AMERICA’S INDOOR/OUTDOOR
UNGLAZED CERAMIC QUARRY TILE
Founders Brewery - Michigan
#310 Mayflower Red
Meetings Your Design Needs

Metropolitan Ceramics® is the leader in manufacturing high quality unglazed quarry tile. Metropolitan quarry tile is manufactured by the extrusion process, not pressed. Metropolitan Ceramics tile is extremely durable, has a low absorption body and a tight die skin surface. Metropolitan quarry tile is slip resisting and can be used indoors or outdoors in virtually any climate. Metropolitan Ceramics tile resists impact and abrasion. The color palette consists of natural earth tones that are through-the-body. The color will not scratch or wear off like some glazed and porcelain products.

Our tile is the ideal choice for demanding commercial and residential ceramic tile applications. The tiles are produced using state-of-the-art manufacturing equipment and expertise gained from a 150 year history producing hard fired ceramic products. Metropolitan brand products are engineered with durability in mind and are suitable for interior and exterior installations. We invite you to experience the pleasing look and lasting value that is uniquely Metropolitan Ceramics.

Please Note: Colors are as accurate as printed representations can be. For final color selection refer to current actual color samples.
Green Squared Certified

Green Squared is North America’s first sustainable product program written exclusively for tiles and tile installation material. Green Squared involves the sustainability product standard ANSI A138.1 and the third party certification to that standard.

Metropolitan Ceramics is your source for Green Squared Certified ceramic quarry tile. Ironrock, maker of Metropolitan Ceramics quarry tile, has gone through the certification process with SCS – Scientific Certification Systems - and has had a number of products Green Squared Certified.

This means that Ironrock has met the criteria for certification in all categories including, environmental product characteristics, environmental product manufacturing/raw material extraction, end of product life management, progressive corporate governance, and innovation. Part of the certification includes having individual products certified and Metropolitan Ceramics has had a number of its most popular products certified. In this catalog you will find the Green Squared Certified products marked with the Green Squared logo. For more information on Green Squared Certified visit www.greensquaredcertified.com.
Sustainability

Metropolitan Ceramics® quarry products are one of the longest lasting flooring products available. In fact, a study conducted by the Tile Council of North America found quarry tile to be the best value among competing floor covering products based specifically on the price and longevity of the product. Metropolitan® quarry tile is an excellent cradle to cradle product because it is mined at a close proximity to the manufacturing site and it can last for many years, even centuries. At the end of a building’s life it can be removed and reused as tile or be recycled as a roadbed material with no negative impact to the environment.

Durability Testing Data

Manufactured for long wear in demanding applications, Metropolitan Ceramics® unglazed ceramic quarry tile meets or exceeds the following standards relating to sustainability.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Test</th>
<th>Standard</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abrasion Resistance</td>
<td>ASTM C1243</td>
<td>Maximum value of 275 mm²</td>
<td>Metropolitan tests at &lt; 275 mm²</td>
</tr>
<tr>
<td>Absorption 5-hour boil</td>
<td>ASTM C373</td>
<td>Maximum 5%</td>
<td>Metropolitan tests at 3% maximum and qualifies as vitreous.</td>
</tr>
<tr>
<td>Breaking Strength</td>
<td>ASTM C648</td>
<td>Average ≥ 275 lbf.</td>
<td>Metropolitan 1/2&quot; thick tests at 800 lbf. or better. Metropolitan 3/8&quot; thick tests at 400 lbf. or better.</td>
</tr>
<tr>
<td>Thickness</td>
<td>ASTM C499</td>
<td>Max. range of 0.05</td>
<td>Metropolitan meets the standard.</td>
</tr>
<tr>
<td>Nominal Size</td>
<td>ASTM C499</td>
<td>The facial dimension of each tile in the sample shall not vary more than ±2.00% from the nominal dimension.</td>
<td>Metropolitan meets the standard.</td>
</tr>
<tr>
<td>FREEZE/THAW</td>
<td>ASTM C1026</td>
<td>Observations after 300 cycles. No visible damage.</td>
<td>Metropolitan meets the standard.</td>
</tr>
</tbody>
</table>

Metropolitan® quarry tile is a natural product with through-the-body color that will not wear off.

During Installation and Once Installed

Metropolitan Ceramics® quarry tile can be installed and sealed with low VOC products, providing air quality advantages during installation. The low absorption, kiln-fired, natural materials that make up Metropolitan® quarry tile produce NO VOC’s sometimes associated with other flooring products. Metropolitan Ceramics® quarry tile is neither an ‘original source’ nor a source for ‘absorbed’ volatile organic compounds. Metropolitan® quarry tile will not contribute to the growth of mold or bacteria. Floor coverings make up a large percentage of surface space in a building, and a Metropolitan® quarry tile floor, when properly installed and maintained, will help contribute to a healthy work and living environment.

