

Product Name & Description

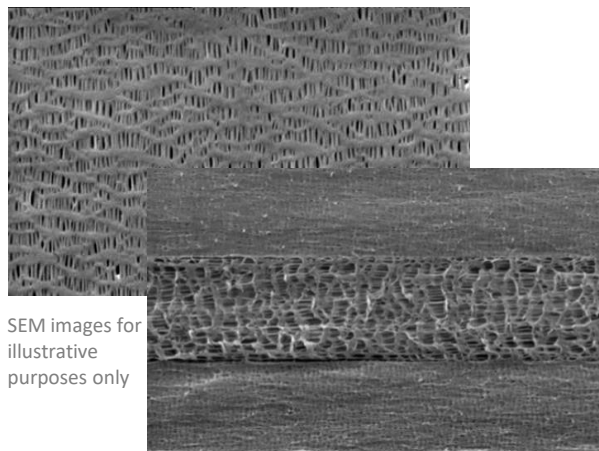
Celgard® H1612
16µm Trilayer Microporous Membrane (PP/PE/PP)

Primary Applications

High Energy Lithium Battery Systems; especially those that require exceptional safety and energy density 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
- Ultra-low electrical impedance



SEM images for illustrative purposes only

Technical Data (Typical Properties)

Basic Film Properties	Unit of Measure	Typical Value
Thickness	µm	16
Gurley (JIS)	Seconds	240
Porosity (calculated)	%	44
TD Shrinkage @ 105°C / 1 Hour (typical)	%	0
MD Shrinkage @ 105°C / 1 Hour (typical / max)	%	4.2 / 6.0
TD Tensile Strength (typical / min)	Kg/cm ²	140 / 100
MD Tensile Strength (typical / min)	Kg/cm ²	2080 / 1350
Puncture Strength (typical / min)	Grams Force (gf)	350/ 280

Packaging

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

United States

Celgard, LLC
13800 South Lakes Drive
Charlotte, North Carolina
28273 United States
Toll Free (US):
1-800-235-4273
Phone: +1 704-588-5310
Fax: +1 704-587-8585

France

Celgard Sales Office
Daramic SAS
BP 90149
25 Rue de Westrich
Sélestat Cedex
67603 France
Phone: +33 3 88 82 41 08
Fax: +33 3 55 03 59 03

China

Sales & Technical Service
Celgard LLC
3201 Room, Galaxy Century
Building A, No 3069
South of Caitian Rd
Futian District, Shenzhen
518-000 PR China
Phone: +86 755-8660 8688
Fax: +86 755-8660 8699

Korea

Polypore Korea, Ltd.
B-506 10, Baekseokgongdan
1-ro,
Seobuk-gu, Cheonan-si,
Chungcheongnam-do, 31094
Republic of South Korea
Phone: +82 419056001
Fax: +82 419056099

Japan

Polypore K.K.
Hibiya Mitsui Tower
1-1-2 Yurakucho,
Chiyoda-ku, Toyko
100-0006 Japan
Phone: +81 3-6891-3750
Fax: +81 3-6891-3769

www.celgard.com



WARRANTY: This product is to be used only by persons familiar with its use. It must be maintained within the stated limitations. The product is warranted to be free of any manufacturing defects. No other warranty is expressed or implied. Purchaser assumes all responsibility for the use and safety of this product. To the best of our knowledge, the information contained herein is accurate. However, neither CELGARD, LLC nor any of its affiliates assumes any liability whatsoever for the accuracy or completeness of this information. Final determination of the suitability of any material and whether there is any infringement of patents is the sole responsibility of the user.

Users of any substance should satisfy themselves by independent investigation that the material can be used safely. We may have described certain hazards, but we cannot guarantee that these are the only hazards that exist. Review the Product Safety Data Sheet for environmental, health and safety information related to this product.

