

TEST REPORT

DATE: 04-01-2024

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TEST NUMBER: 0306215

CLIENT	Egetaepper a/s
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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
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DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Eco Structure wt
CONSTRUCTION	Loop Pile
BACKING	Woven Synthetic

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	
		240
AVERAGE SPECIFIC OPTICAL DENSITY AT 4.0 MINUTES		253
	Specimen 1	Specimen 2
Maximum Density (Dm)	257.0	272.0
Time to Dm (minutes)	2.5	3.0
Clear Beam (Dc)	36.0	24.0
Corr. Max Density (Dmc)	221.0	248.0
Density at 1.5 minutes	211.0	153.0
Density at 4.0 minutes	242.0	257.0
Time to 90% Dm (minutes)	1.5	2.0
Specimen Weight (grams)	11.5	11.6
		Specimen 3
		281.0
		3.0
		31.0
		250.0
		171.0
		261.0
		2.0
		11.7

***NOTE: This material meets the requirements of NFPA Life Safety code for ASTM E662 of not to exceed 450 DMC.**

APPROVED BY:



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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	Non-Flaming		

AVERAGE MAXIMUM DENSITY CORRECTED (Dmc)	NON-FLAMING		
AVERAGE SPECIFIC OPTICAL DENSITY AT 4.0 MINUTES	176		
	Specimen 1	Specimen 2	Specimen 3
Maximum Density (Dm)	199.0	431.0	295.0
Time to Dm (minufes)	8.5	11.5	10.0
Clear Beam (Dc)	2.0	3.0	3.0
Corr. Max Density (Dmc)	197.0	428.0	292.0
Density at 1.5 minufes	20.0	6.0	6.0
Density at 4.0 minufes	152.0	172.0	203.0
Time to 90% Dm (minufes)	5.5	8.0	7.5
Specimen Weight (grams)	11.6	11.7	11.6

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