

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

Test Report No: TJ2554-8

Date: December 24, 2014

SAMPLE ID: The Client submitted and identified the following test material as “**Makrolon SK 0.177” Clear**”.

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 0.177" Clear

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	0.178	0.177	0.178	0.178
Spec. Size	Inch	1 x 1	1 x 1	1 x 1	1 x 1
Spec. Weight	Grams	2.5	2.5	2.5	2.5
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	%	3	5	3	3.7
30	%	8	17	22	15.7
45	%	25	24	30	26.3
60	%	51	34	31	38.7
75	%	57	37	32	42.0
90	%	57	43	34	44.7
105	%	52	42	34	42.7
120	%	53	41	33	42.3
135	%	52	40	33	41.7
150	%	50	40	32	40.7
165	%	49	39	31	39.7
180	%	48	38	30	38.7
195	%	46	38	29	37.7
210	%	46	37	28	37.0
225	%	45	36	27	36.0
240	%	45	35	26	35.3
Photocell Residue	%	4	11	7	7.3

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Observations:

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

Calculated Values:

<u>Value</u>	<u>Unit</u>	<u>Sample</u>
Maximum Smoke Density	%	44.7
Area Under Curve	% - Sec	8146.7
Maximum Area	% - Sec	24000.0
Smoke Density Rating	%	33.9

Graphical Data:

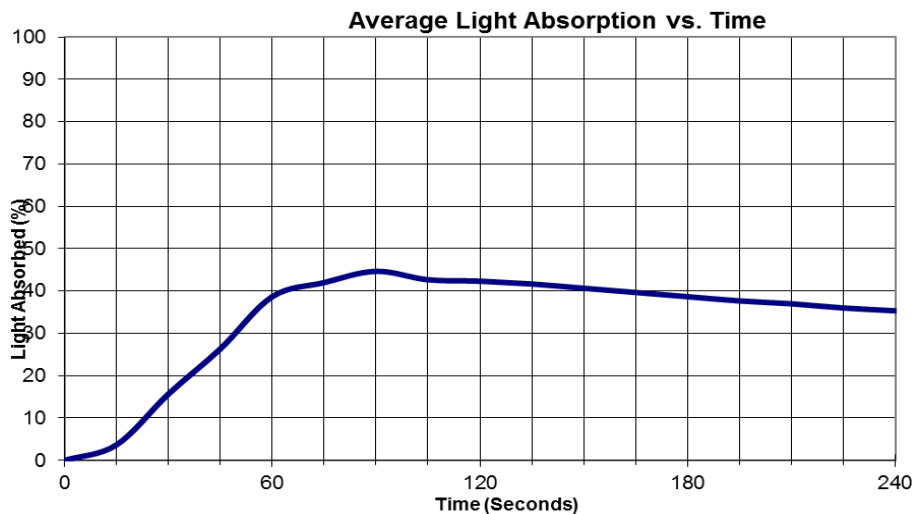


Figure 1. Light Absorption vs. Time Graph

End of Report

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