditioning: The specimens were conditioned till constant mass for 48 hours at a temperature of 23±2^{0}C and relative humidity of 50±5%.
Test conditions: The test was performed at a temperature of 22.1^{0}C and relative humidity of 48%

7. FIRE TEST PROCEDURE

7.1 Parameter: FIGRA0.2MJ, FIGRA0.4MJ, SMOGRA, TSP600s, THR600s

Test Method: BS EN 13823:2020+A12022
1 specimen was tested, formed from two wings i.e, short wing and long wing of overall dimensions 500 mm x 1500 mm and 1000 mm x 1500 mm respectively. The tests were performed in the equipment called SBI (Single Burning Item), which consists of a test chamber, a test trolley and the smoke extraction system.
The test principle is to expose the two wings of the test material in a vertical position in right angle to a burner located in the lower corner (main burner). The flames are obtained by combustion of propane gas, injected through a sand bed with an output power (30.7 ± 2.0) kW.

The behavior of the sample is evaluated over a period of 20 minutes, determining performance parameter such as heat emission, smoke production, lateral spread of flame and drop inflamed particles.
A short time before the main burner ignition is used to quantify heat and smoke produced only by the burner, using an identical burner away from the sample and called auxiliary burner. Measurements are taken automatically and by visual observation. The extraction pipe is equipped with sensors for measuring the temperature, attenuation of light, the molar fraction of oxygen and carbon dioxide, and the flow induced by the pressure difference. These parameters are recorded automatically and used to calculate the volume flow, the energy release (HRR) and smoke production rate (SPR).
Parameters recorded

- **FIGRA$_{0.2MJ}$** (W/s): Maximum value of coefficient of heat release rate for the sample and the moment is started, using a threshold THR (amount of heat evolved) of 0.2 MJ.
- **FIGRA$_{0.4MJ}$** (W/s): Maximum value of coefficient of heat release rate for the sample and the moment is started, using a threshold THR (amount of heat evolved) of 0.4 MJ.
- **THR$_{600s}$** (MJ): Total amount of heat released from the sample in the first 600 seconds of the start of exposure by main burner.
- LSF edge: Lateral flame spread along the long wing of the sample.
- Droplets or flamed particles with inflammation times higher or lower than 10 seconds.
- **SMOGRA** (m^2/s^2): The rate at which smoke production increases during the full 20-minute exposure period.
- **TSP$_{600s}$** (m^2): Total smoke production during the first 600 s of the start of exposure by main burner.

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7.2 Parameter: Ignitability

Test Method: ISO 11925-2:2020

This test determines the ignitability of a vertically oriented test specimen when exposed to a small flame for 30seconds, at the edge or the surface of the specimen. The burning behavior of the specimen is observed for flame spread, the occurrence of burning particles and droplets.

8. OBSERVATIONS

8.1. Pre -Test Observations

The specimen was found satisfactory and fit to be tested.

8.2. Test Observations

8.2.1 Observations of Single Burning Items test as per EN 13823

Parameters	Specimen			Mean
	S-1	S-2	S-3	
Thickness in mm	6	6	6	**6**
Weight of complete assembly, in kg	20.21	20.25	20.31	**20.26**
FIGRA$_{0.2MJ}$ (W/s)	24.25	25.43	17.99	**22.56**
FIGRA$_{0.4MJ}$ (W/s)	24.91	25.51	18.12	**22.85**
THR$_{600s}$ (MJ)	5.70	5.12	5.76	**5.53**
SMOGRA (m^2/s^2)	0	0	0	**0**
TSP$_{600s}$	12.72	16.24	14.34	**14.43**
LFS to edge	No	No	No	-
Flaming Droplet/ Particles ≥10s within the first 600 seconds (Yes/No)	No	No	No	-
Flaming Droplet/ Particles ≤10s within the first 600 seconds (Yes/No)	No	No	No	-
Time of Flaming, s	NA	NA	NA	-
Occurrence of a surface flash (Yes/No)	No	No	No	-
Smoke not entering the hood during test, but flowing out of the trolley into the surrounding testing room (Yes/No)	No	No	No	-
Falling of parts of the specimen (Yes/No)	No	No	No	-
Development of gap in the corner (Failure of mutual fixing of backing boards) (Yes/No)	No	No	No	-
Early termination of test (Yes/No), if yes then specify reason	No	No	No	-
Occurrence of distortion or collapse of the specimen	No	No	No	-

