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Sample ID: PRE-1640FRH-DTA FLAME RETARDANT HALOGENED THIXOTROPIC FILLED POLYESTER

	TEST	METHOD	SPECIMEN	RESULT
*	Fire tests on building materials and structures – Part 7: Method of test to determine the classification of the surface spread of flame of products	BS 476-7:1997	PRE-1640FRH-DTA FLAME RETARDANT HALOGENED THIXOTROPIC FILLED POLYESTER	CLASS 1



Seal



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Environment

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

BS 476 - Fire tests on building materials and structures – Part 7: Method of test to determine the classification of the surface spread of flame of products

Scope

BS 476: Part 7:1997 specifies a method of test for measuring the lateral spread of flame along the surface of a specimen of a product orientated in the vertical position, and a classification system based on the rate and extent of flame spread. It provides data suitable for comparing the performances of essentially flat materials, composites, or assemblies, which are used primarily as the exposed surfaces of walls or ceilings.

Conditioning of test specimen

Test specimens are conditioned to constant mass at a temperature of $23 \pm 2^{\circ}\text{C}$ and a relative humidity of $50 \pm 5 \%$ prior to testing.

The setup

A combustion chamber containing a horizontal gas burner tube and two electrical heating elements is placed below a removable steel chimney and cowl (specimen holder). The specimen is placed in a vertical test position adjacent to the radiation panel, within 5 seconds of igniting a pilot flame.

The procedure

- Ignite the pilot light.
- Remove a specimen structure, including all support plates, spacers, and padding, from the conditioning atmosphere and place it in the rest position within 5 minutes at an angle of 90° or more from the test position to the specimen holder.
- Move the specimen holder and specimen to the test position within 5 s and immediately start the timing mechanism, ie start the test.
- Extinguish the pilot light 1 minute after the start of the test.
- End the test when the flame front reaches the 825 mm reference line or after 10 minutes, whichever is shorter.
- Return the sample holder to the rest position and remove any remnants of the sample structure. Clean any debris from the holder.

Specimen Mounting

Each specimen are placed over 25mm thick by 20mm wide calcium silicate based spacers positioned around its perimeter and mounted onto a backing board so that a 25mm enclosed air gap is provided between the unexposed face of the specimen and the backing board.

Exposed Face

The decorative face of the specimens are exposed to the heating conditions of the test.

TEST RESULT

The test result for the individual specimens, together with observations made during the test and comments on any difficulties encountered during the test are given in Table 1.

Table 1

SPECIMEN NO.	1	2	3	4	5	6
Max. distance travelled at 1.5 minutes (mm)	< 70	< 70	< 70	< 70	< 70	< 70
Distance (mm) 75 165 190 215 240 265 290 375 455 500 525 600 675 710 750 785 825	Time to travel to indicated distance (minutes : seconds)					
Time to reach max. distance travelled	1:00	1:00	1:00	1:00	1:00	1:00
Max. distance travelled in 10 minutes (mm)	< 70	< 70	< 70	< 70	< 70	< 70

Distance along reference line from the hotter ed of the specimen position	75	225	375	525	625	825
Irradiance at points specified above (kW/m ²)	33.5	22.5	15.0	11.0	7.5	5.0

Classification of Spread of Flame

Classification	Spread of Flame at 1.5 min		Final Spread of Flame	
	Limit (mm)	Limit for one specimen (mm)	Limit (mm)	Limit for one specimen (mm)
Class 1	165	165 + 25	165	165 + 25
Class 2	215	215 + 25	455	455 + 45
Class 3	265	265 + 25	710	710 + 75
Class 4	Exceeding the limits for class 3			

Observation

The results indicate that the sample met the performance requirements of Class 1. In the case of each specimen tested all sustained flaming ceased after 1:00.

IMAGE OF SAMPLE



***** End of Report *****