

Table C3-2 Minimum Densities for Design Loads from Materials

Material	Density (lb/ft ³)	Material	Density (lb/ft ³)
Aluminum	170	Glass	160
Bituminous products		Gravel, dry	104
Asphaltum	81	Gypsum, loose	70
Graphite	135	Gypsum, wallboard	50
Paraffin	56	Ice	57
Petroleum, crude	55	Iron	
Petroleum, refined	50	Cast	450
Petroleum, benzine	46	Wrought	480
Petroleum, gasoline	42	Lead	710
Pitch	69	Lime	
Tar	75	Hydrated, loose	32
Brass	526	Hydrated, compacted	45
Bronze	552	Masonry, ashlar stone	
Cast-stone masonry (cement, stone, sand)	144	Granite	165
Cement, portland, loose	90	Limestone, crystalline	165
Ceramic tile	150	Limestone, oolitic	135
Charcoal	12	Marble	173
Cinder fill	57	Sandstone	144
Cinders, dry, in bulk	45	Masonry, brick	
Coal		Hard (low absorption)	130
Anthracite, piled	52	Medium (medium absorption)	115
Bituminous, piled	47	Soft (high absorption)	100
Lignite, piled	47	Masonry, concrete ^a	
Peat, dry, piled	23	Lightweight units	105
Concrete, plain		Medium weight units	125
Cinder	108	Normal weight units	135
Expanded-slag aggregate	100	Masonry grout	140
Haydite (burned-clay aggregate)	90	Masonry, rubble stone	
Slag	132	Granite	153
Stone (including gravel)	144	Limestone, crystalline	147
Vermiculite and perlite aggregate, nonload-bearing	25–50	Limestone, oolitic	138
Other light aggregate, load-bearing	70–105	Marble	156
Concrete, reinforced		Sandstone	137
Cinder	111	Mortar, cement or lime	130
Slag	138	Particleboard	45
Stone (including gravel)	150	Plywood	36
Copper	556	Riprap (not submerged)	
Cork, compressed	14	Limestone	83
Earth (not submerged)		Sandstone	90
Clay, dry	63	Sand	
Clay, damp	110	Clean and dry	90
Clay and gravel, dry	100	River, dry	106
Silt, moist, loose	78	Slag	
Silt, moist, packed	96	Bank	70
Silt, flowing	108	Bank screenings	108
Sand and gravel, dry, loose	100	Machine	96
Sand and gravel, dry, packed	110	Sand	52
Sand and gravel, wet	120	Slate	172
Earth (submerged)		Steel, cold-drawn	492
Clay	80	Stone, quarried, piled	
Soil	70	Basalt, granite, gneiss	96
River mud	90	Limestone, marble, quartz	95
Sand or gravel	60	Sandstone	82
Sand or gravel and clay	65	Shale	92
		Greenstone, hornblende	107