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Particle Size Conversion Table

Sieve Designation		Nominal Sieve Opening		
Standard	*Mesh*	*inches*	*mm*	*Microns*
25.4 mm	1 in.	1.00	25.4	25400
22.6 mm	7/8 in.	0.875	22.6	22600
19.0 mm	3/4 in.	0.750	19.0	19000
16.0 mm	5/8 in.	0.625	16.0	16000
13.5 mm	0.530 in.	0.530	13.5	13500
12.7 mm	1/2 in.	0.500	12.7	12700
11.2 mm	7/16 in.	0.438	11.2	11200
9.51 mm	3/8 in.	0.375	9.51	9510
8.00 mm	5/16 in.	0.312	8.00	8000
6.73 mm	0.265 in.	0.265	6.73	6730
6.35 mm	1/4 in.	0.250	6.35	6350
5.66 mm	No.3 1/2	0.223	5.66	5660
4.76 mm	No. 4	0.187	4.76	4760
4.00 mm	No. 5	0.157	4.00	4000
3.36 mm	No. 6	0.132	3.36	3360
2.83 mm	No. 7	0.111	2.83	2830
2.38 mm	No. 8	0.0937	2.38	2380
2.00 mm	No. 10	0.0787	2.00	2000
1.68 mm	No. 12	0.0661	1.68	1680
1.41 mm	No. 14	0.0555	1.41	1410
1.19 mm	No. 16	0.0469	1.19	1190
1.00 mm	No. 18	0.0394	1.00	1000
0.841 mm	No. 20	0.0331	0.841	841
0.707 mm	No. 25	0.0278	0.707	707
0.595 mm	No. 30	0.0234	0.595	595
0.500 mm	No. 35	0.0197	0.500	500
0.420 mm	No. 40	0.0165	0.420	420
0.354 mm	No. 45	0.0139	0.354	354
0.297 mm	No. 50	0.0117	0.297	297
0.250 mm	No. 60	0.0098	0.250	250
0.210 mm	No. 70	0.0083	0.210	210
0.177 mm	No. 80	0.0070	0.177	177

0.149 mm	No. 100	0.0059	0.149	149
0.125 mm	No. 120	0.0049	0.125	125
0.105 mm	No. 140	0.0041	0.105	105
0.088 mm	No. 170	0.0035	0.088	88
0.074 mm	No. 200	0.0029	0.074	74
0.063 mm	No. 230	0.0025	0.063	63
0.053 mm	No. 270	0.0021	0.053	53
0.044 mm	No. 325	0.0017	0.044	44
0.037 mm	No. 400	0.0015	0.037	37

Large sieve openings (1 in. to 1/4 in.) have been designated by a sieve "mesh" size that corresponds to the size of the opening in inches. Small sieve "mesh" sizes of 3 1/2 to 400 are designated by the number of openings per linear inch in the sieve.

The following convention is used to characterize particle size by mesh designation:

- "+" before the sieve mesh indicates the particles are retained by the sieve;
- "-" before the sieve mesh indicates the particles pass through the sieve;
- typically 90% or more of the particles will lie within the indicated range.

For example, if the particle size of a material is described as -4 +40 mesh, then 90% or more of the material will pass through a 4-mesh sieve (particles smaller than 4.76 mm) and be retained by a 40-mesh sieve (particles larger than 0.420 mm). If a material is described as -40 mesh, then 90% or more of the material will pass through a 40-mesh sieve (particles smaller than 0.420 mm).

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