8.2.2 Observations of Ignitability test as per ISO 11925-2

a. Surface Flame Attack

Flame Time: 30 seconds

Parameters	Specimen		
	S-1	S-2	S-3
Ignition of test specimen(Y/N)	N	N	N
Time to reach 150mm Mark, S	-	-	-
Ignition of Filter Paper(Y/N)	N	N	N

***Y- Ignition Occurred, N- No ignition**

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b. Edge Flame Attack
Flame Time: 30 seconds

Parameters	Specimen		
	S-1	S-2	S-3
Ignition of test specimen(Y/N)	N	N	N
Time to reach 150mm Mark, S	-	-	-
Ignition of Filter Paper(Y/N)	N	N	N

*Y- Ignition Occurred, N- No ignition

9. CONFORMITY

Specimen has been tested as per **EN 13823** and **ISO 11925-2** and evaluated in accordance with **EN 13501-1** for **B S1 D0** classification. Tested specimen is meeting the requirements of **B S1 D0** as per **EN 13501-1:2018 only for installation method given in clause 5.**

Parameter	Requirements of B S1 D0 Class of EN 13501-1:2018	Observed Results	Conformity (Confirms/Do not Confirms)
A. Single Burning Item Test			
$FIGRA_{0.2MJ}$ (W/s)	≤120W/s	22.56	**Confirms**
THR_{600}(MJ)	≤7.5MJ	5.53	**Confirms**
SMOGRA (m^2/s^2)	≤30m^2/s^2	0	**Confirms**
TSP_{600s}	≤50m^2	14.43	**Confirms**
LFS to edge	No LFS to edge	No	**Confirms**
Flaming Droplet/ Particles ≥10s within the first 600 seconds	No	No	**Confirms**
B. Ignitability Test			
Flame to reach 150mm Mark	No Flame should reach 150mm mark	No Flame reached 150mm mark	**Confirms**

Fire behaviour		Smoke Production			Flaming Droplets	
B	-	s	1	,	d	0

Reaction to fire classification: B-s1, d0

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10. CLASSFICIATION CRITERIA

Classes of reaction to fire performance for construction products excluding floorings and linear pipe thermal insulation products are given below

Class	Test method(s)		Classification criteria	Additional classification
A1	EN ISO 1182 [a] and		ΔT 30°C, and, Δm 50%, and tf=0(i.e. no sustained flaming)	
	EN ISO 1716		*PCS* 2.0MJ/kg [a] and *PCS* 2.0MJ/kg [b c] and *PCS* 1.4MJ/m^2 [d] and *PCS* 2.0MJ/kg [e]	
A2	EN ISO 1182 [a] or	and	ΔT 50°C, and, Δm 50%, and tf 20 s	
	EN ISO 1716		*PCS* 3.0MJ/kg [a] and *PCS* 4.0MJ/m^2 [b] and *PCS* 4.0MJ/m^2 [d] and *PCS* 3.0MJ/kg [e]	
	EN 13823		*FIGRA* 120W/s and *LFS*<edge of specimen and *THR*$_{600s}$ 7.5MJ	Smoke production [f] and Flaming droplets/particles [g]
B	EN 13823 and		FIGRA 120W/s and LFS<edge of specimen and THR600s 7.5MJ	Smoke production f and Flaming droplets/particles [g]
	EN ISO 11925-2 [i] Exposure =30s		Fs 150mm within 60 s	
C	EN 13823 and		FIGRA 250W/s and LFS<edge of specimen and THR600s 15MJ	Smoke production f and Flaming droplets/particles [g]
	EN ISO 11925-2 [i] Exposure=30s		Fs 150mm within 60 s	
D	EN 13823 and		FIGRA 750W/s	Smoke production f and Flaming droplets/particles [g]
	EN ISO 11925-2 [i] Exposure=30s		Fs 150mm within 60 s	
E	EN ISO 11925-2 [i] Exposure =15s		Fs 150mm within 20 s	flaming droplets/particles [h]
F	No performance determined			

[a] For homogeneous products and substantial components of non-homogeneous products.

[b] For any external non-substantial component of non-homogeneous products.

[c] Alternatively, any external non-substantial component having a PCS 2,0 MJ/m^2, provided that the product satisfies the following criteria of EN 13823: FIGRA 20 W/s, and LFS < edge of specimen, and THR$_{600s}$ 4,0 MJ, and s1, and d0.

