

*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-0009     |
| Fax:                |  | Sampled Date:  | 07/09/2013   |
|                     |  | Lot:           |              |
|                     |  | Product Code:  |              |
| Sample Description: | <b>530 Flash, Old Colonial, Cimarron, Sedona, Fort Dodge, Old Cheyenne, Pawnee Sand, Old Williamsburg, Santa Fe, 545 F</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 (%)        |                                 | 4.14            | 3.65            | 4.23            | 4.11            | 4.18            | 4.06           |
| 5 Hour Submersion in Boiling Water (%)      |                                 | 7.27            | 6.50            | 7.24            | 6.95            | 7.10            | 7.01           |
| Saturation Coefficient (Ratio of 24H to 5H) |                                 | 0.57            | 0.56            | 0.58            | 0.59            | 0.59            | 0.58           |
| <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>                      | 9,037           | 9,551           | 8,752           | 8,441           | 9,317           | 9,019          |
|   | <i>MPa</i>                      | 62.3            | 65.9            | 60.3            | 58.2            | 64.2            | 62.2           |
| <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> | 2.7             | 5.4             | 2.3             | 3.4             | 2.5             | 3.2            |

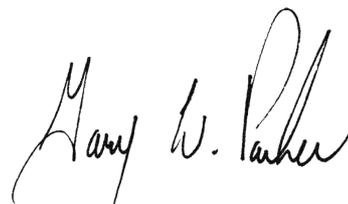
**The brick represented by the test results shown here comply with the standards listed below:**

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