

# Celceram PV20A

## Specifications

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.

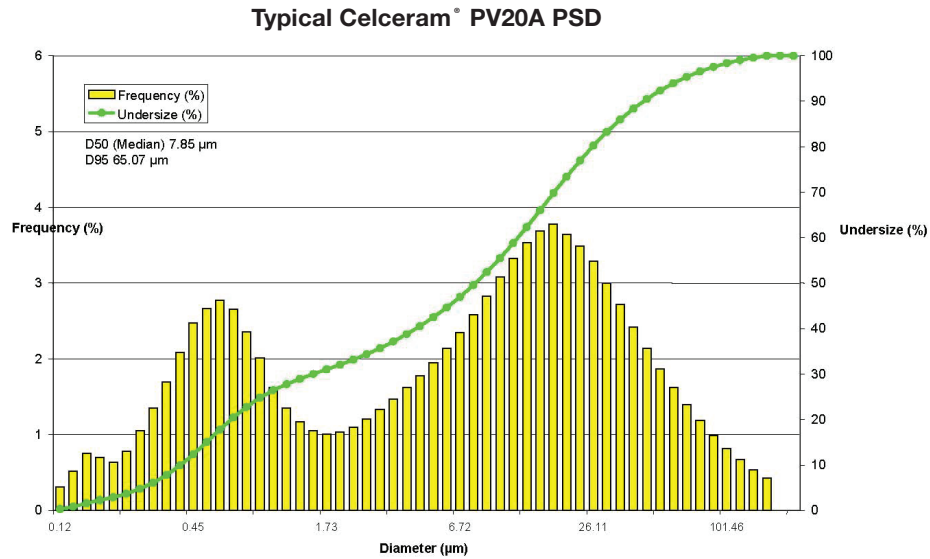
Typical specifications are described by particle size distribution, specific gravity and screen analysis. Additional parameters identified to be critical to an application can be monitored if requested by the customer.

For more information or answers to questions about the use of fly ash in specific applications, contact your nearest Eco Material Technologies Technical Sales Representative or call 1-770-684-0102.

### Celceram® PV20A

Physical Specifications			Chemical Specifications			
	Average or Typical Value	Units		AVG	UNIT	Procedure
Median	8.5	microns	SiO <sub>2</sub>	35.87	%	XRF
Mean	18	microns	Al <sub>2</sub> O <sub>3</sub>	18.58	%	XRF
D50	8.5	microns	Fe <sub>2</sub> O <sub>3</sub>	6.97	%	XRF
D95	-75	microns	CaO	25.11	%	XRF
Dry 60 Mesh	-0.03	% retained	MgO	5.69	%	XRF
325 Mesh	14	% retained	SO <sub>3</sub>	1.75	%	XRF
LOI	0.3	%	Na <sub>2</sub> O	1.64	%	XRF
Oil Adsorption	15	%	K <sub>2</sub> O	0.47	%	XRF
Viscosity	3300	cP	Available Alkalis	0.87	%	FP (AA)
			Moisture	-01.10	%	Wt Loss
			SG	2.70		He Pychno

**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.



Test	Value	Unit	Typical Results
LOI <sup>1</sup>	≤0.50	%	<0.3%
Fineness (45µm-#325) <sup>2</sup>	Reported	%	14%
Fineness (250µm-#60) <sup>3</sup>	≤0.030	%	<0.03%
Particle Mean Distribution (D50)	Reported	µm (microns)	8.5
Viscosity <sup>4</sup>	Reported		3300 cP
Moisture <sup>5</sup>	<0.1	%	<0.1

1. LOI = Loss on Ignition. Represents carbon content of product.
2. Fineness on #325 mesh. Action to be taken if in excess of 15% retained.
3. Fineness on #60 mesh. Action to be taken if in excess of 0.03%.
4. 81% loading in linseed oil at 80 psi in Severs testing apparatus.
5. ASTM C618.

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.