SIEVE DESIGNATION TO OPENING SIZE CORRELATION

The following table provides a cross-reference between sieve designations and their related sieve opening sizes.

U.S. Std. Sieve Designation	Alt. Sieve Designation	Opening mm	Appr. Open. inches	U.S. Std. Sieve Designation	Alt. Sieve Designation	Opening mm	Appr. Open. Inches
107.6 mm	4.24 in	107.6	4.24	2.83 mm	No. 7	2.83	0.111
101.6 mm	4 in	101.6	4.00	2.38 mm	No. 8	2.38	0.0937
90.5 mm	3 ½ in	90.5	3.5	2.00 mm	No. 10	2.00	0.0787
76.1 mm	3 in	76.1	3.00	1.68 mm	No 12	1.68	0.0661
64.0 mm	2 ½ in	64.0	2.5	1.41 mm	No. 14	1.41	0.0555
53.8 mm	2.12 in	53.8	2.12	1.19 mm	No. 16	1.19	0.0469
50.8 mm	2 in	50.8	2.00	1.00 mm	No. 18	1.00	0.0394
45.3 mm	1 ¾ in	45.8	1.75	841 µ	No. 20	0.841	0.0331
38.1 mm	1 ½ in	38.1	1.50	707 µ	No. 25	0.707	0.0278
32.0 mm	1 ¼ in	32.0	1.25	595 µ	No. 30	0.595	0.0234
26.9 mm	1.06 in	26.9	1.06	500 µ	No. 35	0.500	0.0197
25.4 mm	1 in	25.4	1.00	420 µ	No. 40	0.420	0.0165
22.6 mm	0.875 in	22.6	0.875	354 µ	No. 45	0.354	0.0139
19.0 mm	¾ in	19.0	0.750	297 µ	No. 50	0.297	0.0117
16.0 mm	0.625 in	16.0	0.625	250 µ	No. 60	0.250	0.0098
13.5 mm	0.530 in	13.5	0.530	210 µ	No. 70	0.210	0.0083
12.7 mm	½ in	12.7	0.500	177 µ	No. 80	0.177	0.0070
11.2 mm	0.4375 in	11.2	0.438	149 µ	No. 100	0.149	0.0059
9.51 mm	0.375 in	9.51	0.375	125 µ	No. 120	0.125	0.0049
8.00 mm	0.3125 in	8.00	0.312	105 µ	No. 140	0.105	0.0041
6.73 mm	0.265 in	6.73	0.265	88 µ	No. 170	0.088	0.0035
6.35 mm	¼ in	6.35	0.250	74 µ	No. 200	0.074	0.0029
5.66 mm	No. 3 ½	5.66	0.223	63 µ	No. 230	0.063	0.0025
4.76 mm	No. 4	4.76	0.187	53 µ	No. 270	0.053	0.0021
4.00 mm	No. 5	4.00	0.157	44 µ	No. 325	0.044	0.0017
3.36 mm	No 6	3.36	0.132	37 µ	No. 400	0.037	0.0015

Geotextile specifications often refer to either the sieve opening size or the sieve number when designating the desired maximum allowed pore opening size, i.e., the Apparant Opening Size or AOS. For example, a specification may read “AOS < 0.600 mm” or “AOS [max] < Opening of a U.S. Standard Sieve No. 30”. These expressions are both clear in their meaning and identical in their results. Infrequently, we encounter specifications in which the values, stated as U.S. Std. Sieve Designations, e.g., No. 30, are listed under a column heading of “MARV”, an acronym for “Mininimum Average Roll Value”. In essence, these specifications could be interpreted to mean “AOS > No. 30 Sieve” or “AOS > Opening of a U.S. Standard Sieve No. 30”. While the intent of the specification writer is believed to mean that the AOS must be smaller than the opening of the No. 30 Sieve [to reduct or prevent soil piping throught the geotextile], this expression leaves interpretation open to discussion. To avoid misinterpretation within geotextile specifications, we suggest all AOS specifications be written using the actual opening size desired, e.g., “< 0.600 mm”, in the value location, rather than using the sieve designation.