Other possible sources of VOCs are the cleaning products required to clean some surface materials. Metropolitan Ceramics® quarry tile can be cleaned using non-toxic, water-based cleaners. A complete green cleaning and maintenance schedule is available online. www.metroceramics.com

The Manufacturing Process

- Over 90% of raw materials are mined within 50 miles of our facility.
- Over 3,000 tons of waste clay is recycled back into production annually.
- The heat from our kilns is also a heat source for our dryers.
- Over 700 tons of fired scrap are recycled into our products each year.
- All shipping cartons contain recycled material and all cartons are recyclable.
- We use the most energy efficient production equipment available.

Recycled Content Chart

The following chart contains percentages of pre-consumer recycled material defined as follows: Pre-consumer recycled material is a waste product of a manufacturing process, diverted from the waste stream and not normally used by industry during the original manufacturing process.

The following manufacturing waste streams, previously disposed of as waste, are now recovered, reprocessed and returned to our manufacturing process: unfired waste material • fired scrap

<table>
<thead>
<tr>
<th>Quarrybasics®</th>
<th>#101 Oyster Bay</th>
<th>4.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>#105 Buckskin</td>
<td>4.0%</td>
<td></td>
</tr>
<tr>
<td>#107 Boulevard</td>
<td>4.0%</td>
<td></td>
</tr>
<tr>
<td>#108 Chestnut Brown</td>
<td>5.8%</td>
<td></td>
</tr>
<tr>
<td>#205 Adobe</td>
<td>6.1%</td>
<td></td>
</tr>
<tr>
<td>#310 Mayflower Red</td>
<td>9.5%</td>
<td></td>
</tr>
<tr>
<td>#220 Auburn</td>
<td>11.6%</td>
<td></td>
</tr>
<tr>
<td>#505 Plaza Gray</td>
<td>4.0%</td>
<td></td>
</tr>
<tr>
<td>#507 Puritan Gray</td>
<td>4.0%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Somerset™</th>
<th>#350 Harvard Square</th>
<th>9.5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>#458 Cordoba</td>
<td>5.8%</td>
<td></td>
</tr>
<tr>
<td>#250 Galaxy</td>
<td>11.6%</td>
<td></td>
</tr>
<tr>
<td>#255 Aztec</td>
<td>6.1%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Down to Earth®</th>
<th>#350 Red Paver</th>
<th>9.5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>#458 Bedrock</td>
<td>5.8%</td>
<td></td>
</tr>
<tr>
<td>#155 Cobblestone</td>
<td>4.0%</td>
<td></td>
</tr>
<tr>
<td>#255 Desert Floor</td>
<td>6.1%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quarrybasics® XA Abrasive</th>
<th>#15XA Buckskin</th>
<th>4.0%</th>
</tr>
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<tbody>
<tr>
<td>#18XA Chestnut Brown</td>
<td>5.8%</td>
<td></td>
</tr>
<tr>
<td>#31XA Mayflower Red</td>
<td>9.5%</td>
<td></td>
</tr>
<tr>
<td>#57XA Puritan Gray</td>
<td>4.0%</td>
<td></td>
</tr>
</tbody>
</table>

Note: Percentages based on most current data.
LEED v4 & Metropolitan Ceramics
by Credit Category

Materials & Resources

*Building Life Cycle Impact Reduction | Metropolitan Ceramics products have a 60+ year lifespan and can last the life of the building.

Product Disclosure | [Environmental Product Declarations] | Metropolitan Ceramics has taken part in an industry-wide EPD, available to download on metroceramics.com

*Product Disclosure | [Source of Raw Material] | Metropolitan Ceramics products contain pre-consumer recycled waste material. Metropolitan Ceramics products can be reused or salvaged. Nearly all raw materials are extracted within a 50 mile radius of the manufacturing facility.

*Product Disclosure | [Material Ingredients] | Metropolitan Ceramics products are fired in kilns at temperatures above 2,000 degrees Fahrenheit and are inert ceramic material.

Construction and Demolition Waste Management | Metropolitan Ceramics products are inert material after firing and can be reused or reclaimed as fill or road bed material. Sizing of the product is such that there is little job site waste of material.

Indoor Environmental Quality

Low Emitting Materials | Ceramic tile is cited as an “inherent non emitting source” for this credit. Metropolitan Ceramics may be used for this credit without testing.

*Construction Indoor Air Quality | Metropolitan Ceramics products are VOC- free and are resistant to mold and mildew.

*Indoor Air Quality Assessment | Metropolitan Ceramics products are inert. They are VOC-free and are formaldehyde free.

*Thermal Comfort | The thermal mass of Metropolitan products allows them to aid in creating a more consistent indoor environment.

*Interior Lighting | Metropolitan Ceramics makes light color quarry tile for both floor and wall use.

Integrative Process

*Integrative Process | Metropolitan Ceramics quarry tile is part of a flooring installation system, one that has been shown to be extremely durable and low maintenance.

