Dexmet® CORPORATION

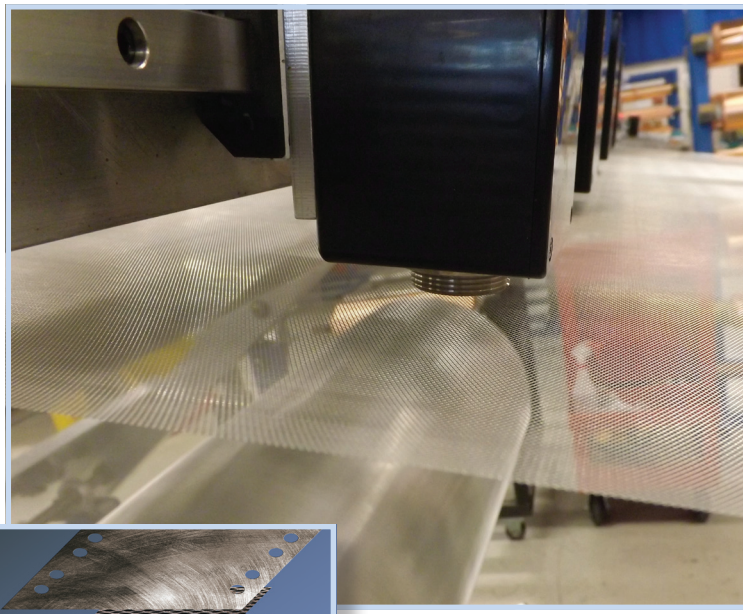
FUEL CELL SOLUTIONS

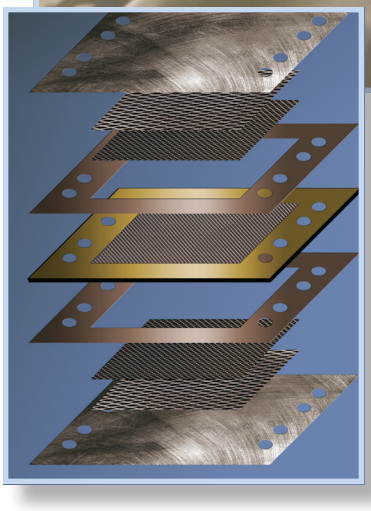
Expanding Technology™

MICROGRID® EXPANDED METALS FOR FUEL CELL & HYDROGEN/OXYGEN GENERATION TECHNOLOGIES

Applications & Advantages

- Current Collector Screens, Membrane Support Grids, Flow Field Structures and Gas Diffusion Electrodes
- Excellent as a Catalyst Substrate
- Infinite Configurations for Precision Open Area, Thickness, Surface Condition and Conductivity
- One Piece Single-Unit Structure for Superior Electrical Conductivity
- Light, Flexible and Strong
- Raw Material Thickness Down to .0015"
- Opening Sizes Down to 25 Micron





Dexmet redefines service and availability for precision expanded foils and polymers with exacting mechanical and electrical properties that meet specific conductivity, weight and dimensional requirements.

The efficiency advantages of using an expanded material when working with precious materials such as Niobium, Zirconium, Nickel, Silver, and Titanium make it a more economical solution over similar perforated or chemically etched products. The unique simultaneous slit and stretch process can yield up to 90% more finished product output than raw material input.

For over 60 years Dexmet Corporation has been at the forefront of expanding technology and has redefined the standards for micro mesh materials providing the greatest range of products, capabilities, and resources available...all with ISO 9001:2008 certified quality.

Features

- 3D Structure for Flow Fields or Smooth Surface for Membrane Support
- Controlled Openings Down to 0.025 mm (0.001")
- 1300+ Openings/cm^2 (8500+ Openings/inch^2)
- Controlled Thickness Down to 0.050 mm (0.002")

Dexmet Corporation
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Wallingford, CT 06492 USA

Visit Our Website For More Information
www.dexmet.com
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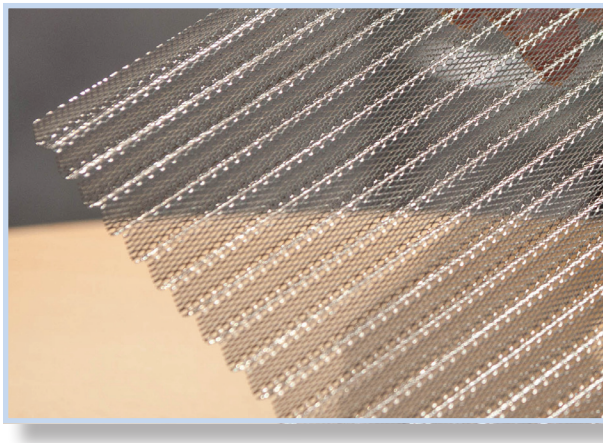
New Expanded Corrugated Products

