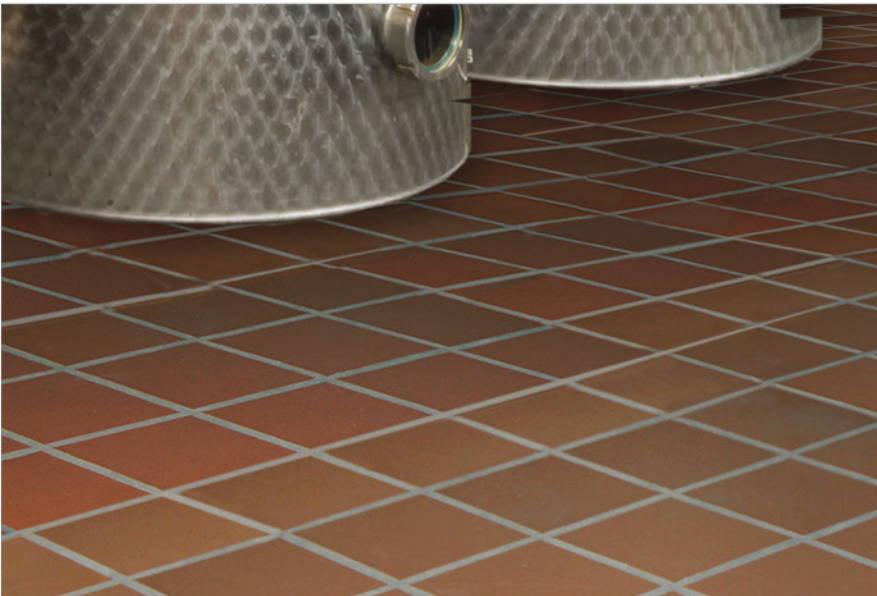


Crafting the right floor tile for the craft brewing industry.

Craft brewers pride themselves on creating unique and outstanding beers that set the mark for flavor and character. And from holding tanks to filtration systems, craft brewers know the equipment they use has to be right. Not only are they most concerned about the quality of the product, but also the appearance of their brewery. That's why so many brewers choose Metropolitan Ceramics quarry tile for their flooring. They know kiln fired Metropolitan quarry tile will provide generations of quality, slip resisting, service. They also know the natural earth tone colors will fit right in with their brewery's design. Tastes may change with the season, but a Metropolitan Ceramics floor will stand the test of time.



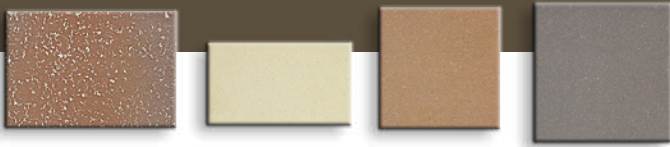
Metropolitan Ceramics #250 Galaxy shown above and to the right in a craft brewery.

- **Use Indoors and Out in any Climate.**
- **Slip Resisting Surface.**
- **Extreme Durability for Heavy Traffic.**
- **Will not Bubble-Chip-Melt.**
- **Resists Grease-Bacteria-Dirty Water.**
- **Economical.**
- **Unglazed Surface Won't Show Wear.**
- **Can be Used Vertically.**
- **Resists Chipping and Abrasion.**

Green at a Glance

- 1 Abundant natural resource.
- 2 Little waste in production.
- 3 No volatile organic compounds.
- 4 Offering decades of performance.
- 5 Safe to discard or repurpose. ||





Sizes, Colors, Textures

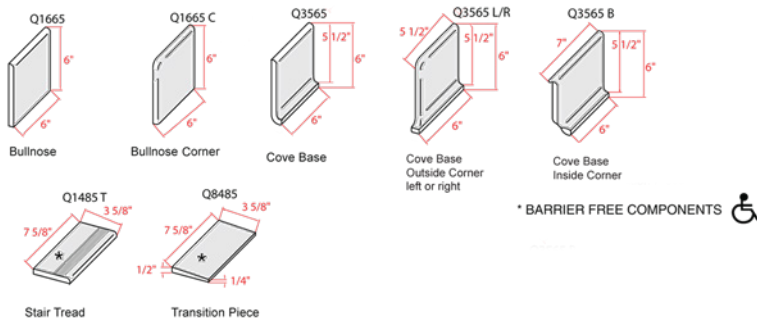
Sizes options include 4" x 8", 4" x 12", 6" x 9", 8" x 8" and 6" x 6". Many size options are nominal (for example, the 4" x 8" is actually 3 5/8" x 7 5/8") to allow for a grout joint when designing patterns. The most popular size 6" x 6" is (actual size). Tile thickness is 1/2". For specific applications, some products are available by special order in 3/8" and 3/4" thickness. Different size options are available in each product line. See the Metropolitan Ceramics website for complete details.

