

CLIENT: BAYER – MATERIAL SCIENCE
119 Salisbury Road
Sheffield, MA 01257

Test Report No: TJ2554-5	Date: December 24, 2014
---------------------------------	--------------------------------

SAMPLE ID: The Client submitted and identified the following test material as “**Makrolon SK 0.118” White**”.

SAMPLING DETAIL: Test samples were submitted to the laboratory directly by the client. No special sampling conditions or sample preparation were observed by QAI.

DATE OF RECEIPT: Samples were received at QAI facilities on November 20, 2014

TESTING PERIOD: December 23, 2014

AUTHORIZATION: Proposal FB-2014-092601 approved on September 26, 2014

TEST PROCEDURE: ASTM D 2843-10, Standard Test Method for Density of Smoke from the Burning or Decomposition of Plastics.

TEST RESULTS: Detailed test results are presented in the subsequent pages of this report.

ASTM D2843-10, Section 1.4: *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.*

Prepared By



David Bauchmoyer
Fire Test Technician

**Signed for and on behalf of
QAI Laboratories, Inc.**



J. Brian McDonald
Operations Manager

RESULTS:

Sample: Makrolon SK 0.118" White

Test Date: December 23, 2014

Data:

<u>Parameter</u>	<u>Unit</u>	<u>Spec. 1</u>	<u>Spec. 2</u>	<u>Spec. 3</u>	<u>Average</u>
Thickness	Inch	0.118	0.118	0.118	0.118
Spec. Size	Inch	1 x 1	1 x 1	1 x 1	1 x 1
Spec. Weight	Grams	1.3	1.3	1.3	1.3
Propane Pressure	PSI	40	40	40	40.0

Light Absorption:

<u>Time (sec)</u>	<u>Unit</u>	<u>Spec. 1</u>	<u>Spec. 2</u>	<u>Spec. 3</u>	<u>Average</u>
0	%	0	0	0	0.0
15	%	4	8	8	6.7
30	%	42	30	75	49.0
45	%	63	68	81	70.7
60	%	69	65	75	69.7
75	%	65	65	77	69.0
90	%	66	65	76	69.0
105	%	65	64	75	68.0
120	%	64	63	74	67.0
135	%	64	63	74	67.0
150	%	63	63	74	66.7
165	%	62	62	73	65.7
180	%	62	61	72	65.0
195	%	61	60	72	64.3
210	%	60	60	71	63.7
225	%	59	60	71	63.3
240	%	58	59	70	62.3
Photocell Residue	%	22	23	32	25.7

THIS REPORT IS THE CONFIDENTIAL PROPERTY OF THE CLIENT ADDRESSED. THE REPORT MAY ONLY BE REPRODUCED IN FULL. PUBLICATION OF EXTRACTS FROM THIS REPORT IS NOT PERMITTED WITHOUT WRITTEN APPROVAL FROM QAI. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED FOR THE INDIVIDUAL PROJECT FILE REFERENCED. THE RESULTS OF THIS REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.

Observations:

<u>Parameter</u>	<u>Spec. 1</u>	<u>Spec. 2</u>	<u>Spec. 3</u>
Visibility of 'EXIT' Sign	MODERATE	DENSE	LOW
Smoke Color	LIGHT	BLACK	BLACK
Flame Color	ORANGE	ORANGE	ORANGE

Calculated Values:

<u>Value</u>	<u>Unit</u>	<u>Sample</u>
Maximum Smoke Density	%	70.7
Area Under Curve	% - Sec	14305.0
Maximum Area	% - Sec	24000.0
Smoke Density Rating	%	59.6

Graphical Data:

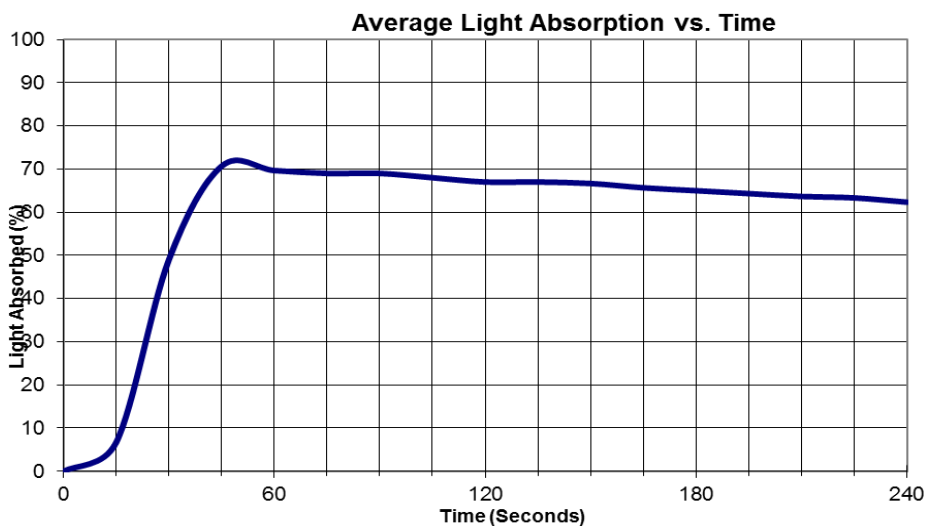


Figure 1. Light Absorption vs. Time Graph

End of Report

THIS REPORT IS THE CONFIDENTIAL PROPERTY OF THE CLIENT ADDRESSED. THE REPORT MAY ONLY BE REPRODUCED IN FULL. PUBLICATION OF EXTRACTS FROM THIS REPORT IS NOT PERMITTED WITHOUT WRITTEN APPROVAL FROM QAI. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED FOR THE INDIVIDUAL PROJECT FILE REFERENCED. THE RESULTS OF THIS REPORT PERTAIN ONLY TO THE SPECIFIC SAMPLE(S) EVALUATED.