TEST REPORT

REPORT NUMBER: 102628407MID-003
ORIGINAL ISSUE DATE: June 27, 2016
REVISED DATE: NA
LIMS #116301

EVALUATION CENTER
Intertek
8431 Murphy Drive
Middleton, WI 53562

RENDERED TO
Polymer Resources, LTD
656 New Britain Ave
Farmington, CT 06032
Kevin Sheehan
ksheehan@prlresins.com

PRODUCT EVALUATED: PC/ ASA GP2 7858
EVALUATION PROPERTY: ASTM D2843-16

Report of Testing PC/ ASA GP2 7858 for compliance with the applicable requirements of the following criteria: ASTM D2843-16 STANDARD TEST METHOD FOR DENSITY OF SMOKE FROM THE BURNING OR DECOMPOSITION OF PLASTICS

1 Table of Contents

2 Introduction

Intertek has conducted testing for Polymer Resources, LTD on PC/ ASA GP2 7858 to measure and observe the relative amounts of smoke obscuration produced by the burning or decomposition of plastics. This standard is used to measure and describe the response of materials, products, or assemblies to heat and flame under controlled conditions, but does not by itself incorporate all factors required for fire hazard or fire risk assessment of the materials, products, or assemblies under actual fire conditions. Testing was conducted in accordance with ASTM D2843-16, following Standard Test Method for Density of Smoke from the Burning or Decomposition of Plastics. This evaluation began June 15, 2016 and was completed June 15, 2016.

3 Test Samples

3.1. SAMPLE SELECTION

Samples were submitted to Intertek directly from the client. Samples were received at the Evaluation Center on June 2, 2016 in good condition.

3.2. SAMPLE AND ASSEMBLY DESCRIPTION

Sample Name: PC/ ASA GP2 7858

Sample Description: Polycarbonate (PC) and a Styrene Acrylonitrile Acrylic (ASA) terpolymer. Samples of PC/ASA GP2 7858 were cut to squares approximately 25.4 ± 0.3 mm by 25.4 ± 0.3 mm by 3 mm by the client. They were conditioned for at lease 40 hours at 23 ± 2 °C and 50% ± 5% relative humidity.

4 Testing and Evaluation Methods

4.1 TEST STANDARD

The test is conducted in a 300 by 300 by 790 mm test chamber. The test chamber is instrumented with a light source, a photoelectric cell, and a meter to measure the light absorption horizontally across the 300-mm light beam path. The test chamber is closed during the 4-minute test period, except for the 1-in. high x 9-in. long ventilation openings around the base of the chamber.

The specimen is placed on stainless steel wire screen. The screen is supported by a stainless steel bezel. The screen is placed 220 mm above the base of the chamber and equidistant from all sides of the chamber. A stainless steel bezel is located 76 mm directly below the specimen and is a cement board, to catch particles that may drip from the specimen. The specimen is placed in the test chamber flat on the screen in such a manner that the burner flame will be directly under the specimen. The specimen shall be ignited by a propane flame from a burner operating at a pressure of 276 kPa (40 psi). There is a 90mm by 150 mm clear area centered 480 mm above the bottom of the test chamber. Through this is a white on red illuminated exit sign. The viewing of the exit sign helps to correlate visibility and measured values. It is also noted the time it takes for the sample to burst into flame, the time for flame extinguishment or specimen consumption, the obscuration of the exit sign by smoke accumulation, and any other burning characteristics such as melting, dripping, foaming, or charring.

For materials that drip, an auxiliary burner (with separate propane gas supply) is introduced into the chamber. The auxiliary burner shall be ignited at the same time the standard burner is ignited. The auxiliary burner shall be operated at 138 kPa (20 psi) and it shall be positioned in such that its flame is directed at the center of the collector tray.

Testing and Evaluation Results

4.2 RESULTS AND OBSERVATIONS

This standard is used to measure and describe the response of materials, products, or assemblies to heat and flame under controlled conditions, but does not by itself incorporate all factors required for fire hazard or fire risk assessment of the materials, products, or assemblies under actual fire conditions.

Environmental conditions: 77.2°F and 49% r.h.

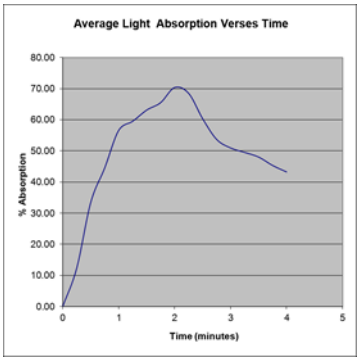
Specimen	1	2	3
Length (mm)	25.6	25.6	25.7
Width (mm)	25.4	25.4	25.4
Thickness (mm)	6.3	6.3	6.3
Weight (g)	5.64	5.67	5.71

Speciman	Observations:
1	Sample ignited at 5s, started dripping at 28s, and obscured the exit sign at 1m 21s
2	Sample ignited at 6s, started dripping at 37s, and obscured the exit sign at 2m 12s
3	Sample ignited at 8s, started dripping at 42s, and obscured the exit sign at 1m 38s

4.3 EXAMINATION OF RESULTS

SUMMARY OF ASTM D 2843 TEST RESULTS

Sample No.	1	2	3	Average
Max. Light Absorption (%)	90.7	67.4	58.0	72.0
Smoke Density Rating	57.9	52.2	44.6	51.6
Exit Sign Obscured (y/n)	Y	Y	Y	



5 Conclusion

Intertek has conducted testing for Polymer Resources, LTD on PC/ ASA GP2 7858 to measure and observe the relative amounts of smoke obscuration produced by the burning or decomposition of plastics. Testing was conducted in accordance with ASTM D2843-16, following Standard Test Method for Density of Smoke from the Burning or Decomposition of Plastics.

MAXIMUM SMOKE DENSITY*	**72.0**
SMOKE DENSITY RATING**	**51.6**

***** The maximum smoke density is based on the average result of the maximum percent light absorption.
****** The smoke density rating is based on the average area under the curve (percent light absorption curve) of the 3 specimens.

The conclusions of this test report may not be used as part of the requirements for Intertek product certification. Authority to Mark must be issued for a product to become certified.

INTERTEK

Reported by: _____
Ashton Falduto
Lab Technician III, Verification Center

Reviewed by: _____
Sandy Osborne
Lab Technician I, Verification Center

REVISION SUMMARY

DATE	SUMMARY
June 27, 2016	Original Report