



**AERLITE™**

AERLITE foam liquid concentrate is a hybrid formula that takes high performing strength attributes of the protein products and combines them with the fluidity and flexibility found in the straight synthetic products. The AERLITE family of foaming agents, most commonly used in geotechnical applications, produces a lightweight cellular concrete when combined with a cement slurry.

**Wet Cast Density Compressive Strength**  
20 pcf to 120 pcf 20 psi to 3,000 psi



**AERLITE - iX™**

AERLITE-iX is the new generation of foam technology. The fully synthetic foam liquid concentrate in the AERLITE family of foaming agents is engineered to produce a more flexible bubble structure which allows for extended pumping distances and increased lift heights. AERLITE-iX is predominantly used in geotechnical construction applications.

**Wet Cast Density Compressive Strength**  
20 pcf to 120 pcf 20 psi to 3,000 psi



**AQUAERiX™**

AQUAERiX is an advanced, patented, synthetic foaming agent that utilizes an open-cell technology. AQUAERiX bubbles merge together creating a capillary-like structure allowing water to pass through. When mixed with a cement slurry, AQUAERiX produces a pervious lightweight cellular concrete used in geotechnical applications where increased drainage and/or reduced buoyancy force is important.

**Wet Cast Density Compressive Strength**  
20 pcf to 50 pcf 50 psi to 500 psi



**MEARLCRETE™**

MEARLCRETE is a traditional protein based foam liquid concentrate. Foam technology using a protein based formula which has been around since the 1940's. Protein formulas produce a rigid bubble structure which allows for higher compressive strengths, reduces lift heights and limits pumping distances. MEARLCRETE has a UL rating and FM approvals, and is predominantly used in the roofing industry.

**Wet Cast Density Compressive Strength**  
25 pcf to 120 pcf 50 psi to 3,000 psi



**AERFLOW / AQUAFLOW**

concentrate formulated for the production of controlled low strength material (CLSM), more commonly known as flowable fill or flow fill. 3 oz of AERFLOW per cubic yard of finished concrete will increase the slump of the initial mix from 1.5 inches to 7-9 inches. Yields can be increased by 20-25%.

**Wet Cast Density Compressive Strength**  
100 pcf to 120 pcf 50 psi to 200 psi



**ARX-TRANSPORT**

ARX-Transport is a synthetic is a proprietary liquid foam concentrate engineered to produce a pre-formed foam to transport solid materials such as mine tailings, crusher fines, or sand, either through a pipeline or for large void fill. Using foam technology as a transport medium dramatically reduces the amount of water needed to move materials compared to traditional methods, reducing dewatering.



The Aerix Industries™ family of foam liquid concentrates can be customized to meet your specific project requirements.

In a marketplace of traditional methods, cellular concrete and foam technology is the perfect alternative to solve your unique project challenges



**Aerix Industries™**  
**Engineering Solutions for Project Savings**

**Aerix Industries™**

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**Aerix Industries™**

Advanced Engineered Foam Solutions

# CELLULAR CONCRETE STRENGTH/DENSITY CHART

## PRODUCTION / BATCHING

### TYPICAL NEAT CEMENT MIXES

### TYPICAL VALUES

CAST DENSITY		TYPICAL COMPRESSIVE STRENGTH AT 28 DAYS		PORTLAND CEMENT		WATER		FOAM VOLUME	
lb/ft <sup>3</sup>	kg/m <sup>3</sup>	psi	MPa	lb/yd <sup>3</sup>	kg/m <sup>3</sup>	gal	L	ft <sup>3</sup> /yd <sup>3</sup>	m <sup>3</sup> /m <sup>3</sup>
20	320	50	0.34	328	195	20	98	22.7	0.84
25	400	80	0.55	420	249	25	125	21.5	0.80
30	481	140	0.97	512	304	31	152	20.3	0.75
35	561	210	1.45	603	358	36	179	19.1	0.71
40	641	330	2.28	695	412	42	206	17.9	0.66
45	721	450	3.10	787	467	47	234	16.7	0.62
50	801	640	4.41	878	521	53	260	15.5	0.57
55	881	790	5.45	970	575	58	288	14.3	0.53
60	961	930	6.41	1062	630	64	315	13.1	0.49

### SAND/CEMENT GROUT MIXES

### TYPICAL VALUES

CAST DENSITY		TYPICAL COMPRESSIVE STRENGTH AT 28 DAYS		PORTLAN CEMENT		SAND		WATER		FOAM VOLUME	
lb/ft <sup>3</sup>	kg/m <sup>3</sup>	psi	MPa	lb/yd <sup>3</sup>	kg/m <sup>3</sup>	lb	kg/m <sup>3</sup>	gal	L	ft <sup>3</sup> /yd <sup>3</sup>	m <sup>3</sup> /m <sup>3</sup>
90	1492	400	2.76	512	304	1640	973	33	162	10.1	0.38
95	1522	750	5.17	542	322	1730	1026	35	171	9.1	0.34
100	1602	1000	6.89	570	338	1815	1077	37	181	8.2	0.30
105	1682	1500	10.34	600	356	1915	1136	38	196	7.3	0.27
110	1762	2000	13.79	630	374	2010	1192	40	199	6.4	0.24
115	1842	2500	17.24	658	390	2100	1246	42	208	5.4	0.20
120	1922	3000	20.68	688	408	2190	1299	44	217	4.5	0.17
125	2002	3500	24.13	714	424	2280	1353	46	226	3.5	0.13

These material weights and measurements are for one cubic yard or cubic meter of cellular concrete

- Typical Mix designs illustrated above are based on a water/cement ratio of 0.50 or the dry sand/cement ratio listed in the chart.
- ASTM C 495 is used for compressive strength testing of lightweight cellular concrete.

