

Overall Rating

A1,s2,d0

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Applicant:

TEKSER TEKNİK SERAMİK TİC. A. Ş.

Applicant Address:

İçerenköy Yolu Üzeri Keyap San. Sit. F.1 Blok No:94 Ümraniye-İSTANBUL

Contact Person:

Mustafa KANTAR

Contact Telephone:

0216 365 66 22

Contact e-mail :

m_kantar@tekser.org

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Sample ID :

Panel Guard
Panel Guard Lite

	STANDARD	METHOD	SPECIMEN	RESULT
*	Fire classification of construction products and building elements-Part 1: Classification using test data from reaction to fire tests.	TS EN ISO 13501-1	PANEL GUARD	A1,s2,d0
			PANEL GUARD LITE	A1,s2,d0



Seal

K. rveli

Customer Representative
Merve Nur KIRVELİ



Laboratory Manager
Merve ÖZLÜ

Inspection results, methods and other information about the sample shown in the relevant pages of this Report are based on the information specified in accordance with "Inspection Request Form (PR03-F01) conveyed to us from the Applicant. Inspection results are valid for the sample as identified above. Sample may not represent the lot which it belongs. This Report does not replace a Product Certificate. Full report or any part of it may not be reproduced or used for any other purpose without the written permission of EUROLAB Laboratory. Sampling has not been done by us. Unsigned and unsealed Reports are invalid. Analysis as indicated with "*" are in the Scope of our Accreditation Certificate issued from UAF according to TS EN ISO/IEC 17020. Analysis as indicated with "**" are performed at the external laboratories using accredited inspection methods according to TS EN ISO/IEC 17020 from EUROLAB. Possible extra notes may add with starting N1 to related pages. Inspection and remaining samples will be kept in specified terms & conditions at inspection request and/or proposal form. Physically, chemically and microbiologically decomposed samples are discarded regardless of the storage period. Applicant can not claim any right in this regard. Results are shown in this Report do not include Measurement Uncertainty values. Measurement Uncertainty values are not taken in consideration during Pass/Fail assessment the of inspection results shown in this Report. Evaluation of the inspection results using Measurement Uncertainty values is the responsibility of the Applicant.

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Merkez Mh, Gençosman Cd, No 11 / A GÜNGÖREN / İSTANBUL

Tel: 0212 702 20 10 Fax: 0212 909 21 10

Web: www.laboratuvar.com E-mail: info@laboratuvar.com

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Environment / Ortam

The requirements and standards apply to equipment intended for use in

X	Residential (domestic) environment
X	Commercial and light-industrial environment
X	Industrial environment
X	Medical environment

1. PANEL GUARD

TS EN ISO 13501-1

Construction products and structural elements, fire classification part 1: Classification using data from tests of behavior in response to fire.

This standard covers the behavior of all construction materials against fire, including products used in combination with construction elements.

Provisions to be Given as a result of Inspection and Experiment:

If the Relevant Rule/Experiment Is Not Necessary to Be Applied to the Sample (Not Applied to the Sample) NU
If inspection Sample Complies with the Rules (Passed) G
If inspection Sample Does Not Comply With The Rules (Failed) F K
If there is a rule/experiment not applied for any reason (not done) Y

Sample Number	1	2	3	4	5	6
Ignition (Yes/No)	No	No	No	No	No	No
Whether the Flame Spreads (Yes/No)	No	No	No	No	No	No
Flame Spread Time	-	-	-	-	-	-
Filter Paper Burn (Yes/No)	No	No	No	No	No	No
RESULT	G	G	G	G	G	G
Observations: Ignition occurred in the samples. The flame did not reach the measuring line during the inspection period. There was no dripping, no melting or burning, no burning of the filter paper.						

Relevant Product Standard and References: Reaction to Fire Test (EN 13501-1 Class A2)	
Conditioning Details: The inspection specimens were conditioned according to EN 13238 clause 4.3 C at 23 ± 2 °C and $50 \pm 5\%$ relative humidity.	
Class A2 (TS EN 13501-1 Matter 8.3)	To determine compliance with Class A2, a product is exposed to flame according to TS EN ISO 13501-1 (inspection period TS EN ISO 1716, TS EN ISO 1182 using the time).
Inspection Sample	Length 550 mm , Width 20 mm , Thickness — mm (on 12mm thick calcium silicate boards)
Exposure Conditions	Surface exposed to flame

CONCLUSION: Sample(s) inspection and inspections were carried out in accordance with the European Standard TS EN ISO 13501-1 A1. The product has passed the inspection successfully.

“The result of this inspection is related to the behavior of a inspection sample of a product under the specific conditions in which the inspection is applied; It is not the only criterion for assessing the potential fire hazard of a product in actual use conditions.”



Reaction to fire

The combustion class (Euroclasses) of the product should be determined according to EN 13501-1.

TS EN 13501-1 -Flammability inspection (TS EN ISO 1182)

This inspection is applied to determine whether a product will contribute significantly to a fire, regardless of its end use. This inspection is related to Class A2 and Class A2ff classes.

