

GRIT AND PARTICLE CONVERSION



Abrasive Grit and Particle Conversions

Average Particle Inches	Average Particle Microns	JIS R6001-87		ANSI B74-12 B74-10		FEPA 32GB 33GB		GOST (USSR)	
		Coarser	Finer	Coarser	Finer	Coarser	Finer	Coarser	Finer
0.0929 0.0787 0.0669	2360 200 1700	8 10 12		8 10 12		8 10 12		200	
0.0629 0.0551 0.0492	1600 1400 1250	14		14		14		60 125	
0.0464 0.0393 0.0334	1180 1000 850	16 20		16 20		16 20		100	
0.0314 0.0279 0.0248	800 710 630	24		24		24		80 63	
0.0236 0.0196 0.0157	600 500 400	30 36		30 36		30 36		50 40	
0.0139 0.0124 0.0118	355 315 300	46 54		46 54		46 54		46 32	
0.0098 0.0083 0.0078	250 212 200	60 790		60 70		60 70		25 20	
0.0070 0.0062 0.0059	180 160 150	80 90		80 90		80 90		16	
0.0049 0.0041 0.0039	125 106 100	100 120		100 120		100 120		12 10	
0.0031 0.0031 0.0024	80 75 63	150 180		150 180		150 180		0 150 6	
0.0022 0.00208 0.00204	57 53 52	220	240	220	240	220	230		
0.00196 0.00188 0.00177	50 48 45		280				240	5	
0.00165 0.00157 0.00145	42 40 37		320	280			280	4	
0.00137 0.00133 0.00118	35 34 30		360 400		320			M40	
0.00094 0.00090 0.00086	24 23 22				400		360	M28	
0.00078 0.00070 0.00066	20 18 17		600 700		500		400	M14	
0.00057 0.00055 0.00051	14.5 14 13		800		600		500		
0.00047 0.00045 0.00043	12 11.5 11		1000		800				
0.00037 0.00035 0.00033	9.5 9 8.5		1200				600	M10	
0.00031 0.00027 0.00026	8 7 6.7		1500 2000		1000		800		
0.00023 0.00021 0.00019	6 5.5 5		2500		1200		1000	M7	
0.00015 0.00011 0.000078	4 3 2		3000 4000 6000				1200	M5	
0.000047 0.00003937	1.2 1		8000						

Surface Finish Comparison Table

RMS μ inch	CLA μ inch	PVA μ inch	R _a μ mm	R _T μ mm	R _Z μ mm
1.12	1	6	0.025	0.2	0.16
2.2	2	12	0.05	0.04	0.32
2.7	2.4	16	0.06	0.5	0.38
3.6	3.2	20	0.08	0.6	0.5
4.5	4	25	0.1	0.8	0.6
5.3	5	32	0.12	1	0.75
7.1	6.3	40	0.16	1.25	1
9	8	50	0.2	1.5	1.25
11.2	7.1	63	0.25	2	1.6
14	12.5	80	0.31	2.5	2
18	16	100	0.4	3.2	2.5
22.4	20	125	0.5	4	3.2
28	25	160	0.6	5	4
35.5	31.5	200	0.8	6.3	5
45	40	250	1.0	8	6.3
56	50	320	1.25	10	8
71	63	400	1.6	12.5	10

R_a = DIN Central Line Average
 R_T = Maximum Peak to Trough Height over surface
 R_Z = Average of fine absolute maximum peaks and troughs within the length of 1m.
 RMS = Root Mean Square Avg. Height
 CLA = Centra Line Aveage
 PVA = Peak to Valley Avg. Height

Bore (H11) Tolerance Chart

BORE DIAMETER		H11 TOLERANCE		
Above (mm)	Up to and Including (mm)	Maximum (mm)	Maximum (Inches)	Minimum
3	6	+0.075	+0.0030	0
6	10	+0.090	+0.0035	0
10	18	+0.110	+0.0042	0
18	30	+0.130	+0.0050	0
30	50	+0.160	+0.0060	0
50	80	+0.190	+0.0075	0
80	120	+0.220	+0.0085	0
120	180	+0.250	+0.0100	0
180	250	+0.290	+0.0115	0
250	315	+0.320	+0.0125	0
315	400	+0.360	+0.0145	0
400	500	+0.400	+0.0160	0