

TEST REPORT

Results of Tests on brick Conducted in accordance with ASTM C67/C67M-18 Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile
12/02/2020

| | | | |
|----------------|--|---------------|------------|
| Name: | Glen-Gery Technical Services 433 South Pottsville Pike Shoemakersville, PA, 19555-0340 | Plant: | Adel Plant |
| Phone: | (p) (610) 562-3076 | Sampled Date: | 11/20/2020 |
| Report Number: | GGAD-0020 | Fired Date: | 11/02/2020 |
| Description: | Shale w/Additives Extruded Solid | | |

| Absorption | 1 | 2 | 3 | 4 | 5 | Average |
|---------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------|
| 24 Hour Cold Water (%) | 3 | 1.7 | 1.5 | 2.2 | 1.5 | 2.0 |
| 5 Hour Boiling Water (%) | 3.3 | 2.6 | 1.8 | 2.8 | 1.8 | 2.5 |
| Saturation Coefficient | 0.92 | 0.64 | 0.82 | 0.77 | 0.86 | 0.80 |
| Compressive Strength | 1 | 2 | 3 | 4 | 5 | Average |
| <i>psi</i> | 29,042 | 30,865 | 31,482 | 31,683 | 30,417 | 30,698 |
| <i>MPa</i> | 200 | 213 | 217 | 219 | 210 | 212 |
| IRA (Oven Dried Method) | 1 | 2 | 3 | 4 | 5 | Average |
| <i>g/min/30 in.²</i> | 1.2 | 1 | 1.3 | 2.9 | 1 | 1.5 |
| Efflorescence | 1 | 2 | 3 | 4 | 5 | |
| <i>Efflorescence Detection</i> | Not Effloresced | Not Effloresced | Not Effloresced | Not Effloresced | Not Effloresced | |
| Abrasion Resistance | 1 | 2 | 3 | 4 | 5 | Average |
| | 0.01 | 0.01 | 0 | 0.01 | 0.01 | 0.01 |

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

- ASTM 32 - 13 Standard Specification for Sewer and Manhole Brick (Made from Clay or Shale)
Grades: SM - SS / MM - MS
- ASTM 62 - 17 Standard Specification for Building Brick (Solid Masonry Units Made From Clay or Shale)
Class: SW - MW - NW
- ASTM 216 - 19 Standard Specification for Facing Brick (Solid Masonry Units Made From Clay or Shale)
Grades: SW - MW
- C902 - 15 Standard Specification for Pedestrian and Light Traffic Paving Brick
Type: I - II - III
Class: SX - MX - NX
- CSA - A82-14 Fired Masonry brick made from clay or shale
Class: EG - IG
- C1272 The Standard Specification for Heavy Vehicular Paving Brick
Grade: F



Mike Krzyzanowski
Technical Services Manager