

Product Name & Description

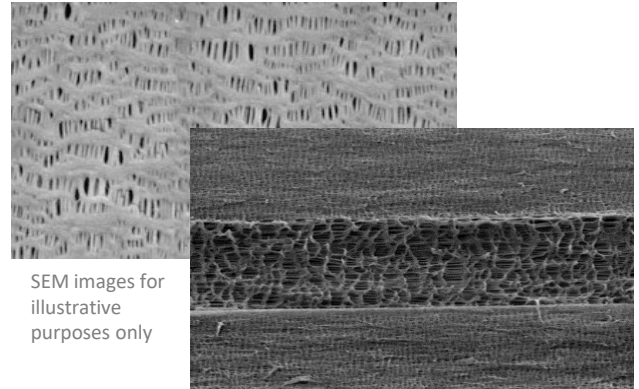
Celgard® H1409
14µm Trilayer Microporous Membrane (PP/PE/PP)

Primary Applications

High Power Lithium-Ion Battery Systems; especially those that require additional safety advantages
Automotive EDV, ESS

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
- Low electrical impedance



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	14
Gurley (JIS)	Seconds	210
Porosity (Calculated)	%	45
TD Shrinkage @ 105°C / 1 Hour (typical)	%	0
MD Shrinkage @ 105°C / 1 Hour (typical / max)	%	1.7 / 6.0
TD Tensile Strength (typical / min)	Kg/cm ²	160 / 100
MD Tensile Strength (typical / min)	Kg/cm ²	2250 / 1100
Puncture Strength (typical / min)	Grams Force (gf)	330 / 240

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

Phone: +1 704-720-5200
Fax: +1 704-720-5211

Europe, Middle East & Africa (EMEA)

Sales & Technical Service

BP 90149
25 Rue de Westrich
Sélestat Cedex
67603 France

Phone: +33 3 88 82 41 08
Fax: +33 3 55 03 59 03

Japan

Sales & Technical Service

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

China

Manufacturing & Distribution

Polypore (Shanghai) Membrane
Products Co., Ltd.
L1 3rd Floor, No. 207 Tai Gu Road
WaiGaoQiao Free Trade Zone,
Shanghai 200131, P.R. China

Phone: +86(21) 5866 6200
Fax: +86(21) 5868 2891

Sales & Technical Service

Celgard Sales Office
Room 1503-1506, Block 6, Lane 3611
Zhangyang Road
Jinqiao International Plaza,
Pudong New District
Shanghai, PR China 200136

Phone: +86 21 3813 9910
Fax: +86 21 3813 9911

Korea

Sales & Technical Service

Polypore Korea, Ltd.
B-506 10, Baekseokgongdan 1-ro,
Seobuk-gu, Cheonan-si,
Chungcheongnam-do, 31094
Republic of South Korea

Phone: +82 41-905-6001
Fax: +82 41-905-6099

India & South Asia

Sales & Technical Service

Pragati Mahalakshmi Building,
Ground Floor, Site No. 62,
New PID No. 11-51-62, 1st Main Road,
3rd Cross, Industrial Suburb II Stage,
Yeshwanthpura,
Bangalore, India 560022

Phone: +91 80 4256 1104
Fax: +91 80 4256 1106



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