Diamond Micron Powder Grit Size Chart

Approximate cross-reference: China W / GB/T 6406 / FEPA–ISO 6106 / JIS

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China W grade	Nominal range (μm)	GB/T 6406 (M grade)	FEPA / ISO 6106 (D grade)	JIS approx. mesh	Typical use
W0.25	0–0.25	M0/0.25	D0.25	30000#	Mirror polishing
W0.5	0–0.5	M0/0.5	D0.25	15000#	Mirror polishing
W1	0.5–1	M0.5/1 (■ M0/1)	D0.7	8000#	Ultra-fine polishing
W1.5	1–1.5	M1/2	D1	6000#	Ultra-fine polishing
W2.5	1.5–2.5	M2/4	D1–D3	4000#	Fine polishing
W3.5	2.5–3.5	M3/6	D3	3000#	Fine polishing
W5	3.5–5	M4/8	D3–D7	2500#	Polishing / lapping
W7	5–7	M5/10 (M6/12)	D7	2000#	Lapping
W10	7–10	M8/12	D10	1500#	Lapping
W14	10–14	M8/16 (M10/20)	D15	1200#	Lapping / fine grinding
W20	14–20	M15/25	D15–D20	1000#	Fine grinding
W28	20–28	M20/30 (M25/35)	D25–D30	800#	Fine grinding
W40	28–40	M30/40 (M35/55)	D35	600#	Fine grinding
W50	35–50	M40/60	D35–D46	500#	Fine grinding
W60	50–70	M50/70	≈D46	400#	Fine grinding (micron limit)

· Cross-references are approximate: the standards grade by different principles (size-interval, median-diameter, or sieving), so no W grade has a perfect equivalent in another system. Always specify in microns.

· GB/T 6406-2016 (grain sizes of diamond / CBN superabrasives) is identical in principle to ISO 6106:2013; micron-powder inspection methods are given in JB/T 7990-2012.

· FEPA micron D-designations are adopted by ISO 6106; JIS mesh numbers are the customary trade approximations (median-diameter basis).

· Supplied grade, D50 and distribution width are governed by the agreed technical documents; grade and tolerance are confirmed in writing at quotation.

Selection guidance

· Polishing: roughly 0–0.5 μm to 6–12 μm (≈ W0.25–W10).

· Lapping: roughly 5–10 μm to 12–22 μm (≈ W5–W20).

· Fine grinding: 20–30 μm and coarser (≈ W20 and up).

· These are customary industry bands; actual selection depends on substrate, equipment and surface target. Send samples or describe your process for a recommendation.