[d] For any internal non-substantial component of non-homogeneous products.

[e] For the product as a whole. [f] In the last phase of the development of the test procedure, modifications of the smoke measurement system have been introduced, the effect of which needs further investigation. This may result in a modification of the limit values and/or parameters for the evaluation of the smoke production. s1 = SMOGRA 30m^2/s^2 and TSP$_{600s}$ 50m^2 ; s2 = SMOGRA 180m^2/s^2 and TSP$_{600s}$ 200m^2; s3= not s1 or s2.

[g] d0 = No flaming droplets/ particles in EN 13823 within 600 s; d1 = no flaming droplets/ particles persisting longer than 10 s in EN 13823 within 600 s; d2 = not d0 or d1. Ignition of the paper in EN ISO 11925-2 results in a d2 classification.

[h] Pass = no ignition of the paper (no classification); Fail = ignition of the paper (d2 classification). [i] Under conditions of surface flame attack and, if appropriate to the end–use application of the product, edge flame attack.

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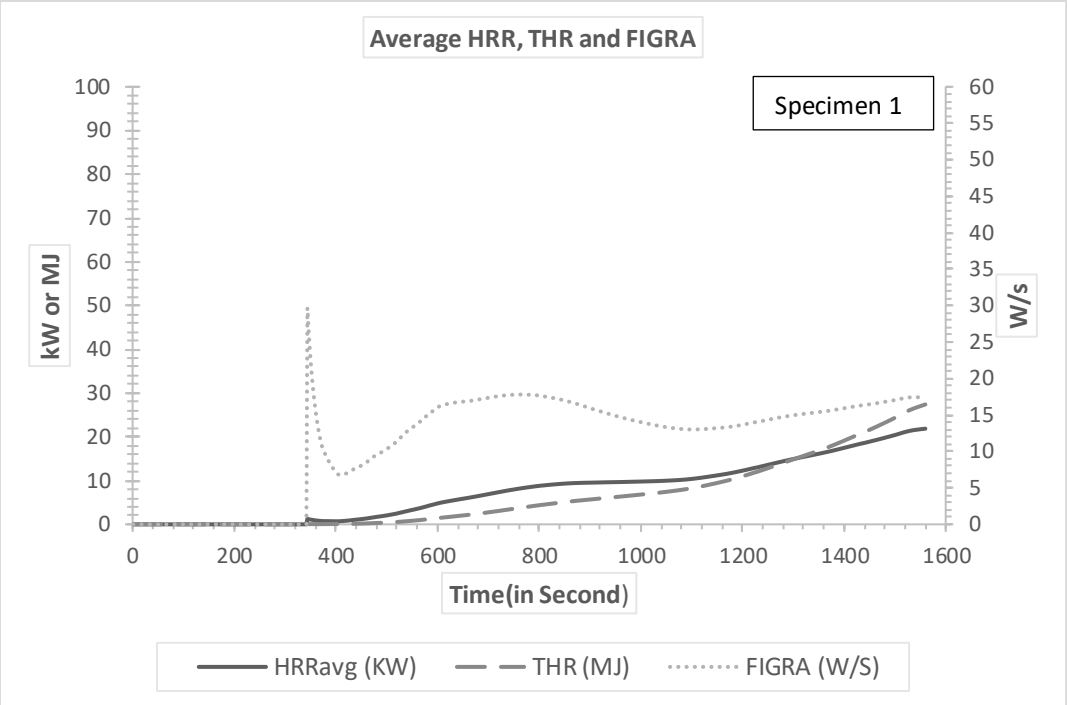
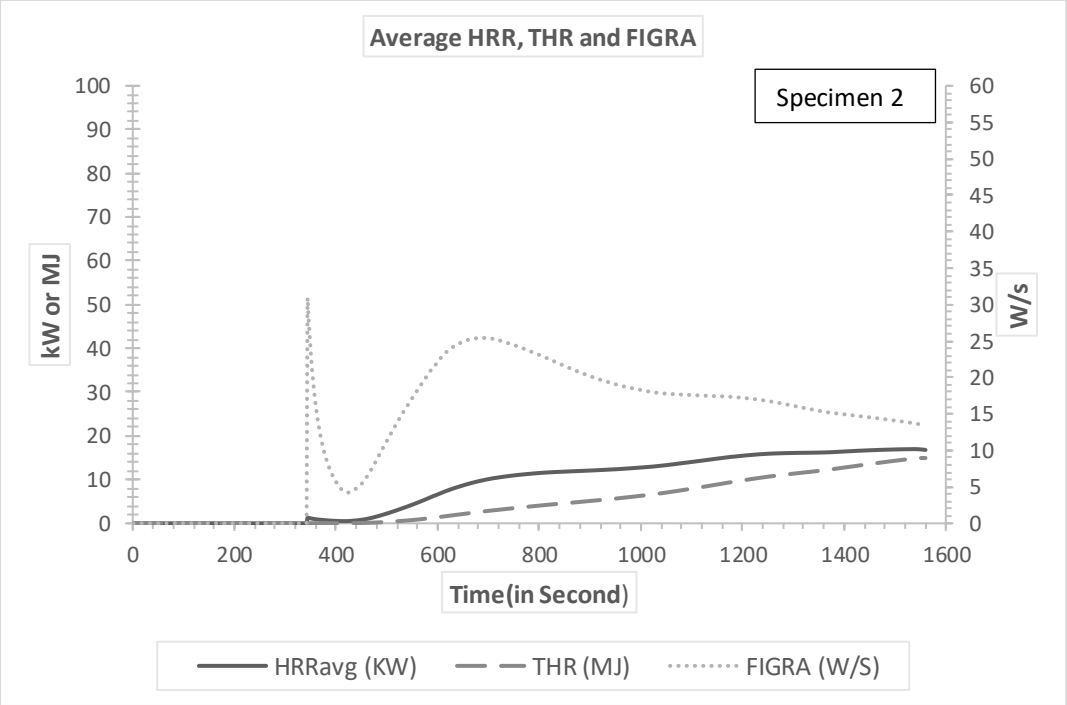
11. GRAPHS





