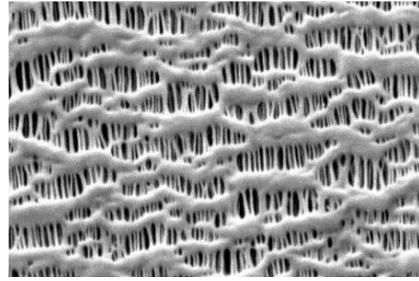


#### Product Name & Description

Celgard® PP2068  
20µm Monolayer Microporous Membrane (PP)



SEM images for illustrative purposes only

#### Primary Applications

**High Power** Lithium-Ion Battery Systems, especially performance-critical applications

#### Product Benefits

- Zero TD shrinkage reduces internal shorting
- Uniform pore structure with high chemical & thermal stability
- High porosity for excellent high-rate performance
- PP layer provides superior high temperature melt integrity compared to other polyolefin-based, uncoated separators as well as oxidation resistance
- Offers additional safety and longevity for power applications

#### Packaging

Please contact your Celgard representative for more information on product roll lengths and slit widths.

#### Technical Data (Typical Properties)

Basic Film Properties	Unit of Measure	Typical Value
Thickness	µm	20
Gurley (JIS)	Seconds	185
Porosity (Calculated)	%	55
TD Shrinkage @ 105°C / 1 Hour (typical)	%	0
MD Shrinkage @ 105°C / 1 Hour (typical / max)	%	2.4 / 5.0
TD Tensile Strength (typical / min)	Kg/cm <sup>2</sup>	115 / 90
MD Tensile Strength (typical / min)	Kg/cm <sup>2</sup>	1550 / 1400
Puncture Strength (typical / min)	Grams Force (gf)	330 / 200

At the Center of Membrane Innovation

### Manufacturing Locations

#### United States

*Headquarters, Manufacturing and R&D at Charlotte*  
13800 South Lakes Drive  
Charlotte, North Carolina  
28273 United States  
Phone: +1 704-588-5310  
Fax: +1 704-588-5319

*Manufacturing and R&D at Concord*  
390 Business Boulevard  
Concord, North Carolina  
28027 United States  
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#### China

*Manufacturing & Distribution*  
Celgard (Shanghai) Materials Technology Co., Ltd.  
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### Sales Offices

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#### China

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