

Diamond Grit Size Designations, Approximate Particle Sizes, and Counts

The diamond grit designations for diamond lapidary tools actually represent a range of diamond particle sizes used to manufacture that designation. For example a 150 grit diamond wheel is actually a 140/170 grit wheel made up of diamond crystals ranging in size from 105-88 microns or .004-.0036 inches in diameter.

Inland lists grit size for all their diamond products by the standard US convention of labeling after the larger size diamond. For example, an Inland 60 grit diamond wheel is made from diamond grit size 60/ 80 range. If you are used to seeing a single number grit size, all you need to do is find the range which that grit falls into and then use the lower number of that range for the comparable Inland diamond product.

USA Grit Size (mesh)	Inland Equivalent	Size - Microns (range or average mean)	Size - Inches (range or average)	Number Particles in One Carat (approx)	Comparable to these Grits
mesh is the number of wires per inch in a screen mesh	listed grit on Inland diamond products	1 micron = $3.93700787 \times 10^{-5}$ inches	1 inch = 25, 400 microns	1 carat = 0.2 grams 1 gram = 5 carats	commonly found grit sizes in lapidary wheels & drums
8/10		2380-2000	.093-.075	4.2-7	
10/12		2000-1680	.075-.066	7-12	
12/14		1680-1410	.066-.055	12-20	
14/16		1410-1190	.055-.047	20-33	
16/18		1190-1000	.047-.039	33-57	
18/20		1000-840	.039-.033	57-97	
20/25		840-710	.033-.028	97-160	
25/30		710-590	.028-.023	160-282	
30/35	30 grit	590-500	.023-.019	282-460	30
35/40		500-420	.019-.016	460-770	
40/45		420-350	.016-.014	770-1,334	
45/50		350-297	.014-.012	1,334-2,080	
50/60		297-250	.012-.010	2,080-3,240	
60/80	60 grit	250-177	.010-.007	3,240-10,400	60
80/100	80 grit	177-149	.007-.006	10,400-17-140	80
100/120	100 grit	149-125	.006-.005	17,140-20,920	100
120/140	120 grit	125-105	.005-.004	20,920-49,400	
140/170	140 grit	105-88	.004-.0035	49,400-82,400	
170/200	170 grit	88-74	.0035-.0029	82,400-140,000	180
200/230	200 grit	74-62	.0029-.0024	140,000-252,000	220
230/270		62-53	.0024-.0021	252,000-384,000	260
270/325	270 grit	53-45	.0021-.0018	384,000-660,000	275
325/400	325 grit	45-37	.0018-.0015	660,000-1,120,000	360
400/500		37-35	.0015-.0014	1,120,000-1,192,800	
500/600		35-30	.0014-.0012	1,192,800-2,046,000	
600/700	600 grit	30-29	.0012-.0011	~2,046,000-2,418,850	600
700/800		29-25	.0011-.0010	~2,418,850-9,503,000	
900		18.5	.00073	~1.18•10 ⁶	
1000		16.5	.00065	~1.32•10 ⁷	
1100		14.5	.00057	~1.32•10 ⁷	
1200	1200 grit	18-12	.00071-.00047	~1.696•10 ⁷	1200
1400		10.5	.00041	~1.696•10 ⁷	
1500		9.5	.00037	~1.39•10 ⁸	
1800		12-8	.00047-.00031	~1.696•10 ⁷ - 2.62•10 ⁸	
2200		10-6	.00039-.00024	~7.86•10 ⁷	
3000	3000 grit	8-4	.00031-.00016	~2.62•10 ⁸	3000
5000		4.5	.00018	~8.82•10 ⁸	
6000		6-2	.00024-.00008	~8.82•10 ⁸	
8000		4-2	.00016-.00008	~2.05•10 ⁹	
12000		3-1	.00012-.00004	~2.05•10 ⁹ - 6.2•10 ¹⁰	
13000		1.25	.00005	~ 6.2•10 ¹⁰	
14000		1.0	.00004	6.2•10 ¹⁰	
15000		2-0	.00008-0	average of 6.2•10 ¹⁰	
25000		1-0	.00004-0	6.2•10 ¹⁰ - 0	
28000		0.5	.00002	~ 3.1•10 ¹⁰	
60000		1-.25	4•10 ⁻⁵ -9.84•0 ⁻⁶	~ 6.2•10 ¹⁰	

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