

CLIENT: POLYGAL INC.
1100 Bond St
Charlotte, NC 28208

Test Report No: TJ2672	Date: January 22, 2015
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SAMPLE ID: The Client submitted and identified the following test material as “20mm TOPGAL”.

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 January 14, 2015

TESTING PERIOD: January 22, 2015

AUTHORIZATION: Proposal SP-2014-120805

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: 20mm TOPGAL

Test Date: January 22, 2015

Data:

<u>Parameter</u>	<u>Unit</u>	<u>Spec. 1</u>	<u>Spec. 2</u>	<u>Spec. 3</u>	<u>Average</u>
Thickness	Inch	0.8	0.8	0.8	0.8
Spec. Size	Inch	1 x 1	1 x 1	1 x 1	1 x 1
Spec. Weight	Grams	2.0	2.0	2.0	2.0
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	%	10	5	4	6.3
30	%	35	22	33	30.0
45	%	62	29	52	47.7
60	%	72	35	60	55.7
75	%	70	46	66	60.7
90	%	70	47	66	61.0
105	%	70	46	64	60.0
120	%	68	45	64	59.0
135	%	68	44	63	58.3
150	%	67	44	61	57.3
165	%	66	43	60	56.3
180	%	65	42	60	55.7
195	%	64	41	59	54.7
210	%	63	40	59	54.0
225	%	62	39	58	53.0
240	%	61	39	57	52.3
Photocell Residue	%	38	11	15	21.3

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Observations:

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

Calculated Values:

<u>Value</u>	<u>Unit</u>	<u>Sample</u>
Maximum Smoke Density	%	61.0
Area Under Curve	% - Sec	11928.3
Maximum Area	% - Sec	24000.0
Smoke Density Rating	%	49.7

Graphical Data:

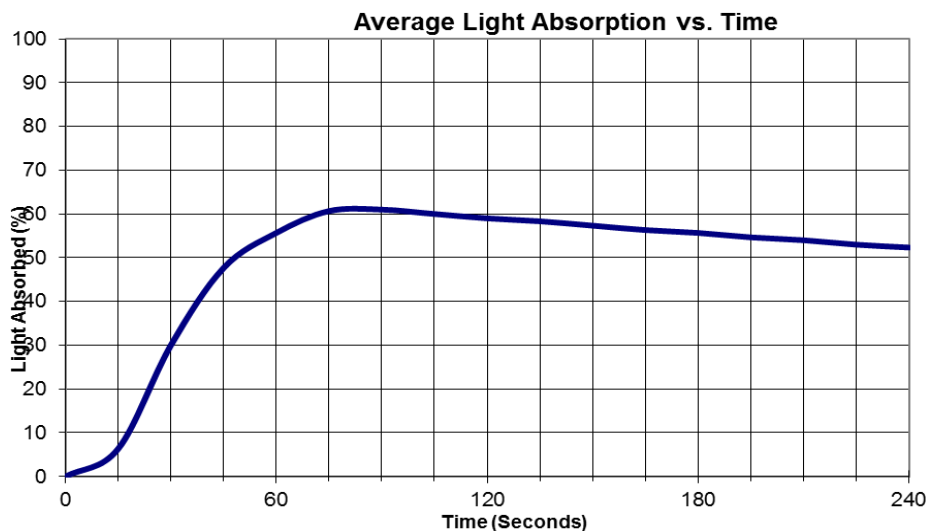


Figure 1. Light Absorption vs. Time Graph

End of Report

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