Clause	Requirements	Conclusion / Evaluation		Result
5	Inspection Sample			
	The inspection sample should be taken from a sample large enough to represent the product. The inspection samples should be cylindrical and each sample should have a volume of (76 ± 8) cm ³ , a diameter of $(45 (+0/-2))$ mm and a height of (50 ± 3) mm.	The sample was prepared with a diameter of 45 mm and a height of 50 mm. (76cm ³)		PASS
6	Conditioning			
	Inspection samples should be conditioned as specified in EN 13238. After conditioning, the inspection samples should be dried for 20 to 24 hours in an air-circulating oven at (60 ± 5) °C and subjected to the inspection. It should be left to cool down to ambient temperature in a desiccator before being kept. Before the inspection, the mass of each sample should be determined with an accuracy of 0.01 g.	Conditioning Time: 1 week Conditioning Temperature: 23 ± 2 °C Conditioning Humidity: 50 ± 5 % EN 13238 4.3 Conditioning for fixed period a) Minimum conditioning period of one week: 2) cement based products;		PASS
8	Display of results			
8.1	The measured mass loss is calculated and recorded in % for each of the five inspection samples. Flare The measured total duration of sustained flaming is calculated and recorded in seconds for each of the five inspection samples -Temperature rise The temperature rise recorded with the thermocouple, $\Delta t = T_m - T_f$, is calculated and recorded for each of the five inspection samples.	1st experiment	2.13 MJ/kg TS EN ISO 1716	PASS
8.2	Note 1: TS EN 13501 -1 A1 class Homogeneous and non-homogeneous products must meet the criteria of $\Delta t \leq 30$ °C and $\Delta m \leq 50\%$ and $t_f = 0s$.	2st experiment	2.14 MJ/kg TS EN ISO 1716	
8.3	Note 2: TS EN 13501-1 Class A2 Homogeneous and non-homogeneous products must meet the criteria of $\Delta t \leq 50$ °C and $\Delta m \leq 50\%$ and $t_f \leq 20s$. Note 3: TS EN 13501-1 Class A1 Homogeneous products must meet the criteria of $PCS \leq 2.0$ MJ/kg.	3st experiment	2.13 MJ/kg TS EN ISO 1716	



Classification of PANEL GUARD according to its behavior against fire according to TS EN 13501-1:

A1

Standard	Parameter	Number of inspections	Continually of the parameter average	Results
TS EN 13823	FIGRA _{0,2MJ} (W/s)	3	50,3	(-)
	LFS > edge	3	(-)	No
	THR _{600s} (MJ)	3	2,9	(-)
	SMOGR _A (m ² /s ²)	3	82,0	(-)
	TSP _{600s} (m)	3	102,7	(-)
	burning drops/particles (s)	3	(-)	No

(-):not applicable

(1) : Exposing the surface to flame

(2) : Exposing the edge to flame (TS EN 14509:2014 standard item C.1.2.2.a)

Standard	Parameter	Continually of the parameter average	Accepted Criteria
TS EN 13823	FIGRA _{p 2 MJ} [W/s]	50,3	< 120 (B)
	THR _{600s} (MJ)	2,9	<7,5(B)
	LFS < edge	(-)	Yes(B)
	SMOGR _A [m ² /s ²]	82,0	<180 (s2)
	TSP _{600s} [m]	102,7	<200 (s2)
	burning drops/particles (s)	No	Yes (d0)

(-): Not applicable

Classification of PANEL GUARD depending on its behavior in the face of fire:

A1

Additional classification for smoke generation:

S2

Additional classification for burning drops/particles:

d0

Reaction to fire for PANEL GUARD

combustion behavior		smoke generation			burning drops	
A1	-	s	2	+	d	0



2. PANEL GUARD LITE TS EN ISO 13501-1

Construction products and structural elements, fire classification part 1: Classification using data from inspections of behavior in response to fire.

This standard covers the behavior of all construction materials against fire, including products used in combination with construction elements.

Provisions to be Given as a result of Inspection and Experiment:

If the Relevant Rule/Experiment Is Not Necessary to Be Applied to the Sample (Not Applied to the Sample)	NU
If Inspected Sample Complies with the Rules (Passed)	G
If Inspected Sample Does Not Comply With The Rules (Failed)	K
If there is a rule/experiment not applied for any reason (not done)	Y

Sample Number	1	2	3	4	5	6
Ignition (Yes/No)	No	No	No	No	No	No
Whether the Flame Spreads (Yes/No)	No	No	No	No	No	No
Flame Spread Time	-	-	-	-	-	-
Filter Paper Burn (Yes/No)	No	No	No	No	No	No
RESULT	G	G	G	G	G	G

Observations: Ignition occurred in the samples. The flame did not reach the measuring line during the inspection period. There was no dripping, no melting or burning, no burning of the filter paper.

