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Particle Size Conversion Table

	Sieve Designation		Nominal Sieve Opening		
	Standard	Mesh	inches	mm	Microns
Discovery Chemistry & Services	25.4 mm	1 in.	1.00	25.4	25400
	22.6 mm	7/8 in.	0.875	22.6	22600
Flavors & Fragrances	19.0 mm	3/4 in.	0.750	19.0	19000
	16.0 mm	5/8 in.	0.625	16.0	16000
Greener Alternatives	13.5 mm	0.530 in.	0.530	13.5	13500
	12.7 mm	1/2 in.	0.500	12.7	12700
Products for the Petrochemical Industry	11.2 mm	7/16 in.	0.438	11.2	11200
	9.51 mm	3/8 in.	0.375	9.51	9510
Phosphoramidites and Reagents	8.00 mm	5/16 in.	0.312	8.00	8000
	6.73 mm	0.265 in.	0.265	6.73	6730
Solvent Center	6.35 mm	1/4 in.	0.250	6.35	6350
	5.66 mm	No. 3 1/2	0.223	5.66	5660
Stable Isotopes	4.76 mm	No. 4	0.187	4.76	4760
	4.00 mm	No. 5	0.157	4.00	4000
Stockroom Reagents	3.36 mm	No. 6	0.132	3.36	3360
	2.83 mm	No. 7	0.111	2.83	2830
Chemical Products	2.38 mm	No. 8	0.0937	2.38	2380
	2.00 mm	No. 10	0.0787	2.00	2000
Learning Center	1.68 mm	No. 12	0.0661	1.68	1680
	1.41 mm	No. 14	0.0555	1.41	1410
Product Guide Request	1.19 mm	No. 16	0.0469	1.19	1190
	1.00 mm	No. 18	0.0394	1.00	1000
Lab Basics Technical Library	0.841 mm	No. 20	0.0331	0.841	841
	0.707 mm	No. 25	0.0278	0.707	707
Concentrations of Acids & Bases	0.595 mm	No. 30	0.0234	0.595	595
	0.500 mm	No. 35	0.0197	0.500	500
Mass Molarity Calculator	0.420 mm	No. 40	0.0165	0.420	420
	0.354 mm	No. 45	0.0139	0.354	354
Normality & Molarity Calculator	0.297 mm	No. 50	0.0117	0.297	297
	0.250 mm	No. 60	0.0098	0.250	250
Particle Size Conversion	0.210 mm	No. 70	0.0083	0.210	210
	0.177 mm	No. 80	0.0070	0.177	177
Properties of Solvents	0.149 mm	No. 100	0.0059	0.149	149
	0.125 mm	No. 120	0.0049	0.125	125
Solution Dilution Calculator	0.105 mm	No. 140	0.0041	0.105	105
	0.088 mm	No. 170	0.0035	0.088	88
Syringe Needle Gauge Chart	0.074 mm	No. 200	0.0029	0.074	74
	0.063 mm	No. 230	0.0025	0.063	63
Wire Gauge Conversion Chart	0.053 mm	No. 270	0.0021	0.053	53
	0.044 mm	No. 325	0.0017	0.044	44
Product Highlights	0.037 mm	No. 400	0.0015	0.037	37
	0.037 mm	No. 400	0.0015	0.037	37

Larger sieve openings (1 in. to 1/4 in.) have been designated by a sieve "mesh" size that corresponds to 1 size of the opening in inches. Smaller 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:

- a "+" before the sieve mesh indicates the particles are retained by the sieve;
- a "-" 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).

This information is also provided on page T848 of the Aldrich 2003-2004 Catalog/Handbook of Fine Chemicals.

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