

Manufacturer 18th June 2019

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Testing & Certification Office

CSI S.p.A. Cascina Traversagna 21 20030 Senago (MI) Italia www.csi-spa.com

FIRE CLASSIFICATION GRAFIPRINT P230HT (Lino) – P231HT (Smeriglio) – P232HT (Wood)

Description of the material:

Printable polymeric calendered white matt PVC film with Lino, Smeriglio or Wood structure, especially developed for wall decoration. The films come with a high tack pressure-sensitive acrylic adhesive.

Fire classification tests:

Fire classification tests were performed by the Italian Testing & Certification Office CSI S.p.A., on request of the supplier of the PVC base material.

Fire classification tests were run in accordance with three technical standards, i.e.

- EN 13823:2010+A1:2014 Reaction to fire tests for building products Building products excluding floorings exposed to the thermal attack by a single burning item.
- EN 13501-1 Fire classification of construction products and building elements Part 1 : Classification using test data from reaction to fire tests.
- EN ISO 11925-2:2010 Reaction to fire tests for building products Part 2: Ignitability when subjected to direct impingement of flame.

Results (test method 1 – EN 13823:2010+A1:2014):

Specimen Identification	FIGRA 0.2MJ/0.4MJ [W/s]	THR [MJ]	LFS [Yes - No]	SMOGRA [m²/s²]	TSP [m²]	FDP [No - <10s - >10w]
1	7.0 at 747 7.0 at 747	1.1	No	15.0	39.1	No
2	Threshold not reached	0.2	No	3.1	48.6	No
3	Threshold not reached	0.9	No	Threshold not reached	26.1	No
Media Average	2.3 2.3	0.7	No	6.0	37.9	No

FIGRA = Fire Growth Rate Index
THR = Total Hest Release
LFS = Lateral Flame Spread
SMOGRA = Smoke Growth Rate Index
FDP = Flaming Droplets or Particles

Results (test method 2 – EN 13501-1):

			Results		
Test method	Parameter	Number of tests	Continuous paramenter average	Compliance parameter	
EN ISO11925-2 Surface flame attack 30s exposure	Fs ≤ 150 mm	6	(-)	Υ	
Edge flame attack 30s exposure	Fs ≤ 150 mm	6	(-)	Υ	
Flaming droplets / particle	Ignition of the filter paper	12	(-)	N	
EN 13823	FIGRA 0,2 MJ	3	2.3	(-)	
	FIGRA 0,4 MJ		2.3	(-)	
	LFS < Edge		(-)	Υ	
	THR _{600s} [MJ]		0.7	(-)	
	SMOGRA [m²/s²]	3	6.0	(-)	
	TSP _{600s} [m ²]		37.9	(-)	
	Flaming droplets / particles	3	(-)	N	

Results (test method 3 – EN ISO 11925-2:2010):

Impingement method SURFACE – Flame application time 30s					
Specimen Identification	Ignition [Yes/No]	Flame tip reaches 150 mm in 60s [Yes/No]	Time at which flame reaches 150 mm [s]	Ignition of the filter paper [Yes/No]	
1	Υ	N	0	N	
2	Υ	N	0	N	
3	Υ	N	0	N	
4	Y	N	0	N	
5	Υ	N	0	N	
6	Υ	N	0	N	

Impingement method EDGE – Flame application time 30s					
Specimen Identification	Ignition [Yes/No]	Flame tip reaches 150 mm in 60s [Yes/No]	Time at which flame reaches 150 mm [s]	Ignition of the filter paper [Yes/No]	
1	Υ	N	0	N	
2	Υ	N	0	N	
3	Υ	N	0	N	
4	Υ	N	0	N	
5	Υ	N	0	N	
6	Υ	N	0	N	

Classification:

The above tests lead to the fire classication **Bs1d0**, which means:

- PVC P230HT, P231HT and P232HT in relation to its fire reaction behavior is classified B
- The additional classification in relation to smoke production is **s1** (limited smoke production)
- The additional classification in relation to flaming droplets/particles is d0 (no burning droplets)

Fire behavior		Smoke produ	ıction	Flaming droplets		
В	-	S	1	-	d	0

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