

Product Name & Description

Celgard® H2013
20µm Trilayer Microporous Membrane (PP/PE/PP)

Primary Applications

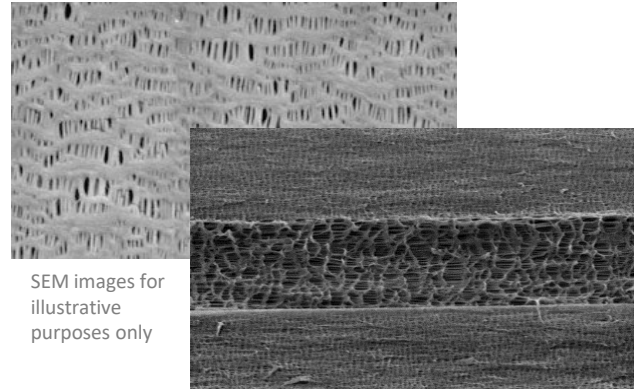
High Energy Lithium-Ion Battery Systems; especially those that require additional safety advantages

Product Benefits

- Zero TD shrinkage reduces internal shorting
- Uniform pore structure with high chemical & thermal stability
- High porosity for excellent high-rate performance
- PP outer layer provides high temperature melt integrity, oxidation resistance
- PE inner layer provides high-speed shutdown features

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	300
Porosity (Calculated)	%	44
TD Shrinkage @ 105°C / 1 Hour (typical)	%	0
MD Shrinkage @ 105°C / 1 Hour (typical / max)	%	3.3 / 6.0
TD Tensile Strength (typical / min)	Kg/cm ²	140 / 120
MD Tensile Strength (typical / min)	Kg/cm ²	1600 / 1100
Puncture Strength (typical / min)	Grams Force (gf)	420 / 320

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