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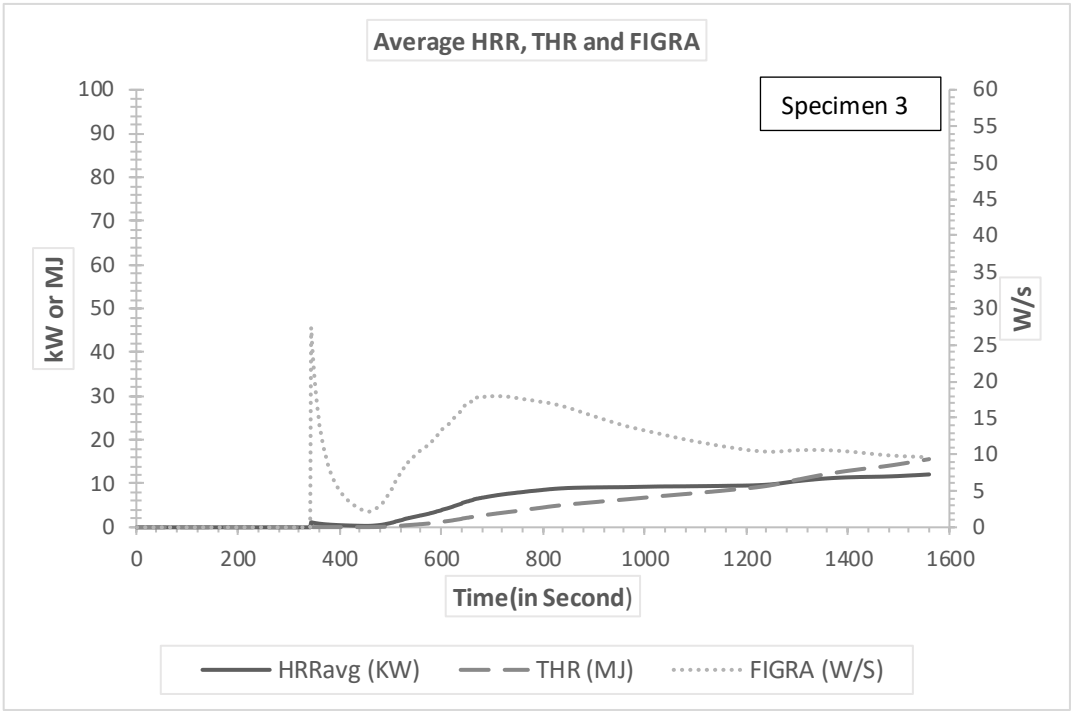

