

PPG MicroGrid[®] expanded metals for advanced battery, capacitor & energy storage

Battery solutions

PPG's engineered materials redefines service and availability for precision expanded foils and polymers with exacting mechanical and electrical properties that meet unequivocal conductivity, weight and dimensional requirements. Foils are from .001" thin, to 60" width, from 1 to 8500+ openings per square inch.

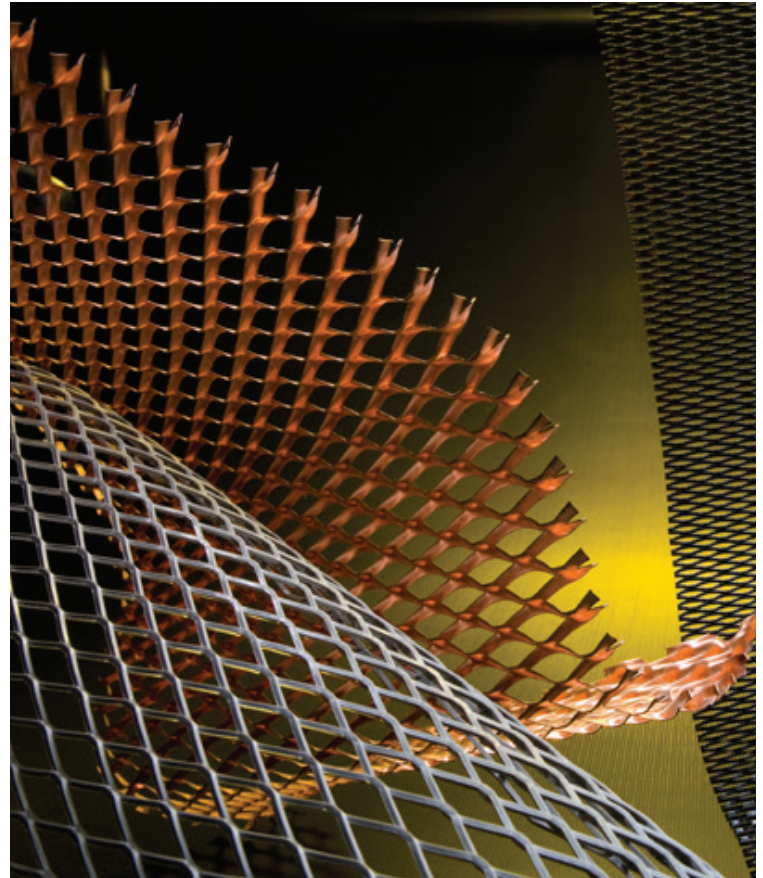
Materials can be anodized, plated, painted or plastic coated, bent, formed, & punched. Our efficient expanding process is of great advantage with very expensive raw materials such as silver and titanium. PPG's engineered materials has the ability to expand all ductile materials and offers the greatest range of products, capabilities and resources available...all with AS 9100:D & ISO 9001:2015 certified quality.

Applications & advantages

- Anode & cathode current collector screens
- Active material support structure
- Engineered geometry for precision weight, thickness, open area and conductivity
- One piece single-unit structure for superior electrical conductivity

Features

- Plated or coated materials available
- Controlled openings and thicknesses, down to 0.025 mm (0.001")
- Over 1300 opening per square centimeter (over 8500 openings per square inch)
- Integrated battery tab eliminates need for tab stock



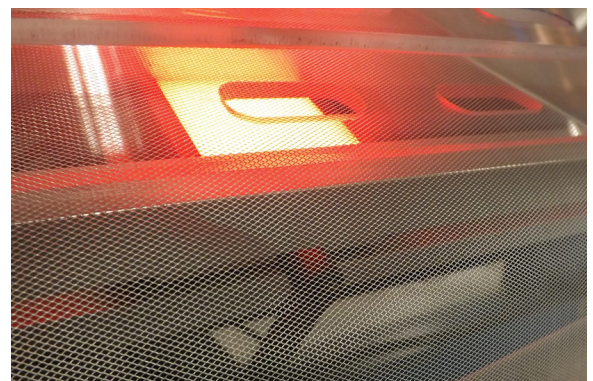
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Standard MicroGrid configurations

Tool code	LWD (mm)	SWD (mm)		Hole Size (mm)		Opening/cm ²		Open area		Width (mm)	Raw thickness (mm)	
		Min	Max	Min	Max	Min	Max	Min	Max		Min	Max
020	0.508	0.279	0.330	0.025	0.178	1162.79	1395.35	32%	75%	203.2	0.025	0.051
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

Our open-area materials have been specifically developed to work in highly engineered applications. PPG's Dexmet Corporation is a long-standing member of the Society for the Advancement of Materials and Process Engineering and AS9100:D and ISO 9001:2015 certified.

Our expertise is why top OEMs have made us their trusted partners. Our continuous investment into our proprietary technology gives us the ability to produce thin, uniquely versatile, open-area materials that meet or exceed application requirements.



MicroGrid is a registered trademark of Dexmet Corporation

All recommendations, statements, and technical data contained herein are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. User shall rely on his own information and tests to determine suitability of the product for the intended use and assumes all risks and liability resulting from his use of the product. Seller's and manufacturer's sole responsibility shall be to replace that portion of the product of this manufacturer which proves to be defective. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss, or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements other than those contained in a written agreement signed by an officer of the manufacturer shall not be binding upon the manufacturer or seller.

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