

Results of Tests on Brick conducted in accordance with ASTM C67-12 Standard Method for Sampling and

Testing Brick and Structural Clay Tile

08/23/2013

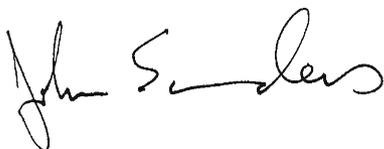
|                     |   |                |              |
|---------------------|---|----------------|--------------|
| Name:               | Kansas Brick & Tile<br>767 North U.S. 281<br>Hoisington, KS 67544 | Plant:         | Kansas Brick |
| Phone:              | 800-999-0480  | Report Number: | KBT-0010     |
| Fax:                |   | Sampled Date:  | 07/09/2013   |
|                     |   | Lot:           |              |
|                     |   | Product Code:  |              |
| Sample Description: | <b>500 Harvard, 500 Manganese, Old Georgetown, 545 FF</b>         |                |              |

|   |                                 |                 |                 |                 |                 |                 | Test Date      |
|---|---------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|
| <b>Absorption</b>                           |                                 | <b>1</b>        | <b>2</b>        | <b>3</b>        | <b>4</b>        | <b>5</b>        | <b>Average</b> |
| 24 Hour Submersion in Cold Water (%)        |                                 | 3.41            | 3.72            | 3.55            | 3.15            | 3.55            | 3.48           |
| 5 Hour Submersion in Boiling Water (%)      |                                 | 6.33            | 6.50            | 6.39            | 6.30            | 6.33            | 6.37           |
| Saturation Coefficient (Ratio of 24H to 5H) |                                 | 0.54            | 0.57            | 0.56            | 0.50            | 0.56            | 0.55           |
| <b>Compressive Strength</b>                 |                                 | <b>1</b>        | <b>2</b>        | <b>3</b>        | <b>4</b>        | <b>5</b>        | <b>Average</b> |
|   | <i>psi</i>                      | 11,321          | 11,453          | 11,263          | 10,205          | 7,850           | 10,418         |
|   | <i>MPa</i>                      | 78.1            | 79.0            | 77.7            | 70.4            | 54.1            | 71.8           |
| <b>Efflorescence</b>                        |                                 | <b>11</b>       | <b>12</b>       | <b>13</b>       | <b>14</b>       | <b>15</b>       |                |
|   |                                 | Not Effloresced | 08/07/2013     |
| <b>IRA</b>                                  |                                 | <b>6</b>        | <b>7</b>        | <b>8</b>        | <b>9</b>        | <b>10</b>       | <b>Average</b> |
|   | <i>g/min/30 in.<sup>2</sup></i> | 2.4             | 2.2             | 2.7             | 2.3             | 2.0             | 2.3            |

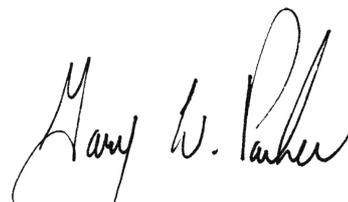
The brick represented by the test results shown here comply with the standards listed below:

ASTM C 216 - 12 Standard Specification for Facing Brick (Solid Masonry Units Made From Clay or Shale)

Grade: SW, MW



John Sanders, Ph.D., PE, Director



Gary W. Parker, Laboratory Supervisor