

# Professional Testing Laboratory Inc.

# **TEST REPORT**

CLIENT Egetaepper a/s

TEST METHOD CONDUCTED

ASTM E662 Smoke Density (Non-Flaming) Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials



	DESCRIPTION OF TEST SAMPLE	
IDENTIFICATION	Highline Wool 1400 ab	
CONSTRUCTION	Cut Pile	

#### **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	As Received			
FURNACE VOLTAGE	118 V	IRRADIANCE	2.5 watts/sq cm		
CHAMBER TEMPERATURE	95° F	CHAMBER PRESSURE	3" H <sub>2</sub> O		
TEST MODE	Non-Flaming		114.1		

AVERAGE MAXIMUM DENSITY CORRECTED (Dmc)		NON-FLAMING	169
AVERAGE SPECIFIC OPTICAL DENSITY AT 4.0 MINUTES			
	Specimen 1	Specimen 2	Specimen 3
Maximum Density (Dm)	172.0	166.0	179.0
Time to Dm (minutes)	19,0	20.0	20.0
Clear Beam (Dc)	4.0	3.0	4.0
Corr. Max Density (Dmc)	168.0	163.0	175.0
Density at 1.5 minutes	24.0	21.0	28.0
Density at 4.0 minutes	52.0	46.0	57.0
Time to 90% Dm (minutes)	13.0	13.5	14.0
Specimen Weight (grams)	17.2	17.4	17.7

APPROVED BY:

QAJVK

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DATE: 07-31-2023 Page 1 of 1 TEST NUMBER: 0299163

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CONDITIONS 24 Hours at 140° F PREDRYING OF TEST SAMPLE 24 Hours at 70° F and 50% Relative Humidity **CONDITIONING OF TEST SAMPLE TESTING CONDITION** As Received IRRADIANCE 2.5 watts/sq cm 118 V **FURNACE VOLTAGE CHAMBER PRESSURE** 95° F 3" H<sub>2</sub>O **CHAMBER TEMPERATURE** Flaming TEST MODE

AVERAGE MAXIMUM DENSITY CORRECTED (Dmc) FLAMING		343	
AVERAGE SPECIFIC OPTICAL DENSITY AT 4.0 MINUTES			208
	Specimen 1	Specimen 2	Specimen 3
Maximum Density (Dm)	375.0	368.0	349.0
Time to Dm (minutes)	7.5	8.0	7.5
Clear Beam (Dc)	23.0	21,0	20.0
Corr. Max Density (Dmc)	352.0	347.0	329.0
Density at 1.5 minutes	24.0	20.0	19.0
Density at 4.0 minutes	208.0	196.0	219.0
Time to 90% Dm (minutes)	5.5	6.0	6.0
Specimen Weight (grams)	17.1	17.3	17.9

APPROVED BY:

NATV

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