

Filters, Water & Instrumentation, Inc.

Particle Size and Concentration Conversions



Pounds of Anything Per Day at Various Concentrations													
Water Flow Rate	Water GPD	Water Pounds per Day	Concentration in PPM										
			0.5	1.0	1.5	2.0	2.5	3.0	4.0	5.0	10.0	50.0	100
1	1,440	11,991	0.01	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.1	0.6	1.2
5	7,200	59,954	0.03	0.06	0.09	0.12	0.15	0.18	0.24	0.30	0.6	3.0	6.0
10	14,400	119,909	0.06	0.12	0.18	0.24	0.30	0.36	0.48	0.60	1.2	6.0	12.0
20	28,800	239,818	0.12	0.24	0.36	0.48	0.60	0.72	0.96	1.20	2.4	12.0	24.0
30	43,200	359,726	0.18	0.36	0.54	0.72	0.90	1.08	1.44	1.80	3.6	18.0	36.0
40	57,600	479,635	0.24	0.48	0.72	0.96	1.20	1.44	1.92	2.40	4.8	24.0	48.0
50	72,000	599,544	0.30	0.60	0.90	1.20	1.50	1.80	2.40	3.00	6.0	30.0	60.0
100	144,000	1,199,088	0.60	1.20	1.80	2.40	3.00	3.60	4.80	6.00	12.0	60.0	119.9
200	288,000	2,398,176	1.20	2.40	3.60	4.80	6.00	7.19	9.59	11.99	24.0	119.9	239.8
300	432,000	3,597,264	1.80	3.60	5.40	7.19	8.99	10.79	14.39	17.99	36.0	179.9	359.7
400	576,000	4,796,352	2.40	4.80	7.19	9.59	11.99	14.39	19.19	23.98	48.0	239.8	479.6
500	720,000	5,995,440	3.00	6.00	8.99	11.99	14.99	17.99	23.98	29.98	60.0	299.8	599.5
750	1,080,000	8,993,160	4.50	8.99	13.49	17.99	22.48	26.98	35.97	44.97	89.9	449.7	899.3
1,000	1,440,000	11,990,880	6.00	11.99	17.99	23.98	29.98	35.97	47.96	59.95	119.9	599.5	1199.1
1,250	1,800,000	14,988,600	7.49	14.99	22.48	29.98	37.47	44.97	59.95	74.94	149.9	749.4	1498.9
1,500	2,160,000	17,986,320	8.99	17.99	26.98	35.97	44.97	53.96	71.95	89.93	179.9	899.3	1798.6
1,750	2,520,000	20,984,040	10.49	20.98	31.48	41.97	52.46	62.95	83.94	104.92	209.8	1049.2	2098.4
2,000	2,880,000	23,981,760	11.99	23.98	35.97	47.96	59.95	71.95	95.93	119.91	239.8	1199.1	2398.2

Pounds of Anything - Chart Above

We initially used the above chart to determine the size of Ozonators in Pounds per day when we had a known flow rate in Gallons per Minute(GPM) and/or gallons per day of water consumed. We have since decided to use the chart for other very practical reasons.

If we happen to know a concentration or a suspected concentration of something in water, the chart gives us a common sense way to determine if our assumptions are correct.

Assume a water flow rate of 100 GPM and a contaminant concentration of 10 PPM. After one full day(24 Hours) of flow we will have seen 1,199,088 pounds of water. Running down the 10.0 PPM Concentration row we see that we would have 12 pounds of the contaminant. One gallon is 8.327(See Conversion Factors on the other side of this sheet) pounds, so we would have 1-1/2 Gallons of contaminant. Is this practical? Is what we have selected big enough to remove that much material? Do these assumptions make sense?

Try this chart. It is disarmingly useful.

Particle Size Conversions - Mesh/Micron Equivalents							
US Mesh	Inches	Microns	Millimeters	US Mesh	Inches	Microns	Millimeters
3	0.2650	6730	6.730	40	0.0165	420	0.420
4	0.1870	4760	4.760	45	0.0138	354	0.354
5	0.1570	4000	4.000	50	0.0117	297	0.297
6	0.1320	3360	3.360	60	0.0098	250	0.250
7	0.1110	2830	2.830	70	0.0083	210	0.210
8	0.0937	2380	2.380	80	0.0070	177	0.177
10	0.0787	2000	2.000	100	0.0059	149	0.149
12	0.0661	1680	1.680	120	0.0049	125	0.125
14	0.0555	1410	1.410	140	0.0041	105	0.105
16	0.0469	1190	1.190	170	0.0035	88	0.088
18	0.0394	1000	1.000	200	0.0029	74	0.074
20	0.0331	841	0.841	230	0.0024	63	0.063
25	0.0280	707	0.707	270	0.0021	53	0.053
30	0.0232	595	0.595	325	0.0017	44	0.044
35	0.0197	500	0.500	400	0.0015	37	0.037

Particle Size Conversions - Chart Above

This is a standard but handy chart which shows equivalencies between US Mesh, Inches, Microns and Millimeters. Different Filters use different units for ratings.

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