

## Description

Special porous silicate granules exclusively manufactured by Pall® are sintered with a siliceous bond to form Pall **Aerolith** porous ceramic, a material of homogeneous composition. This porous **Aerolith** ceramic consists mainly of crystalline and amorphous silicates.

Due to high porosity and the large internal surface, the porous **Aerolith** ceramic products offer a high storing capacity for particles and liquids. The labyrinth structure leads to an excellent separation efficiency at a simultaneously very low increase of differential pressure.

Porous **Aerolith** ceramic is distinguished by the large variety of configurations, and can be used in depth filtration applications of up to 500 °C (932 °F).

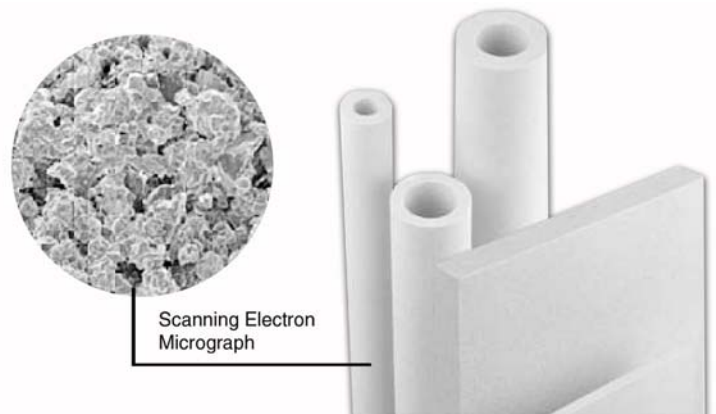
## Applications

### Cylinders and Flanged Candles

- |                                   |   |
|-----------------------------------|---|
| • Particle filtration for Liquids | Acids, water and alcohol                                  |
| • Particle filtration for Gases   | Process gases, air, sewer gas, natural gas and liquid gas |
| • Coalescer                       | Compressed air, nitrogen and carbon dioxide               |
| • Storing Media                   | Water, colour and ink                                     |
| • Aeration Element                | Drinking water, mineral water and fish ponds              |
| • Vacuum Lance                    | Retention of fire extinguishing powder                    |

### Plates

- |                    |  |
|--------------------|--|
| • Aeration element | Drinking water, mineral water and fish ponds |
| • Nutsches         | Mud thickening                               |



Scanning Electron  
Micrograph

## General Information

- Porous **Aerolith** ceramic elements can be machined using hard metal tools.
- Ceramic elements are to be handled with care.
- Elements can be easily glued using commercial glues which Pall can supply. Consideration must be paid to operating temperature and chemical resistance.
- Pall can supply a variety of element fixing systems.

## Chemical Resistance<sup>2</sup>

Porous **Aerolith** ceramic media is resistant to most acids, saline solutions and organic solvents, liquid or gaseous. It is resistant up to pH 9 in the alkaline range.

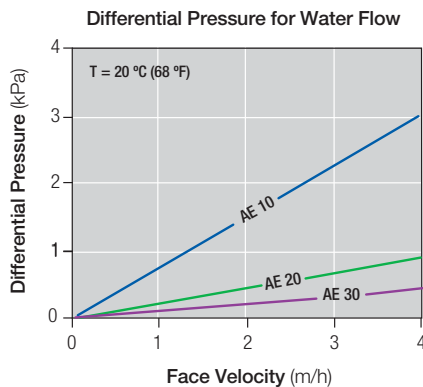
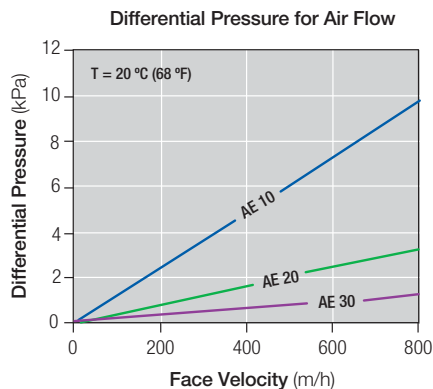
<sup>2</sup> As end use conditions can vary it is the users responsibility to verify compatibility with their specific use conditions.

## Technical Information

Aerolith (AE)	Cylinders, Flanged Candles and Plates		
	AE 10	AE 20	AE 30
Filtration Grade for Liquids	10 µm	25 µm	30 µm
Filtration Grade for Gases	1.5 µm	2.5 µm	5 µm
Porosity	40 %	40 %	40 %
Material Density	1.35 g/cm <sup>3</sup>	1.40 g/cm <sup>3</sup>	1.30 g/cm <sup>3</sup>
Specific Permeability	65 10 <sup>-13</sup> m <sup>2</sup>	200 10 <sup>-13</sup> m <sup>2</sup>	350 10 <sup>-13</sup> m <sup>2</sup>
Bending Strength (O-Ring compression)	>8 MPa	>6 MPa	>4.5 MPa
Maximum Temperature Resistance <sup>1</sup>	500 °C (932 °F)	500 °C (932 °F)	500 °C (932 °F)
Expansion Co-efficient (25 - 500 °C)	14 10 <sup>-6</sup> /K	14 10 <sup>-6</sup> /K	14 10 <sup>-6</sup> /K
Dimensions (Do / Di)	70 / 40 mm	70 / 40 mm	60 / 40 mm

<sup>1</sup> Depending on operating conditions

## Flow vs Differential Pressure



## Ordering Information

Part Number	Aerolith (AE)	Type	Do / Di (mm)	Length (mm)	Area (m <sup>2</sup> )	Weight (kg)
88001200	Cylinder	10	40 / 20	80	0.010	0.1
88004500		20	40 / 20	80	0.010	0.1
88007300		30	40 / 20	80	0.010	0.1
88156500		10	60 / 40	1000	0.188	2.1
88005400		20	60 / 40	1000	0.188	2.1
88008100		30	60 / 40	1000	0.188	2.1
88003200		10	70 / 40	1000	0.220	3.5
88006100		20	70 / 40	1000	0.220	3.5
88009000		30	70 / 40	1000	0.220	3.5
88043000	Flanged Candle <sup>3</sup>	10	60 / 40	1000	0.188	2.1
88045500		30	60 / 40	1000	0.188	2.1

<sup>3</sup> Rectangular head 70 x 15 mm

Part Number	Aerolith (AE)	Type	Length (mm)	Width (mm)	Height (mm)	Area (m <sup>2</sup> )	Weight (kg)
88059500	Plate	20	250	250	50	0.063	4.2
88062800		30	250	250	50	0.063	4.2

Please contact Pall for enquiries relating to dimensions not specified above.



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