



TEST REPORT

DATE: 04-10-2014

TEST NUMBER: 0207104

CLIENT	Avant Contract
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TEST METHOD CONDUCTED	ASTM E662 Smoke Density (Flaming) Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials also referenced as NFPA 258
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DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	APMI Mitre
CONSTRUCTION	Multi-Level Loop Pile
BACKING	ReNova

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.

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" H ₂ O
TEST MODE	Flaming		

AVERAGE MAXIMUM DENSITY CORRECTED (Dmc)	FLAMING		
	Specimen 1	Specimen 2	Specimen 3
AVERAGE SPECIFIC OPTICAL DENSITY AT 4.0 MINUTES			387
			441
Maximum Density (Dm)	444.0	472.0	486.0
Time to Dm (minutes)	8.5	9.0	9.5
Clear Beam (Dc)	72.0	84.0	88.0
Corr. Max Density (Dmc)	375.0	388.0	398.0
Density at 1.5 minutes	90.0	101.0	118.0
Density at 4.0 minutes	427.0	439.0	456.0
Time to 90% Dm (minutes)	4.5	5.0	5.0
Specimen Weight (grams)	25.9	25.8	25.6

* This sample PASSES the requirements of 450 or less.

APPROVED BY:



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