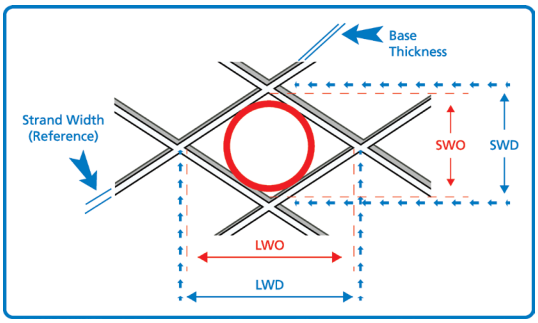
Dexmet has designed a product that answers the need of Fuel Cell designers trying to increase the efficiency of the anode and reduce stack cost through multi-functional products. Dexmet's new expanded corrugated product, when used as the anode substrate, increases the amount of surface area allowing for more catalyst material to be applied. The new product can also enhance the flow through the substrate for better ion separation. Variability in the manufacturing process allows the customer to specify the Amplitude and Frequency, as well as the Open Area of the material, to optimize surface area and flow for the application. In addition, this product can also be utilized to create the Hydrogen and Oxidant Flow Field layers within the stack.



Available in most expanded metal offerings. Contact our Power Technologies Product Manager to find out more and obtain samples of this new Dexmet product.

Standard Dexmet MicroGrid® Configurations

Tool Code	LWD (mm)	SWD (mm)		Hole Size (mm)		Opening/SQCM		Open Area		Width (mm)	Raw Thickness (mm)	
		Min	Max	Min	Max	Min	Max	Min	Max		Min	Max
025	0.635	0.318	0.391	0.030	0.203	806.20	992.25	32%	75%	203.2	0.025	0.076
031	0.787	0.457	0.610	0.038	0.254	410.85	550.39	32%	82%	304.8	0.025	0.127
040	1.016	0.559	0.813	0.051	0.432	271.32	348.84	24%	85%	304.8	0.038	0.152
050	1.270	0.610	0.914	0.076	0.559	173.64	254.26	21%	89%	609.6	0.038	0.203
060	1.524	0.762	1.092	0.076	0.686	120.93	178.29	20%	90%	609.6	0.038	0.229
075	1.905	0.762	0.940	0.084	0.762	111.63	136.43	15%	90%	965.2	0.038	0.229
077	1.956	0.838	1.422	0.102	0.838	73.64	120.16	15%	90%	914.4	0.051	0.305
080	2.032	0.940	1.702	0.178	1.016	58.14	104.65	16%	90%	1219.2	0.051	0.356
090	2.286	1.143	1.422	0.178	1.143	62.02	77.52	16%	90%	609.6	0.051	0.356
100	2.540	1.016	1.956	0.178	1.168	38.76	73.64	16%	90%	965.2	0.051	0.432
105	2.667	1.270	1.956	0.178	1.219	38.76	54.26	20%	90%	609.6	0.051	0.457
125	3.175	1.270	2.819	0.203	1.321	23.26	50.39	20%	90%	1219.2	0.051	0.635
140	3.556	1.499	3.175	0.254	1.651	17.05	38.76	30%	90%	609.6	0.076	0.762
158	4.001	1.956	3.175	0.279	1.905	15.50	27.91	30%	90%	685.8	0.076	0.762
180	4.572	1.803	2.819	0.279	2.032	15.50	23.26	32%	90%	609.6	0.102	0.762
190	4.826	1.702	2.540	0.508	2.235	12.40	20.16	35%	90%	609.6	0.127	0.762
215	5.461	2.108	3.632	0.508	2.413	10.08	17.05	35%	90%	609.6	0.127	0.762
236	5.994	2.311	3.632	0.635	2.540	9.30	13.95	35%	90%	609.6	0.127	0.762
250	6.350	2.540	4.424	0.686	2.794	7.75	12.40	35%	90%	609.6	0.127	0.762
284	7.214	2.311	3.632	0.762	3.302	6.98	12.40	35%	90%	609.6	0.127	0.762
400	10.160	3.175	8.458	0.889	4.572	2.33	6.20	35%	90%	609.6	0.127	0.762
500	12.700	2.311	3.632	0.762	3.302	6.98	12.40	35%	90%	609.6	0.127	0.762



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Connecticut Hydrogen-Fuel Cell Coalition

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