

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.

USA Grit Size (mesh)	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	1 micron = 3.93700787 Å— 10 ⁻⁰⁵ 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	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	250-177	.010-.007	3,240-10,400	60
80/100	177-149	.007-.006	10,400-17-140	80
100/120	149-125	.006-.005	17,140-20,920	100

120/140	125-105	.005-.004	20,920-49,400		R I N D I N G
140/170	105-88	.004-.0035	49,400-82,400		
170/200	88-74	.0035-.0029	82,400-140,000	180	
200/230	74-62	.0029-.0024	140,000-252,000	220	
230/270	62-53	.0024-.0021	252,000-384,000	260	
270/325	53-45	.0021-.0018	384,000-660,000	275	
325/400	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	30-29	.0012-.0011	~2,046,000-2,418,850	600	
700/800	29-25	.0011-.0010	~2,418,850-9,503,000		L A P P I N G
900	18.5	.00073	~1.18x10 ⁶		
1000	16.5	.00065	~1.32x10 ⁷		
1100	14.5	.00057	~1.32x10 ⁷		
1200	18-12	.00071-.00047	~1.696x10 ⁷	1200	
1400	10.5	.00041	~1.696x10 ⁷		
1500	9.5	.00037	~1.39 x10 ⁸		
1800	12-8	.00047-.00031	~1.696x10 ⁷ - 2.62x10 ⁸		
2200	10-6	.00039-.00024	~7.86x10 ⁷		
3000	8-4	.00031-.00016	~2.62x10 ⁸	3000	
5000	4.5	.00018	~8.82x10 ⁸		P O L I S H I N G
6000	6-2	.00024-.00008	~8.82x10 ⁸		
8000	4-2	.00016-.00008	~2.05x10 ⁹		
12000	3-1	.00012-.00004	~2.05x10 ⁹ - 6.2x10 ¹⁰		
13000	1.25	.00005	~ 6.2x10 ¹⁰		
14000	1.0	.00004	6.2x10 ¹⁰		
15000	2-0	.00008-0	average of 6.2x10 ¹⁰		
25000	1-0	.00004-0	6.2x10 ¹⁰ - 0		
28000	0.5	.00002	~ 3.1x10 ¹⁰		
60000	1-.25	4x10 ⁻⁵ -9.84x0 ⁻⁶	~ 6.2x10 ¹⁰		