The grout joint recommended in most instances is 3/8". A 1/4" joint may sometimes be used in some instances, see web site for details. Metropolitan quarry tile is available in a variety of natural earth tones. Some products are reduction fired in the kilns to produce a random shade variation. Many colors are manufactured with little to no shade variation for a 'single tone' appearance.

A number of products are available with texture for added appeal and to increase slip resisting properties. Details on all products manufactured by Metropolitan Ceramics are available on the Metropolitan Ceramics' website- www.metroceramics.com.

Trim Pieces

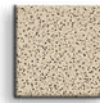
Metropolitan Ceramics offers a number of trim pieces. Shown below are some of the most popular trim options. Please see the Metropolitan web site- www.metroceramics.com for a complete listing of trim and availability.



Test Results

SPECIFICATION	TEST	STANDARD	RESULT
Abrasion Resistance	ASTM C1243	Maximum value of 275 mm ³	Metropolitan tests at < 275 mm ³
Absorption 5-hour boil	ASTM C373	Maximum 5%	Metropolitan tests at 3% maximum and qualifies as vitreous.
Breaking Strength	ASTM C648	Average ≥ 250 lbf.	Metropolitan tests at 400 lbf. or better.
Thickness	ASTM C499	Max. range of .050"	Metropolitan meets the standard.
Nominal Size	ASTM C499	The facial dimension of each tile in the sample shall not vary more than ±2.00% from the nominal dimension.	Metropolitan meets the standard.
Freeze/ Thaw	ASTM C1026	Observations after 300 cycles. No visible damage	Metropolitan meets the standard.
Shear Bond Strength	ASTM C482	50 P.S.I. or better	Metropolitan exceeds the standard.
DCOF Acu Test	ANSI 137.1 - 2012 BOT 3000	No industry standard Threshold of 0.42	At time of manufacture, Metropolitan QUARRYBASICS [®] abrasive and QUARRYBASICS [®] X-Colors tests at ≥0.75. All other Metropolitan products test above 0.60.
Warpage	ASTM C485	Min. -.1.5% Max. 1.5% along any edge. Min -1.0% Max 1.0% on either diagonal.	Metropolitan meets the standard.
Wedging	ASTM C502	Min. -.1.0% Max. 1.0%	Metropolitan meets the standard.
Chemical Resistance	ASTM C650	As Reported	Class A Classification
Stain Resistance	ASTM C1378	As Reported	Metropolitan meets the standard.
Scratch Hardness	MOHS	No Industry Standard	7

Added Slip Resistance



QUARRYBASICS[®] Abrasive
Silicon Carbide Abrasive.



METRO TREAD[®]
Raised Tread Design- installed in a checkerboard pattern.

Metro Tread has the added benefit of ease of cleaning. Will not trap debris. Meets the strictest health department regulations-California- without the need for additional drains.

Environmental

Metropolitan Ceramics products meet requirements for sustainable building and may contribute to a building receiving a level of LEED certification by their use. For more information on Metropolitan Ceramics and the environment, please visit our web site www.metroceramics.com.



To the left is a map showing the area that makes up a 500 mile radius around the Metropolitan Ceramics manufacturing facility located in Canton, Ohio. This is an important component of the LEED regional material credit

Specifications

By ANSI Standard Specification A137.1 Metropolitan Ceramics' unglazed quarry tile is classified as quarry tile, however, the exceptional technical characteristics noted allow them to be used in virtually any application suitable for ceramic tile. Metropolitan Ceramics' unglazed tile meets both the ASTM standards, the ANSI A137.1 specification for quarry tile, and Metropolitan internal standards as listed.

Cleaning and Maintenance

Metropolitan quarry tile is easy to maintain and requires only neutral cleaners and no special power washing!

For complete specification and cleaning/maintenance information, including download versions, please visit our web site.

www.metroceramics.com



METROPOLITAN
C E R A M I C S
Ironrock Since 1866