

Guidelines for soil description

Properties	Classification					
Color	Matrix color	dominant (background) color >50% area in a soil mass				
	Mixed color	When 2 or more colors in a soil in more or less equal proportion				
	Mottle color	When the color occupies less than 40% area				
	Mottle color Notations	Mottle can be described on the basis of three notations				Examples
	Abundance	Few (f) < 2% of area	Common (c) 2- < 20% area	Many (m) 20-40% area	c3P, c1D	
	Size	Fine(1) <2mm	Medium (2) 2-<5 mm	Coarse (3) 5-<20 mm		
	Contrast	Faint (F)	Distinct (D)	Prominent (P)		
STRUCTURE Grade: Degree of distinctness of peds. Type: Shape or form and arrangement pattern of peds. Class: Size of peds	Grade					
	Structureless (0)	Ploughed or no evidence of structure found				
	Weak (1)	When disturbed 80% natural peds are broken easily				
	Moderate (2)	When disturbed 50-60% natural peds are broken only				
	Strong (3)	When disturbed 20% natural peds are broken only				
	Example: <i>1vc pr</i>					
	Type	Class (Size of peds)				
	Platy (pl)	Very Fine(vf) <1mm dia	Fine (f) 1-2mm dia	Medium(m) 2-5mm dia	Coarse (c) 5-10 mm dia	Very Coarse(vc) >10mm dia
	Prismatic (pr)	<10mm dia	10-20mm dia	20-50mm dia	50-100mm dia	>100mm dia
	Angular (abk)& Subangular (sbk) Blocky	<5mm dia	5-10 mm dia	10-20mm dia	20-50mm dia	>50mm dia
	Spheroidal (sp)	<1mm dia	1-2mm dia	2-5mm dia	5-10 mm dia	>10mm dia
Cutan	Distribution	Continuous (c)	Broken (b)	Patchy (p)	Example C1g/vp, c3dg/vhp	
	Thickness	Thin (1)	Mod Thick (2)	Thick (3)		
	Nature	Grey (g)	Dark Grey (dg)	Dark brown (db)		
	Location	Vertical (v)	Horizontal (h)	Pores (p)		
Consistency	Dry state					
	Loose (dl)	Soft (ds)	Slightly hard (dsh)	Hard (dh)	Extremely hard (deh)	
	Moist state					
	Loose (ml)	Very friable (mvfr)	friable (fr)	Firm (mfi)	Very Firm (mvfi)	
	Wet state					
	Stickiness	Non sticky (wso)	Slightly sticky (wss)	Sticky (ws)	Very Sticky (wvs)	
	Plasticity	Nonplastic (wpo)	Slightly plastic (wsp)	Plastic (wp)	Very Plastic (wvp)	
Example: <i>dsh, mfr, wss, wsp</i>						
Pores	Abundance	Few (f) 1-3/inch ²	Common (c) 4-14/inch ²	Many (m) >14/ inch ²		
	Diameter	Macro (0) <0.075 mm	Very fine(l) 0.075-1.0 mm	Fine(2) 1-2 mm	Medium (3) 2-5 mm	Coarse (4) >5 mm
Example: <i>ml, c1 & f2</i>						

Roots	Size (diameter)				Example <i>m1, f2, c3</i>
	Very fine (vf) <1 mm	Fine(f) 1-2 mm	Medium (m) 2-5 mm	Coarse (c) >5 mm	
	Number (abundance)				
	Few (1)	< 10/dm ²	< 10/dm ²	1/dm ²	1/dm ²
	Common (2)	10-100/dm ²	10-100/dm ²	1-10/dm ²	1-5/dm ²
	Many (3)	>100/ dm ²	>100/ dm ²	>10/ dm ²	>10/ dm ²
Calcareousness	Non calcareous (e0)	Slightly calc (es)	Strongly calc (ev)		
Horizon Boundary	Width				
	Abrupt (a) < 2 mm	Clear (c) 2-5 mm	Gradual (g) 5-12 mm	Diffuse (d) >12 mm	
	Topography (Cross-sectional shape of the contact between horizons)				
	Smooth (s)	Wavy (w) Width of undulation is > than depth	Irregular (i) Depth of undulation is > than width	Broken (b) Discontinuous horizons	
Example: aw, cs					
Texture	Sand	Sand	S	Coarse textured soil	Sandy soil
		Loamy sand	LS		
	Sandy loam	Sandy loam	SL	Moderately coarse textured soil	Loamy soil
		Fine sandy loam	FSL		
		very fine sandy loam	VFSL		
	Silt		S	Medium textured soil	Loamy soil
	Loam		L		
	Silt loam		SiL		
	Sandy clay loam		SCL		
	Silty Clay loam		SiCL	Moderately fine textured soil	Loamy soil
	Clay loam		CL		
	Sandy clay		SC		
	Silty clay		SiC	Fine textured soil	Clayey soil
Clay		C			
pH soil reaction	Extremely acid	<4.5	Mildly alkaline	7.4-7.8	
	Very strongly acid	4.5-5.0	Moderately alkaline	7.9-8.4	
	Strongly acid	5.1-5.5	Strongly alkaline	8.5-9.0	
	Medium acid	5.6-6.0	Very strongly alkaline	>9.0	
	Slightly acid	6.1-6.5			
	Neutral	6.6-7.3			

One dm² = a square that is 10 cm on a side, or 100 cm².

HORIZON BOUNDARY - Record Distinctness and Topography of horizon boundary. Distinctness is the distance through which one horizon grades into another. Topography is the lateral undulation and continuity of the boundary between horizons. A complete example is: clear, wavy, or C,W.

ROOTS (and PORES) – SIZE - See the following graphic for size.

Size Class	Code		Diameter	Soil Area Assessed ¹
	Conv.	NASIS		
Very Fine	vf	VF	< 1 mm	1 cm ²
Fine	f	F	1 to < 2 mm	1 cm ²
Medium	m	M	2 to < 5 mm	1 dm ²
Coarse	co	C	5 to < 10 mm	1 dm ²
Very Coarse	vc	VC	≥ 10 mm	1 m ²

¹ One dm² = a square that is 10 cm on a side, or 100 cm².