# TEST REPORT

**DATE: 09/30/2013** **TEST NUMBER**: 160674

| | |
|---|---|
| **CLIENT** | LG Hausys America, Inc. (GA) |

| | |
|---|---|
| **TEST METHOD CONDUCTED** | ASTM E662-09 Smoke Density (Non-Flaming) Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials also referenced as NFPA 258 |

| | **DESCRIPTION OF TEST SAMPLE** |
|---|---|
| **IDENTIFICATION** | Uncommon Ground/Crete/Jeogori |
| **COLOR** | ----- |
| **ROLL** | ----- |
| **CONSTRUCTION** | LVT |
| **FIBER** | ----- |
| **BACKING** | ----- |
| **REFERENCE** | |

**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 140º F | | |
| **CONDITIONING OF TEST SAMPLE** | 24 Hours at 70º F and 50% Relative Humidity | | |
| **FURNACE VOLTAGE** | 118 V | **IRRADIANCE** | 2.5 watts/sq cm |
| **CHAMBER TEMPERATURE** | 95º F | **CHAMBER PRESSURE** | 3" $H_2O$ |
| **TEST MODE** | Non-Flaming | | |

| | | | |
|---|---|---|---|
| **AVERAGE MAXIMUM DENSITY CORRECTED (Dmc)** | | **NON-FLAMING** | 353 |
| **AVERAGE SPECIFIC OPTICAL DENSITY AT 4.0 MINUTES** | | | 76 |
| | **Specimen 1** | **Specimen 2** | **Specimen 3** |
| **Maximum Density (Dm)** | 339.0 | 356.0 | 366.0 |
| **Time to Dm (minutes)** | 16.0 | 16.5 | 16.5 |
| **Clear Beam (Dc)** | 0.0 | 1.0 | 2.0 |
| **Corr. Max Density (Dmc)** | 339.0 | 355.0 | 364.0 |
| **Density at 1.5 minutes** | 7.0 | 12.0 | 14.0 |
| **Density at 4.0 minutes** | 64.0 | 78.0 | 85.0 |
| **Time to 90% Dm (minutes)** | 13.5 | 14.0 | 14.0 |
| **Specimen Weight (grams)** | 31.6 | 31.5 | 31.2 |

**** This sample PASSES the requirements of 450 or less.***

**APPROVED BY:** Gary Asbury

NVLAP®

This facility is accredited by the National Voluntary Laboratory Accreditation Program for the specific scope of accreditation under Lab Code 100297. This accreditation does not constitute an endorsement, certification, or approval by NIST or any agency of the United States Government for the product tested. This report is provided for the exclusive use of the client to whom it is addressed. It may be used in its entirety to gain product acceptance from duly constituted authorities. This report applies only to those samples tested and is not necessarily indicative of apparently identical of similar products. This report, or the name of Professional Testing Laboratory Inc. shall not be used under any circumstance in advertising to the general public.

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