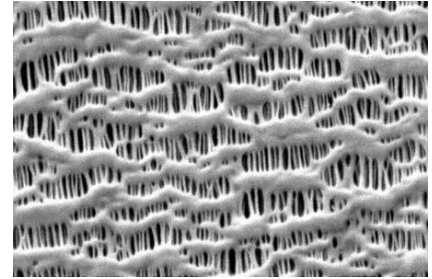


Product Name & Description

Celgard® 3501
25µm Monolayer Microporous Membrane (PP)
Surfactant Coated

Primary Applications

Aqueous Electrolyte Battery Systems



SEM images for illustrative purposes only

Product Benefits

- Surfactant coated for rapid wetting
- Gas barrier provides thermal stability
- Zero TD shrinkage reduces internal shorting and improves high temperature dimensional stability
- Oxidation resistance for excellent cycling and trickle charge performance

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	25
Gurley (JIS)	Seconds	200
Porosity (Calculated)	%	55
TD Shrinkage @ 105°C / 1 Hour (typical)	%	0
MD Shrinkage @ 105°C / 1 Hour (typical / max)	%	1.1 / 5.0
TD Tensile Strength (typical / min)	Kg/cm ²	130 / 80
MD Tensile Strength (typical / min)	Kg/cm ²	1170 / 770
Puncture Strength (typical / min)	Grams Force (gf)	325 / 200
Wettability (max- internal method)	seconds	30

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

DISCLAIMER, LIMITED WARRANTY: This product is to be used only by persons familiar with its use. It must be maintained within the stated limitations. Most non-developmental, purchased Celgard products are sold subject to Celgard's then current Sales T&C's. 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. An Article Information Sheet may be available upon request. This product may be provided in confidence under NDA and as such is Celgard Confidential.

