

TEST REPORT

ASTM E662 Smoke Density (Flaming) Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials also referenced
as NFPA 258



DESCRIPTION OF TEST SAMPLE				
IDENTIFICATION	Nylon 66 Duraback Carpet Tiles			
CONSTRUCTION	Multi-Level Loop Pile			
FIBER	Nylon 66			

GENERAL PRINCIPLE

This procedure is designed to measure the specific optical density of smoke generated by the test specimen within a closed chamber. Each specimen is exposed to an electrically heated radiant-energy source positioned to provide a constant irradiance level of 2.5 watts/square cm on the specimen surface. Measurements are recorded through a photometric system employing a vertical beam of light and a photo detector positioned to detect the attenuation of light transmittance caused by smoke accumulation within the chamber. The light transmittance measurements are used to calculate specific optical density, a quantitative value which can be factored to estimate the smoke potential of materials. Two burning conditions can be simulated by the test apparatus. The radiant heating in the absence of ignition is referred to as the Non-Flaming Mode. A flaming combustion in the presence of supporting radiation constitutes the Flaming Mode.

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CONDITIONS							
PREDRYING OF TEST SAMPLE	24 Hours at 140° F						
CONDITIONING OF TEST SAMPLE	24 Hours at 70° F and 50% Relative Humidity						
TESTING CONDITION	As Received						
FURNACE VOLTAGE	118 V	IRRADIANCE	2.5 watts/sq cm				
CHAMBER TEMPERATURE	95° F	CHAMBER PRESSURE	3" H₂O				
TEST MODE	Flaming						

AVERAGE MAXIMUM DENSITY CORRECTED (D	208		
AVERAGE SPECIFIC OPTICAL DENSITY AT 4.0 /	207		
	Specimen 1	Specimen 2	Specimen 3
Maximum Density (Dm)	244.0	228.0	258.0
Time to Dm (minutes)	7.0	6.0	8.0
Clear Beam (Dc)	35.0	30.0	41.0
Corr. Max Density (Dmc)	209.0	198.0	217.0
Density at 1.5 minutes	113.0	102.0	125.0
Density at 4.0 minutes	205.0	196.0	219.0
Time to 90% Dm (minutes)	5.0	4.5	5.5
Specimen Weight (grams)	24.9	25.1	25.1

^{*} This sample PASSES the requirements of 450 or less.

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APPROVED BY:

NVLAP

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714 Glenwood Place Dalton, GA 30721 706-226-3283 Fax: 706-226-6787 protest@optilink.us