



Table 1 Porosities and hydraulic conductivities for various rocks and sediments.

Geological material	Grain size/mm	Porosity (%)	Hydraulic conductivity/m per day
Unconsolidated sediments			
clay	0.0005 to 0.002	45 to 60	less than 10^{-2}
silt	0.002 to 0.06	40 to 50	10^{-2} to 1
sand	0.06 to 2	30 to 40	1 to 5×10^2
gravel	2 to 64	25 to 35	5×10^2 to 1×10^4
Consolidated sedimentary rocks			
shale	fine	5 to 15	5×10^{-8} to 5×10^{-6}
sandstone	medium	5 to 30	10^{-4} to 10^*
limestone	variable	10^{-1} to 30^* (solution porosity)	10^{-5} to 10^*
Igneous and metamorphic rocks			
basalt	fine	10^{-3} to 1 (up to 50 if vesicular)	3×10^{-4} to 3^*
granite	coarse	10^{-4} to 1 (up to 10 if fractured)	3×10^{-4} to 1^*
slate	fine	10^{-3} to 1	10^{-8} to 10^{-5}
schist	medium	10^{-3} to 1	10^{-7} to 10^{-1}
*Values at the higher end of the range occur where there is secondary porosity or permeability.			

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