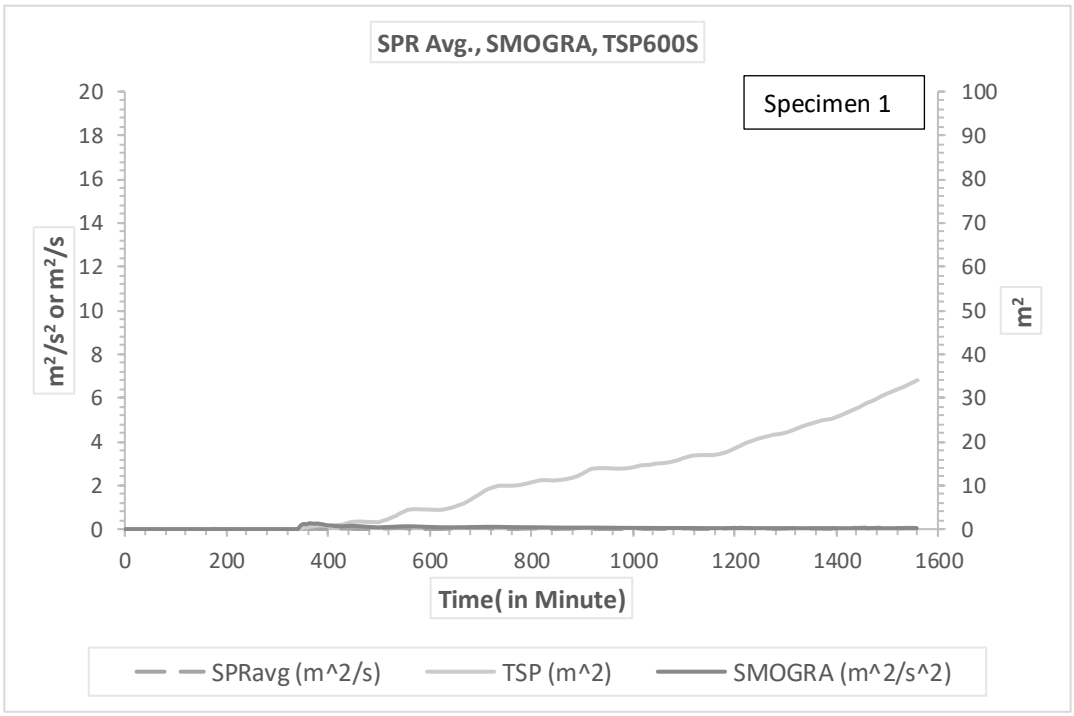

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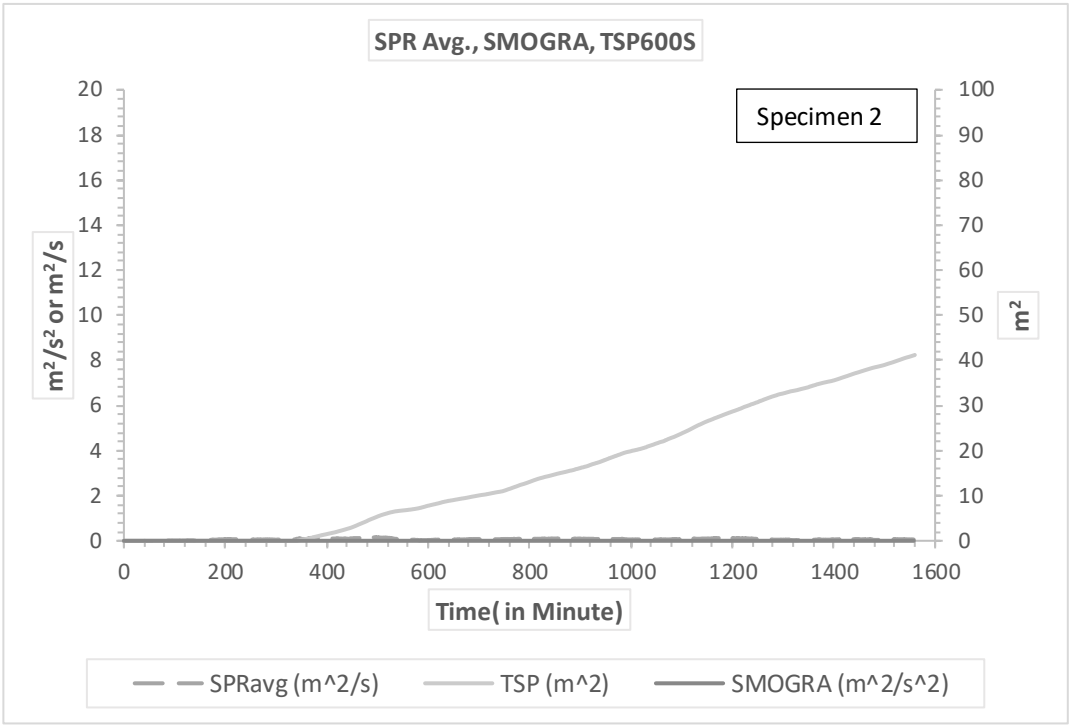