Relevant Product Standard and References: Reaction to Fire Inspection (EN 13501-1 Class A2)	
Conditioning Details: The inspection specimens were conditioned according to EN 13238 clause 4.3 C at 23 ± 2 °C and 50 ± 5% relative humidity.	
Class A2 (TS EN 13501-1 Matter 8.3)	To determine compliance with Class A2, a product is exposed to flame according to TS EN ISO 13501-1 (inspection period TS EN ISO 1716, TS EN ISO 1182 using the time).
Inspection Sample	Length 550 mm , Width 20 mm , Thickness — mm (on 12mm thick calcium silicate boards)
Exposure Conditions	Surface exposed to flame

CONCLUSION: Sample(s) inspection and inspections were carried out in accordance with the European Standard TS EN ISO 13501-1 A1. The product has passed the inspection successfully.

“The result of this inspection is related to the behavior of a inspection sample of a product under the specific conditions in which the inspection is applied; It is not the only criterion for assessing the potential fire hazard of a product in actual use conditions. ”



Reaction to fire

The combustion class (Euroclasses) of the product should be determined according to EN 13501-1.

TS EN 13501-1 -Flammability inspection (TS EN ISO 1182)

This inspection is applied to determine whether a product will contribute significantly to a fire, regardless of its end use. This inspection is related to Class A2 and Class A2ff classes.

Clause	Requirements	Conclusion / Evaluation		Result
5	Inspection Sample			
	The inspection sample should be taken from a sample large enough to represent the product. The inspection samples should be cylindrical and each sample should have a volume of (76 ± 8) cm ³ , a diameter of $(45 (+0/-2))$ mm and a height of (50 ± 3) mm.	The sample was prepared with a diameter of 45 mm and a height of 50 mm. (76cm ³)		PASS
6	Conditioning			
	Inspection samples should be conditioned as specified in EN 13238. After conditioning, the inspection samples should be dried for 20 to 24 hours in an air-circulating oven at (60 ± 5) °C and subjected to the inspection. It should be left to cool down to ambient temperature in a desiccator before being kept. Before the inspection, the mass of each sample should be determined with an accuracy of 0.01 g.	Conditioning Time: 1 week Conditioning Temperature: 23 ± 2 °C Conditioning Humidity: 50 ± 5 % EN 13238 4.3 Conditioning for fixed period a) Minimum conditioning period of one week: 2) cement based products;		PASS
8	Display of results			
8.1	The measured mass loss is calculated and recorded in % for each of the five inspection samples. Flare The measured total duration of sustained flaming is calculated and recorded in seconds for each of the five inspection samples - Temperature rise The temperature rise recorded with the thermocouple, $\Delta t = T_m - T_f$, is calculated and recorded for each of the five inspection samples.	1st Experiment	2.13 MJ/kg TS EN ISO 1716	PASS
8.2	Note 1: TS EN 13501 -1 A1 class Homogeneous and non-homogeneous products must meet the criteria of $\Delta t \leq 30^\circ\text{C}$ and $\Delta m \leq 50\%$ and $t_f = 0\text{s}$.	2st Experiment	2.14 MJ/kg TS EN ISO 1716	
8.3	Note 2: TS EN 13501-1 Class A2 Homogeneous and non-homogeneous products must meet the criteria of $\Delta t \leq 50^\circ\text{C}$ and $\Delta m \leq 50\%$ and $t_f \leq 20\text{s}$. Note 3: TS EN 13501-1 Class A1 Homogeneous products must meet the criteria of $\text{PCS} \leq 2.0 \text{ MJ/kg}$.	3st Experiment	2.13 MJ/kg TS EN ISO 1716	

Classification of PANEL GUARD LITE according to its behavior in the face of fire according to TS EN 13501-1:

A1

Standard	Parameter	Number of inspections	Continually of the parameter average	Results
TS EN 13823	FIGRA _{0,2MJ} (W/s)	3	50,3	(-)
	LFS > edge	3	(-)	No
	THR _{600s} (MJ)	3	2,9	(-)
	SMOGRA (m ² /s ²)	3	82,0	(-)
	TSP _{600s} (m)	3	102,7	(-)
	burning drops/particles (s)	3	(-)	No

(-): Not applicable

(1) : Exposing the surface to flame

(2) : Exposing the edge to flame (TS EN 14509:2014 standard item C.1.2.2.a)

Standard	Parameter	Continually of the parameter average	Results
TS EN 13823	FIGRA _{p 2 MJ} [W/s]	50,3	< 120 (B)
	THR _{600s} (MJ)	2,9	<7,5(B)
	LFS < edge	(-)	Evet(B)
	SMOGRA [m ² /s ²]	82,0	<180 (s2)
	TSP _{600s} [m]	102,7	<200 (s2)
	burning drops/particles (s)	No	No (d0)

(-):Not applicable

Classification of PANEL GUARD LITE depending on its behavior in the face of fire:

A1

Additional classification for smoke generation:

S2

Additional classification for burning drops/particles:

d0

Reaction to fire for PANEL GUARD LITE

combustion behavior		smoke generation			burning drops	
A1	-	s	2	†	d	0

END OF REPORT