TEST REPORT
100 Clemson Research Blvd.
Anderson, SC 29625
(864) 656-1094
Fax: (864) 656-1095
www.brickandtile.org

Results of Tests on Brick conducted in accordance with ASTM C67-14 Standard Method for Sampling and Testing
Brick and Structural Clay Tile

09/05/2016

Name: Glen-Gery Corporation
433 S. Pottsville Pike
Shoemakersville, PA 19555
Phone: 610-562-3076
Fax: 610-562-2084

Plant: Hanley

Report Number: GGGA-1463

Received Date: 07/27/2016

Sample Date: 05/27/2016
Lot: 059L1DA

Product Code: 71201100

Sample Description: Hanley Clay Extruded

Absorption

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 Hour Submersion in Cold Water (%)</td>
<td>1.94</td>
<td>1.99</td>
<td>2.20</td>
<td>1.93</td>
<td>2.45</td>
<td>2.10</td>
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<tr>
<td>5 Hour Submersion in Boiling Water (%)</td>
<td>2.14</td>
<td>2.13</td>
<td>2.35</td>
<td>2.01</td>
<td>2.55</td>
<td>2.24</td>
</tr>
<tr>
<td>Saturation Coefficient (Ratio of 24H to 5H)</td>
<td>0.91</td>
<td>0.93</td>
<td>0.94</td>
<td>0.96</td>
<td>0.96</td>
<td>0.94</td>
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</table>

Compressive Strength

<table>
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<tr>
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<th>5</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>psi</td>
<td>15,210</td>
<td>15,291</td>
<td>16,407</td>
<td>16,354</td>
<td>13,855</td>
<td>15,423</td>
</tr>
<tr>
<td>MPa</td>
<td>104.9</td>
<td>105.4</td>
<td>113.1</td>
<td>112.8</td>
<td>95.5</td>
<td>106.3</td>
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</table>

Efflorescence

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<th>12</th>
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<th>14</th>
<th>15</th>
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<tbody>
<tr>
<td>Not Effloresced</td>
<td>Not Effloresced</td>
<td>Not Effloresced</td>
<td>Not Effloresced</td>
<td>Not Effloresced</td>
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IRA (Oven Dried Method)

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<tr>
<th></th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>Average</th>
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</thead>
<tbody>
<tr>
<td>g/min/30 in.²</td>
<td>2.0</td>
<td>2.1</td>
<td>2.7</td>
<td>2.2</td>
<td>2.4</td>
<td>2.3</td>
</tr>
</tbody>
</table>

The results shown above apply only to the samples tested, which are provided by the customer.

This test report shall not be reproduced except in full, without written approval of the laboratory.

Michael Walker, Quality Manager

*The temperature and humidity of the Bishop Materials Laboratory is constantly kept between 60 -90F, and 30-70% RH

The brick represented by the test results shown here comply with the physical property requirements of the standards listed below:

ASTM C 216 - 15 Standard Specification for Facing Brick (Solid Masonry Units Made From Clay or Shale)
Grade: SW, MW, with absorption alternate in section 7.1.2

ASTM C 32 - 13 Standard Specification for Sewer and Manhole Brick (Made From Clay or Shale)
Grade: SM, SS / MM, MS, with absorption alternate in Section 5.1

ASTM C 62 - 13a Standard Specification for Building Brick (Solid Masonry Units Made From Clay or Shale)
Grade: SW, MW, NW, with absorption alternate in section 5.1.2

CAN/CSA-A82-06 Fired masonry brick made from clay or shale
Grade: EG