SAMPLE REQUIREMENTS FOR SOIL TESTING

	Test	Suitable sample type required	Suitable soil types	Mass required based on			Comments
				Fine Grained	Medium Grained	Coarse Grained	
Classification Tests	Water / moisture content	D, U, (B)	C, S, G	50 g	350 g	4 kg	Use of B samples not preferred as of lower quality.
	Atterberg limits (LL/LP)	D, U, (B)	C, S	500 g	1 kg	2 kg	
	Density (linear)	U	C, S	500 g	1 kg	2 kg	
	Particle size description (PSD)	D, B, (U)	All	150 g	2.5 kg	17 kg	U sample suitable for fine soils.
Compaction Tests	California bearing ratio (CBR)	U*, B	All	6 kg	6 kg	12 kg	
	Compaction (heavy/4.5 kg)	B	All	10 kg	25 kg	50 kg	
	Compaction (light/2.5 kg)	B	All	10 kg	25 kg	50 kg	
	Compaction (vibrating hammer)	B	All	50 kg	50 kg	50 kg	
Strength Tests	Undrained unconsolidated triaxial (UU)	U	C	6 kg	6 kg	12 kg	
	Consolidated undrained triaxial (CU)	U	C	6 kg	6 kg	12 kg	
	Consolidated drained triaxial (CD)	U	C	6 kg	6 kg	12 kg	
	Laboratory vane	U	C	100 mm diameter >100 mm long			
	Small shear box	U*, B	All	1 kg	2 kg	n/a	
	Large shear box	U*, B	All	35 kg	35 kg	35 kg	
Consolidation	Oedometer consolidation	U	C	500 g	1 kg	2 kg	
Chemical	pH and sulphate	D, B, U	All	150 g	600 g	3.5 kg	

Definitions:

The laboratory definitions of 'fine' and 'coarse' soil differ from those used for engineering soil descriptions.

Fine grained soil = not more than 10% >2 mm (includes clay, silt and sand)

Medium grained soil = some >2 mm, not more than 10% >20mm (includes fine and medium gravel)

Coarse grained soil = some >20 mm, not more than 10% >37.5% includes coarse gravel)

C = CLAY/SILT, S =SAND, G = GRAVEL

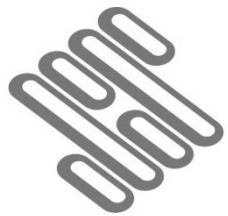
Sample Types:

U = Undisturbed sample (e.g. U100 or similar)

B = Bulk distributed sample

D = Small disturbed sample

U* = samples in test specific moulds



Notes: This guide assumes 10kg of sample obtained per bulk bag, therefore those highlighted in red require more than 1 bulk bag (e.g. 35kg).