

Mesh vs. Micron Comparison Chart

Mesh	Microns	Inches	Millimeters	Object
3	6730	0.2650	6.730	
4	4760	0.1870	4.760	
5	4000	0.1570	4.000	Gravel starts at 4.75 mm
6	3360	0.1320	3.360	
7	2830	0.1110	2.830	
8	2380	0.0937	2.380	
10	2000	0.0787	2.000	
12	1680	0.0661	1.680	
14	1410	0.0555	1.410	
16	1190	0.0469	1.190	Eye of a Needle = 1,230 microns
18	1000	0.0394	1.000	
20	841	0.0331	0.841	
25	707	0.0280	0.707	
28	700	0.0280	0.700	
30	595	0.0232	0.595	
35	500	0.0197	0.500	
40	420	0.0165	0.420	
45	354	0.0138	0.354	
50	297	0.0117	0.297	
60	250	0.0098	0.250	Fine Sand
70	210	0.0083	0.210	
80	177	0.0070	0.177	
100	149	0.0059	0.149	
120	125	0.0049	0.125	
140	105	0.0041	0.105	
	100	0.00394	0.100	Beach Sand (100 - 2,000 microns)
170	88	0.0035	0.088	
200	74	0.0029	0.074	Portland Cement
	70	0.00276	0.070	Average Human Hair (70 - 100) / Grain of Salt
230	63	0.0024	0.063	
	55	0.00217	0.055	
270	53	0.0021	0.053	
	50	0.00197	0.500	Remove Visible Particles from Liquid
325	44	0.0017	0.044	Silt (10 - 75)
	40	0.00157	0.040	Lower Limit of Visibility (Naked Eye)
400	37	0.0015	0.037	Plant Pollen
(550)*	25	0.00099	0.025	White Blood Cells / Level to Achieve 'Optical Clarity' in a Liquid
(625)	20	0.00079	0.020	
(1200)	12	0.0005	0.012	
(1250)	10	0.000394	0.010	Talcum Powder / Level to Remove Haze from Liquid / Fertilizer (10 - 1,000 microns) / Mold Spores (10 - 30 microns)
	7	0.000276	0.007	Red Blood Cells (8 - 12 microns)
(2500)	5	0.000197	0.005	Bacteria (0.5 - 20 microns)
(4800)	3	0.000118	0.003	
(5000)	2.5	0.000099	0.0025	Cigarette Smoke & Bacteria (Cocci) = 2 microns
(12000)	1	0.0000394	0.001	Cryptosporidium (1 - 10 microns)

* Mesh numbers in parentheses are too small to exist as actual screen sizes. They are only estimations and are included for reference.

What does mesh size mean? Determining mesh is very simple. Simply count how many openings there are in one inch of screen. The number of openings is the mesh size. An 80-mesh screen means there are 80 openings across one linear inch of screen. A 140-mesh screen has 140 openings, and so on. Therefore, as the mesh number increases, the size of the openings decreases. Note - Mesh size is not a precise measurement of particle size because of the size of the wire used in the screen. Beyond 400 mesh, particle size is normally defined only in "microns." That is because the finer the weave, the closer the wires get together; eventually there is no space between them.

What do the minus (-) and plus (+) plus signs mean when describing mesh sizes and particle distribution tests? To characterize particle size by mesh designation:

- A "+" before the mesh indicates the particles are retained by the sieve,
- A "-" before the mesh indicates the particles pass through the sieve, and
- Typically, 90%+ of the particles will lie within the indicated range.

For example, if the particle size of a material is described as -10 / +30 mesh, then 90% or more of the material will pass through a 10-mesh sieve (particles smaller than 2.0 mm) but will be retained by a 30-mesh sieve (particles larger than 0.595 mm). If the material is described as -30 mesh, then 90% or more of the material will pass through a 30-mesh sieve (particles smaller than 0.595 mm).