

Soil Classification

Civil Engineering

What the Unified group symbols tell you.

Unified Soil Classification. Letters describe grading and plasticity.

Group	What it is	Behaviour
GW · GP	Clean gravel	Free draining, strong
SW · SP	Clean sand	Free draining, strong
SM · SC	Silty or clayey sand	Drainage falls with fines
ML · MH	Silt	Frost and erosion prone
CL · CH	Clay, low then high LL	Low permeability, shrinks
OL · OH · Pt	Organic soil and peat	Compressible, avoid loading

Educational reference. Classification sets expectations only. Design values come from testing and a qualified engineer.