



INCREASED MASON PRODUCTIVITY WITH Q-LITE® CONCRETE MASONRY UNITS

Concrete masonry construction provides a unique combination of load-carrying capability and excellent thermal performance in a cost competitive wall system. With Q-LITE concrete masonry units, the benefits are even greater.

Q-LITE concrete masonry units are manufactured using Rotary Kiln Expanded Clay lightweight aggregates produced by Big River Industries, Inc., the nation's largest producer of Expanded Clay aggregates. Big River aggregates, LIVLITE® and GRAVELITE®, are the PREMIUM lightweight aggregates, manufactured in compliance with A.S.T.M. C 331, "Specification for Lightweight Aggregates for Concrete Masonry Units".

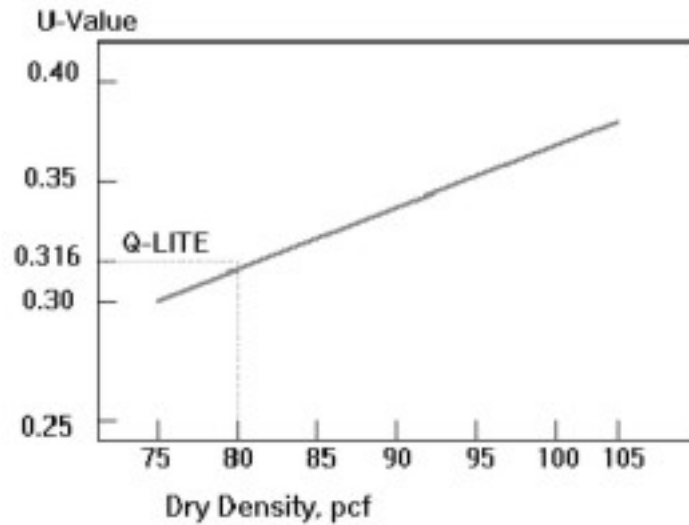
The superior quality of Big River aggregates gives the Q-LITE units their excellent thermal characteristics. Because the insulating value of concrete is largely a function of concrete

density, the lightweight Q-LITE units have a built-in advantage. An 8X8X16 Q-LITE unit weighs only 23 pounds – less than other "lightweight" blocks – resulting in an "R" value that is 27% higher than that of 28 pound units. And because Big River aggregates themselves have better thermal qualities than other aggregates, Q-LITE units have an extra advantage.

Tests conducted by an independent laboratory show Big River Rotary Kiln Expanded Clay aggregate has an Apparent Thermal Conductivity of 0.794 BTU in/hr °F ft², or a Thermal Resistance of 1.26 hr °F ft²/BTU in. The values for typical lightweight aggregates are 1.0 and 1.0, respectively.

Figure 1 shows the effect of concrete density on the thermal resistance of 8X8X16 concrete masonry units, based on calculations using the Series Parallel Method. This is the calculation method recommended by ASHRAE and the National Concrete Masonry Association.

U-Values for 8-Inch Hollow CMU



Reference:

NCMA Concrete Masonry R Value Program



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SUGGESTED SPECIFICATION FOR Q-LITE® CONCRETE MASONRY UNITS

Lightweight Concrete Masonry Units (CMUs) shall be Q-LITE CMUs conforming to the

requirements of ASTM C 90, "Specification for Load-Bearing Concrete Masonry Units". The units shall be Type II, Nonmoisture Controlled Units.

The producer of the Q-LITE lightweight concrete masonry units shall supply a current certification that all concrete masonry units use Rotary Kiln Expanded Clay aggregates produced by Big River Industries, Inc., conforming to ASTM C 331, "Specification for Lightweight Aggregates for Concrete Masonry Units".

Natural aggregates shall conform to ASTM C 33 "Specification for Aggregates for Concrete".

The mix design used in manufacturing the Q-LITE concrete masonry units shall include not less than 70% expanded clay aggregate (all gradations) and not more than 30% local natural aggregates (all gradations), by volume.

Q-LITE® is a registered trademark of Big River Industries, Inc.