

**CLIENT:** EasyRock USA, Inc  
2260 South Haven Unit B  
Ontario Ca 91761

<b>Report No: RJ3599-2</b>	<b>Date: January 20, 2015</b>
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**SAMPLE ID:** 2 each, Random Rock Samples

**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 Laboratories on September 16, 2014 and January 16, 2015.

**AUTHORIZATION:** Signed QAI Test Proposal No. MB-2014-072901.

**TESTING PERIOD:** October 22, 2014 and January 19, 2015.

**TEST REQUESTED:** Thermal properties test per ASTM C 518-10, *Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.*

**TEST PROCEDURE:** The test specimens were individually placed horizontally in a Netzsch Inc. Q-Lab Thermal Conductivity Test Apparatus at the specimens thermal properties determined in accordance with ASTM C518 Section 5.

**TEST RESULTS:** **Average R-value for 2 repetitions was 6.07 F-h-ft<sup>2</sup>/Btu.** Detailed test results are presented on pages 2 of this report. Pictures of the sample are provided in the appendix section of this test report.

**Prepared By**



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



Jose Elias  
Operations Manager

**THERMAL PROPERTIES TEST PER ASTM C518**

**STEADY-STATE THERMAL TRANSMISSION PROPERTIES**

**Test Procedure:** Testing was performed in accordance with ASTM C518-10. Two 12" x 12" x 1.39" thick specimens were individually tested in a Heat Flow Apparatus in accordance with the specifications of ASTM C518-10 section 5. Before testing, the specimen was conditioned at 72 degrees Fahrenheit and 50% relative humidity until less than a 1% mass change was observed over a 24-hour period

**Test Results**

QAI Customer: Easy Rock				Thermal Resistance Testing (Metric Values)			
Specimen #	Specimen Thickness	Density	Mean Test Temp	Delta T	Thermal Conductivity	Duration of Test	Thermal Resistance of test thickness
(units)	(cm)	(g/cm3)	°C	°C	(W/mK)	(mins:sec)	(m2K/W)
1	3.535	7.85417E-07	25.7	28.05	0.32435	0:25:21	1.089887
2	3.510	7.84295E-07	23.76	27.93	0.33470	0:30:44	1.048631
<b>Avg</b>	<b>3.522</b>	<b>7.84856E-07</b>	<b>24.73</b>	<b>27.99</b>	<b>0.329525</b>		<b>1.069259</b>

QAI Customer: Easy Rock				Thermal Resistance Testing (Inch Values)			
Specimen #	Specimen Thickness	Density	Mean Test Temp	Delta T	Thermal Conductivity	Duration of Test	Thermal Resistance of test thickness
(units)	(inch)	(lb/ft3)	(°F)	(°F)	(Btu in/ft2 °F h)	(mm:ss)	(F h ft2/Btu)
1	1.39	10.09	78.26	50.49	0.22	0:25:21	6.19
2	1.38	10.07	74.77	50.28	0.23	0:30:44	5.95
<b>Avg</b>	<b>1.39</b>	<b>10.08</b>	<b>76.52</b>	<b>50.39</b>	<b>0.23</b>		<b>6.07</b>

Note: Pictures of the sample are in the appendix section of this test report.

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**STEADY-STATE THERMAL TRANSMISSION PROPERTIES, CONTINUED**

**Additional Heat Flow Meter Apparatus Information:**

- Orientation of heat flow meter: horizontal.
- Heat flux direction through specimen: downward.
- The apparatus used meters against both the hot and cold surfaces of the specimens.
- The apparatus enclosed the edges of the specimens so that they were sealed from ambient conditions.
- Last calibration of the apparatus took place on October 22, 2014.

**APPENDIX**



Submitted Test Sample

**\*\*\*\*End of Report\*\*\*\***

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