Celceram® PV20A is comprised of solid calcium aluminosilicate glass spheres. The source for these complex inorganic glass structures is the inorganic material that has coalesced into spheres during the combustion process of coal in power generating processes. As such, all Celceram® products are considered to be 100% post-industrial recycled content as defined by USGBC’s LEED program. The NSF 140 standard and the UL Environment’s GREENGUARD CERTIFICATION recognize Celceram® as 100% pre-consumer. While coal derived fly ash is ubiquitous, the product characteristics required for its performance as a functional filler in polymer systems requires unique characteristics and tight production specifications.

Typical specifications are described by particle size distribution, specific gravity and screen analysis. Additional parameters identified to be critical to an application can be monitored if requested by the customer.

### Physical Specifications

<table>
<thead>
<tr>
<th>Average or Typical Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median</td>
<td>8.5 microns</td>
</tr>
<tr>
<td>Mean</td>
<td>18 microns</td>
</tr>
<tr>
<td>D50</td>
<td>8.5 microns</td>
</tr>
<tr>
<td>D95</td>
<td>75 microns</td>
</tr>
<tr>
<td>Dry 60 Mesh</td>
<td>-0.03 % retained</td>
</tr>
<tr>
<td>325 Mesh</td>
<td>14 % retained</td>
</tr>
<tr>
<td>LOI</td>
<td>0.3 %</td>
</tr>
<tr>
<td>Oil Adsorption</td>
<td>15 %</td>
</tr>
<tr>
<td>Viscosity</td>
<td>3300 cP</td>
</tr>
</tbody>
</table>

### Chemical Specifications

<table>
<thead>
<tr>
<th>Average or Typical Value</th>
<th>Units</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>SiO2</td>
<td>35.87 %</td>
<td>XRF</td>
</tr>
<tr>
<td>Al₂O₃</td>
<td>18.58 %</td>
<td>XRF</td>
</tr>
<tr>
<td>Fe₂O₃</td>
<td>6.97 %</td>
<td>XRF</td>
</tr>
<tr>
<td>CaO</td>
<td>25.11 %</td>
<td>XRF</td>
</tr>
<tr>
<td>MgO</td>
<td>5.69 %</td>
<td>XRF</td>
</tr>
<tr>
<td>SO₃</td>
<td>1.75 %</td>
<td>XRF</td>
</tr>
<tr>
<td>Na₂O</td>
<td>1.64 %</td>
<td>XRF</td>
</tr>
<tr>
<td>K₂O</td>
<td>0.47 %</td>
<td>XRF</td>
</tr>
<tr>
<td>Available Alkalis</td>
<td>0.87 %</td>
<td>FP (AA)</td>
</tr>
<tr>
<td>Moisture</td>
<td>-0.11 %</td>
<td>Wt Loss</td>
</tr>
<tr>
<td>SG</td>
<td>2.70 He Pychno</td>
<td></td>
</tr>
</tbody>
</table>

Notes: X-Ray Fluorescence provides relative concentrations of the chemical elements found within the glass matrix. The values are then converted to the oxide form of the elements for reporting purposes. Viscosity is calculated using a Severs Rheometer at 80 psi in a linseed oil base loaded to 81% w/w filler level.

For more information or answers to questions about the use of fly ash in specific applications, contact your nearest Boral Resources Technical Sales Representative or call 1-770-684-0102
Celceram® PV20A has been successfully used as a functional filler in polyolefin, PVC, asphalt, reactive polyurethane, SBR and latex based chemistries.

The unique particle size distribution contributes to an improved packing factor. This increase in packing factor permits Celceram® PV20A to be loaded to higher levels compared to traditional fillers while maintaining or improving the physical characteristics of the finished polymer system.

Some improved characteristics that have been observed are improved fire ratings, decreased process viscosities which translate into faster production rates, improved dimensional stability, decreased product weight, and improved economics (cost savings to manufacturer due to increased filler loadings).

Contact Mitchell Smith, Technical Sales Representative, at (951) 216-4130 for additional technical information or performance characteristics specific to your application.