- Final properties will depend on cement used, curing conditions and other variables as dictated by jobsite conditions.

These charts illustrate the various typical properties of weight/density and compressive strength values attainable with various volumes of pre-formed foam when added to neat cement or sand/cement mixes.

Preformed foam is produced using specialty foam generating equipment and the Aerix Industries™ dynamic product line of foam liquid concentrates. Foam generators can be sized for any production rate and are for use with either continuous or batch mixing systems. With pressure tank generating systems, foam liquid concentrate and water are premixed in the tank. The solution is then discharged from the pressurized tank



placing equipment, continuous foam delivery is desired, or the volumes of foam required are very large. Aerix Industries™ Auto-Foam Generator (AFG) automatically blends the foam liquid concentrate with water and compressed air in fixed proportions. The AFG continuously siphons the foaming agent directly from the container. The liquid foam concentrate is metered and blended with water to produce a premixed solution



through the foam-making nozzle. No additional water pump is required. The process is completed by air pressure alone. Pressure tanks are supplied in sizes from 30 - 200 gallon capacity to accommodate the project size. Pressure tank generating systems are optimal for operations where batching equipment is utilized. It is very cost effective when relatively small quantities of foam are required.

at the proper ratio. This solution is then pressurized and balanced with an outside air source. Air and the premixed solution are then metered through a foam nozzle, whose output can be varied by the AFG. The nozzle is designed for the production of a fine, micro-bubbled foam of a specific density and quantity. The AFG produces the highest quality most stable preformed foam in the industry. Aerix Industries™ also manufactures a state-of-the-art portable lab foam generator for producing accurate mix design results in the laboratory.

Continuous generating systems are optimal when used in conjunction with continuous concrete mixing and

## TYPICAL APPLICATIONS



### GEOTECHNICAL

- Annular Grouting
- Bridge Approach Backfill
- Utility Backfill
- Retaining Wall Backfill
- Load Reducing Backfill
- Roadway Subbase
- Pipeline/Tank Abandonment
- Pervious Lightweight Concrete



### MINING

- Annular Applications
- Ground Support/Ventilation
- Material Transport
- Mine Backfill/ Void Space
- Reclamation



### ROOFING & FLOORS

- Roof Decks
- Flooring Applications



### MANUFACTURING

- Building Materials
- Precast Blocks
- Precast Wall Panels
- Fireproofing
- Sound Deadening



### READY MIX

- CLSM Fills

Visit our website for more information about applications [www.aerixindustries.com](http://www.aerixindustries.com)

At Aerix Industries™, we manufacture and supply a dynamic product line of integrated, engineered foam liquid concentrates, enabling our customers to produce and install high quality, lightweight cellular concretes, and utilize foam technology for a variety of applications. We have been providing advanced engineered foaming solutions to the construction and mining industries for more than 70 years. Our innovative product line includes protein, synthetic, proprietary and hybrid formulas engineered to produce a controlled density and meet compressive strengths based on project requirements. Our foam liquid concentrates produce the most stable preformed foam in the industry. Our technical team is dedicated to education and research, continuously working to develop new products and applications to solve the challenges facing our clients.

### Quality Products

Aerix supplies you with a durable cell structure not affected by long pumping distances or extended mixing, allows our products to out-perform others in the marketplace. Tests prove our products help meet worldwide industry specifications and project criteria that others cannot.

### Technical Field Support

Our experienced staff of engineers provide hands-on consultation services to find the best solutions for your specific application. Through customer training programs, mix design assistance, on-site batching and placement support; we help our clients decrease schedule impacts, increase revenue, improve quality control and promote jobsite safety.

### Innovative Solutions

Our dynamic product line provides innovative solutions for a wide range of applications and challenges across various industries. Our lab facilities allows our staff to drive advancements in our current products, pioneer new technologies and custom engineer foams to meet specific project parameters.

### Cutting Edge Technology

We are committed to advancing the industry through research and development of cutting edge products, including AQUAERIX™. Our patented synthetic foaming agent produces a pervious lightweight concrete and ARX-Transport™, used to transport solid materials in place of water.

### Ultimate Value

Aerix provide you with more tools in your toolbox. Our solutions are not necessarily used every day or in every project, but they have many applications and beneficial properties that provide an economical and sustainable option with an increased return on your investment.

### The Experience

Our process does not end with the sale of our products. Aerix Industries take the next step in supporting our customers to meet their project goals and objectives with individualized solutions by utilizing a design-supply model.

