

**CELLULAR CONCRETE
STRENGTH / DENSITY CHART**

THESE TYPICAL DENSITIES AND STRENGTHS MATERIAL WEIGHTS AND MEASURES ILLUSTRATE THE FLEXIBILITY OF THE CELLULAR CONCRETE SYSTEM. CONTACT YOUR CELLULAR CONCRETE REPRESENTATIVE FOR MIX DESIGN ASSISTANCE

TYPICAL NEAT CEMENT (NO SAND) DENSITIES AND STRENGTHS

The following chart illustrates the various typical properties of **Weight Density** (lb./c.f.), **Compressive Strength**, (psi), and **Thermal Conductivity** values attainable with various volumes of preformed foam additions to Neat Cement Mixes.

Typical Values			
Wet Cast Density lb/ft³	Dry Density lb/ft³	Compressive Strength * (28 Days) lb/in²	"k" Thermal** Conductivity Btu in/h ft² °F
20	16	50	0.54
25	20	80	0.60
30	25	140	0.67
35	29	210	0.76
40	34	330	0.87
45	38	450	0.98
50	43	640	1.06
55	47	790	1.20
60	51	930	1.33

*The compressive strengths shown are approximate. As with ordinary concrete, the strength at any given density and mix proportion will also vary with the type of cement and the final water content of the mix. Substantial increases in strength will result by reduction of the w/c ratio, such as is possible with efficient mixing equipment and by curing in low-pressure steam. Other admixtures such as foam compatible dispersing agents and water reducing agents may contribute to strength increases.

**Reference: National Bureau of Standards Data from "Insulating Concretes", ACI Journal (Nov. 1956)

Typical Mix Designs Illustrated above are based on a water/cement Ratio of 0.50
Method of ASTM C 495 used for compressive strength testing of Lightweight Insulating Concrete

Actual properties will depend on cement used, curing conditions and other variables as dictated by job conditions.

CELLULAR CONCRETE STRENGTH / DENSITY CHART

THESE TYPICAL MATERIAL DENSITIES AND STRENGTHS ILLUSTRATE THE FLEXABILITY OF THE CELLULAR CONCRETE SYSTEM.
CONTACT YOUR CELLULAR CONCRETE LLC REPRESENTATIVE FOR MIX DESIGN ASSISTANCE.

SAND & CEMENT GROUT MIXES

The following chart illustrates the various typical properties of **Weight Density** (lb./ft³), **Compressive Strength**, (psi), and **Thermal Conductivity** values attainable in Sand / Cement Mixes.

Typical Values

Wet Cast Density lb/ft ³	Dry Density lb/ft ³	Compressive Strength * (28 days) lb/in ²	"k" Thermal ** Conductivity Btu in/h ft ² °F
90	85	400 - 500	3.30
95	90	750 - 1,000	3.70
100	95	1000 - 1,500	4.10
105	100	1,500 - 2,000	4.50
110	105	2,000 - 2,500	5.00
115	110	2,500 - 3,000	5.50
120	115	3,000 - 3,500	6.00
125	120	3,500 - 4,000	6.60

*The compressive strengths shown are approximate. As with ordinary concrete, the strength at any given density and mix proportion will also vary with the type of cement, the quality and fineness of the sand and the final water content of the mix. Substantial increases in strength will result by reduction of the w/c ratio, such as is possible with efficient mixing equipment and by curing in low-pressure steam. Other admixtures such as foam compatible dispersing agents and water reducing agents may contribute to strength increases.

**Reference: National Bureau of Standards Data from "Insulating Concretes", ACI Journal (Nov. 1956)

Actual properties will depend on cement used, curing conditions and other variables as dictated by job conditions. The above typical mix designs are based on a water / cement ration of 0.53

FC716-0702