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# VANDERBILT

## Technical Data

### Kaolin Clay

Paint Department

R.T. Vanderbilt Company, Inc. offers five grades of air-floated kaolin clay for use in paints and coatings. These products find use as fillers for primers, alkyd flats and latex paints. Because of their fine particle size, the hard clays are good TiO<sub>2</sub> spacers in coatings that do not require a high brightness extender.

The typical properties of the grades are given below:

|                                | Hard Clay    |             | Soft Clay          |                    |          |
|--------------------------------|--------------|-------------|--------------------|--------------------|----------|
|                                | BILT-PLATES® | DIXIE CLAY® | PEERLESS®<br>No. 1 | PEERLESS®<br>No. 3 | McNAMEE® |
| Density at 25° C (g/cc)        | 2.62         | 2.62        | 2.6                | 2.6                | 2.6      |
| Pounds per gallon              | 21.8         | 21.8        | 21.7               | 21.7               | 21.7     |
| G. E. Brightness (TAPPI T 646) | 76           | 70          | 73                 | 68                 | 75       |
| 325 Mesh Residue               | <0.1%        | 0.7%        |                    |                    | 0.3%     |
| 200 Mesh Residue               | -            | -           | 0.4%               | 0.8%               |          |
| Oil Absorption (ASTM D 281)    | 42           | 41          | 30                 | 30                 | 32       |
| Hegman Fineness (3 lbs/gal)    | 4            | -           | -                  | -                  | 2        |
| Median Particle Size (microns) | 0.28         | 0.28        | 0.62               | 0.62               | 0.62     |

#### Typical Chemical Analysis (calculated as oxides)

|   | Hard Clay | Soft Clay |
|---|-----------|-----------|
| Silicon Dioxide (SiO <sub>2</sub> ) by difference | 45%       | 44%       |
| Aluminum Oxide (Al <sub>2</sub> O <sub>3</sub> )  | 39%       | 40%       |
| Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )      | 0.5%      | 0.3%      |
| Titanium Dioxide (TiO <sub>2</sub> )              | 2%        | 1.2%      |
| Calcium Oxide (CaO)                               | <0.1%     | <0.1%     |
| Potassium Oxide (K <sub>2</sub> O)                | -         | 0.3%      |
| Sodium Oxide (Na <sub>2</sub> O)                  | -         | <0.1%     |
| Magnesium Oxide (MgO)                             | -         | <0.1%     |
| Loss on Ignition (1000 °C)                        | 13%       | 14%       |

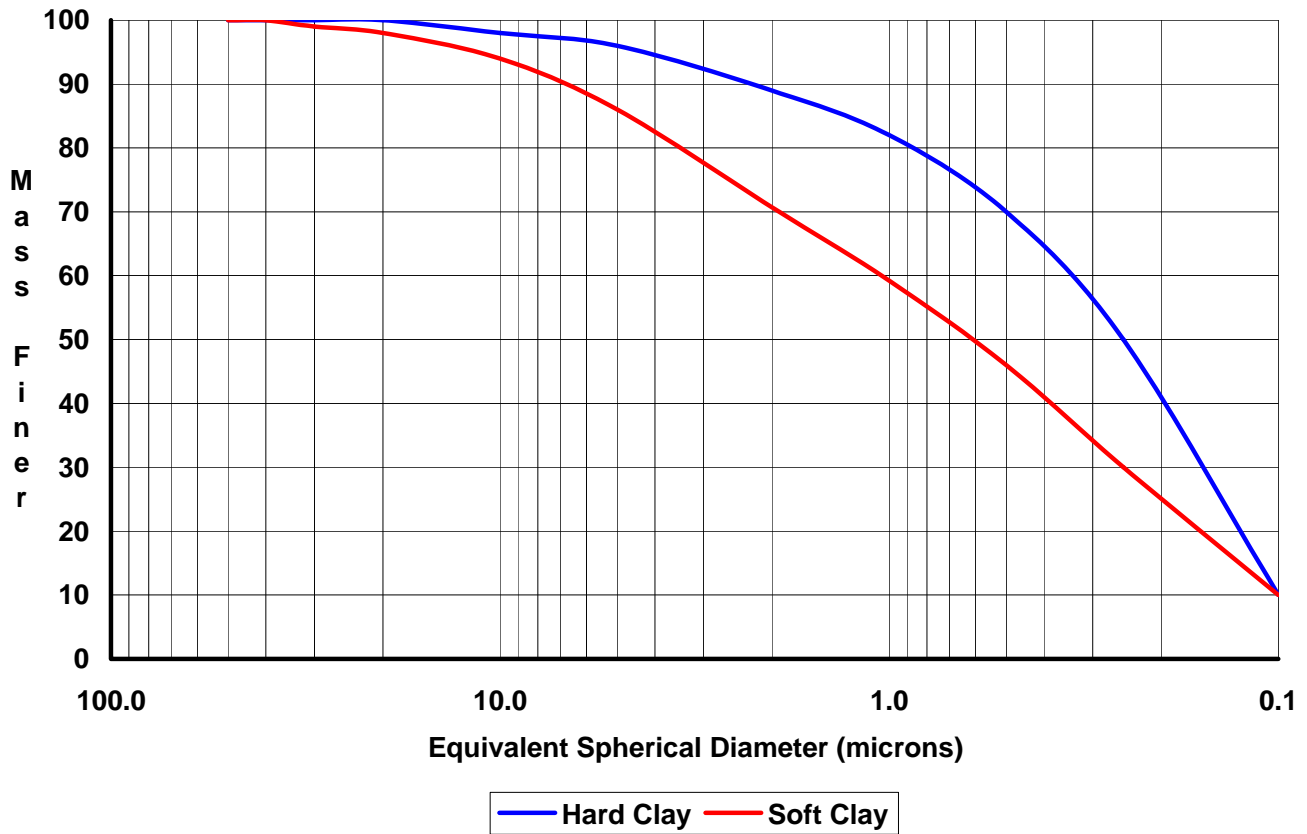
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### Particle Size Distribution SediGraph 5100



| Diameter        | Hard Clay    | Soft Clay    |
|-----------------|--------------|--------------|
| 50              | 100          | 100          |
| 40              | 100          | 100          |
| 30              | 100          | 99           |
| 20              | 100          | 98           |
| 15              | 99           | 96           |
| 10              | 98           | 94           |
| 5               | 96           | 86           |
| 2               | 88           | 69           |
| 1               | 82           | 58           |
| Median Diameter | 0.28 microns | 0.62 microns |