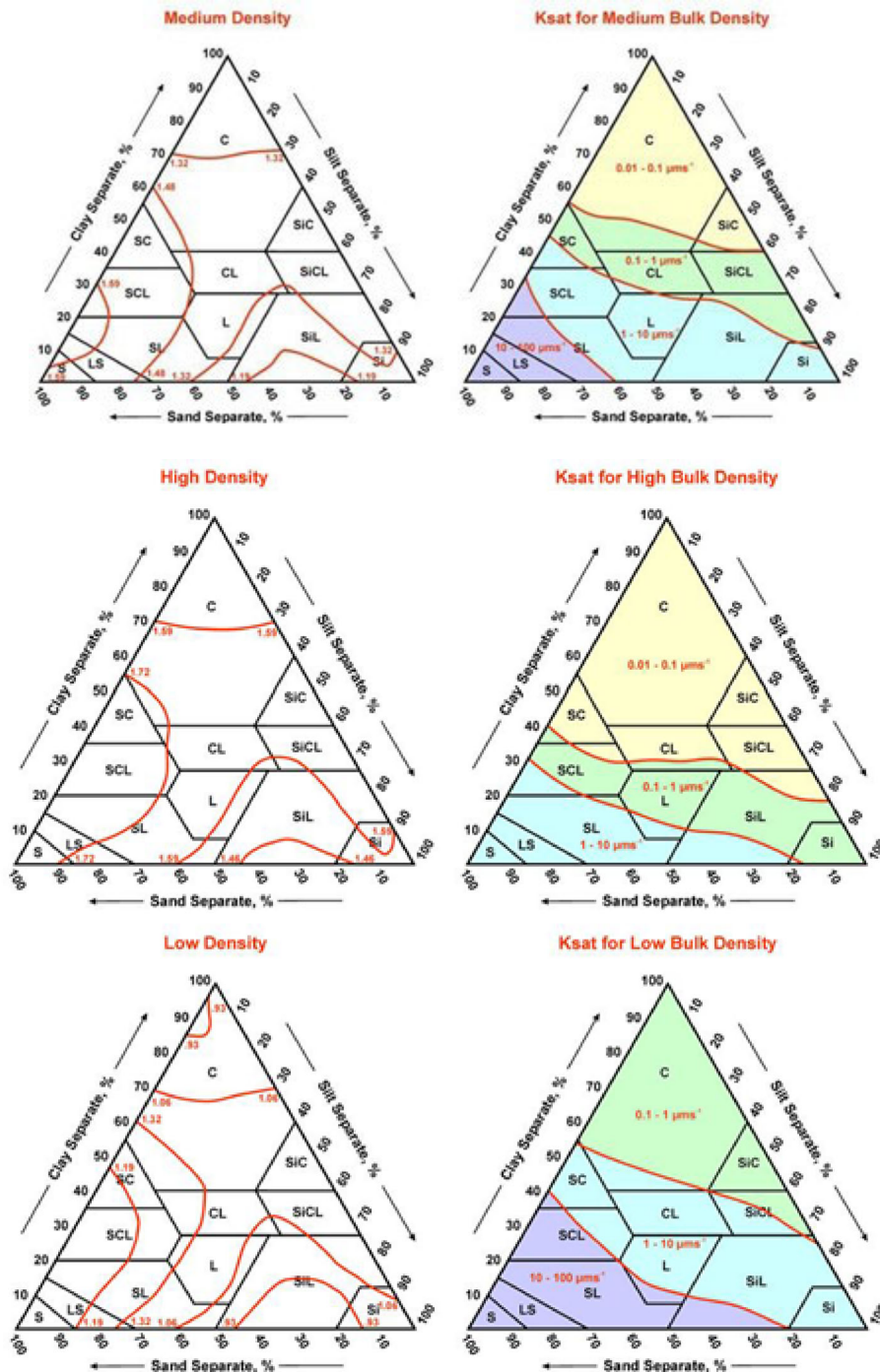


618.86 Guide for Estimating Saturated Hydraulic Conductivity from Soil Properties

Estimate saturated hydraulic conductivity (K_{sat}) from soil texture by first selecting the bulk density class of medium, low, or high. Then use the corresponding texture triangle to select the range of saturated hydraulic conductivity in $\mu\text{m s}^{-1}$. Overrides follow the texture triangles.



If overriding conditions (listed below) exist, use this table to estimate Ksat instead of the texture triangles. A single property statement is sufficient for an override from the texture guides.

Overriding Condition	Saturated Hydraulic Conductivity ($\mu\text{m s}^{-1}$)
All fragmental, cindery, or pumiceous.	≥ 100
Many medium or coarser vertical pores that extend through the layer.	≥ 100
Medial-pumiceous, medial-skeletal, ashy-pumiceous, ashy-skeletal, or hydrous-pumiceous material that is very friable, friable, soft, or loose.	10 – 100
When material is moderately moist or wetter, structure is moderate or strong granular, strong blocky, or prismatic smaller than very coarse; no stress surfaces or slickensides.	10 – 100
Common medium or coarser vertical pores extend through the layer.	10 – 100
Strong very coarse blocky or prismatic structure and no stress surfaces or slickensides.	1 – 10
35 percent or more clay that is soft, slightly hard, very friable or friable; no stress surfaces or slickensides and the clay activity is in the range of the subactive class (i.e. cation exchange capacity divided by noncarbonate clay equals less than 0.24 after subtracting the quantity [2 times (percent organic carbon times 1.7)])	1 – 10
Few stress surfaces, few slickensides, or both.	0.1 – 1
Massive and very firm or extremely firm or weakly cemented.	0.1 – 1
Continuously moderately cemented.	0.1 – 1
Common or many stress surfaces or common or many slickensides.	0.01 – 0.1
Continuously indurated or very strongly cemented.	< 0.01