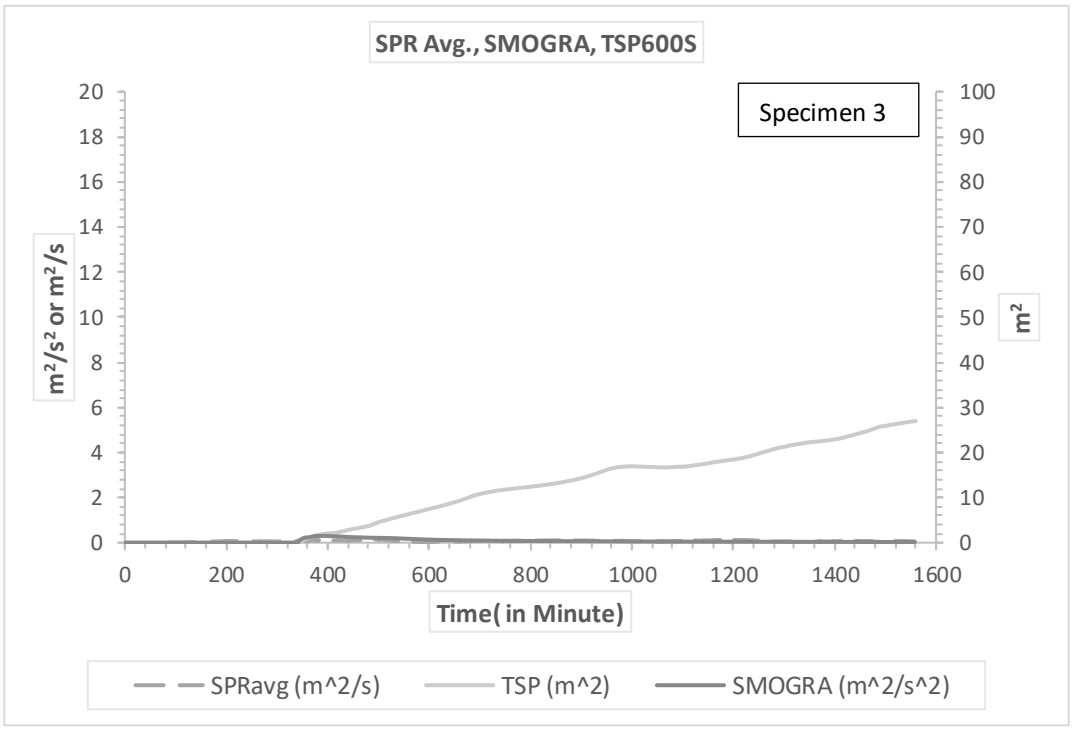

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12. PHOTOS

Sample Before Test

Sample Before Test

Sample After Test

Sample After Test

13. LIMITATION

The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test, they are not intended to the sole criterion for assessing the potential fire hazard of the product in use.

----------End of Test Report----------

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Terms & Condition:

- The results are related only to the items Tested
- Total Liability of our Laboratory is limited to the invoiced Amount. No Liability will be accepted after Sample is taken back
- The Sample Description is given "As desired by the customers". Sample not drawn by us & Analysis Conducted on Received sample unless specified otherwise.
- Retained sample will be destroyed after 30 days from the date of issue of the test report unless instructed otherwise.
- Any Complaints or Retest request should be communicated within 15 days from the issue of the Test report.
- Test Report shall not be reproduced except in full, without Written approval of the Laboratory
- The Test report is not to be reproduced wholly or in parts & cannot be used as an evidence in a court of law & shall not be used in advertising media without our permission in writing.

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