Sustainable Sites

*Open Space | The durability, freeze/thaw resisting, and slip resistant properties of Metropolitan quarry tile make it an excellent paving tile. The color palette consists of natural earth tones.

*Heat Island Reduction | Metropolitan Ceramics makes light color quarry tile. Metropolitan quarry tile is an excellent paving tile.

Pilot Credit

Certified Multi-attribute Products & Materials | Green Squared is included in this pilot credit. Metropolitan G² products meet the criteria of this credit because Metropolitan Ceramics is part of an industry wide EPD.
Unglazed Quarry Tile

QUARRYBASICS® unglazed ceramic quarry tile offering the combination of long wear and great looking colors and shapes. The colors coordinate to fit high traffic multi-use commercial and residential design needs.

"Proven Performance"
Years of providing durable service in installations as demanding as airports, rest stops, commercial kitchens, restaurants, hotels and homes.

Through-the-Body Color
Different from glazed tile, no chipping, wearing off or scratching.

Low Absorption
Resists soiling, suitable for exterior applications.

Relieved Edges
Less susceptible to chipping, softer more natural looking.

101 Oyster Bay 105 Buckskin 107 Boulevard 108 Chestnut Brown
205 Adobe* 220 Auburn 310 Mayflower Red
505 Plaza Gray 507 Puritan Gray 710 Raven (Premium Color)

*205 Adobe is a V2 (Slight Variation).
**Flashed Quarry Tile**

Somerset™ is a premium, fired ceramic tile with random color range produced naturally in the kiln. This is done without the use of glazes or fired surface treatments sometimes associated with other 'flashed' products. Somerset ceramic tile combines strong earth tones, mellow ranges and deep hues. Use Somerset with traditional architecture and furnishings for a classic appearance.

Arranged in more exotic patterns, Somerset becomes the perfect floor to complement contemporary designs and materials.

**Indoors and Out**

The perfect answer for restoration and renovation projects, indoors and out.

**Commercial & Residential Applications**

Suitable for commercial installations such as a courtyard or entryway. The right fit for residential applications such as a patio, walkway or foyer.

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**Available Sizes**

(All sizes are 1/2” thick)

8x8, 6x6, 4x8

**Natural Shade Variation**

Somerset™ combines the natural appeal of rich shade variation from tile to tile, with the durability and slip resisting features and benefits of our other Metropolitan® Quarry tile.

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**Moderate Variation**

V3

**Recycled Content**

(See Chart)

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8x8, 6x6, 4x8

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255 Aztec  
250 Galaxy  
350 Harvard Square  
458 Cordoba
TWO Slip Resisting Additives In ONE Tile

XA Abrasive combines two slip resisting additives to create a one-of-a-kind slip resisting tile with a Dynamic Coefficient of Friction ≥ 0.70.

With XA Abrasive, the properties of both Quarrybasics® X-Colors and Quarrybasics® Abrasive are incorporated into one tile. The silicon embedded surface, combined with the metallic additive through the body of the tile, work together to combat the effects of spills, moisture, extreme temperatures, and heavy traffic.

Use Quarry Basics® XA Abrasive in the most demanding environments and anywhere durability and slip resistance are important.

“Silicon carbide embedded in the surface combined with a through-the-body metallic additive.”
RAISED TREADS
QUARRY TILE

METRO TREAD®

AVAILABLE SIZE
(ALL SIZES ARE 1/2” THICK)
6x6 ONLY

UNIFORM APPEARANCE

RECYCLED CONTENT
(SEE CHART)

#31T Mayflower Red

31T Mayflower Red  57T Puritan Gray  15T Buckskin

Note: METRO TREAD® must be installed in one of two patterns depending on the application.

Raised Treads
Added Slip Resistance

METRO TREAD® features nine raised treads across the surface of each tile and spaced 5/8” apart for added slip resistance. METRO TREAD® is a popular choice for commercial kitchens and anywhere slip resistance is an issue.

METRO TREAD® is available in three through-the-body natural earth tones in the 6” x 6” size.

A popular choice for commercial kitchens and anywhere slip resistance is an issue.

Grid Pattern
For use in multi-directional traffic such as commercial kitchens.

Linear Pattern
When traffic flows across the tread such as in a hallway or ramp.
Down to Earth® paver tiles offer rich natural color variation, detailed textures, and classic shapes. Down to Earth® will add warmth to any environment indoors and out.

Down to Earth® can be used in both traditional and contemporary settings. And Down to Earth® is available in three sizes each with its own unique texture. Use a contrasting grout color to enhance the appearance of the textured surface. Use a similar grout color to minimize the texture’s appearance. To reduce the amount of grout that collects in the texture use a grout release prior to grouting.

Think of Down to Earth indoors for restaurants - foyers - lobbies - bathrooms/rest rooms and bring the indoors out for walkways - patios - balconies - courtyards - drives.

For Every Environment
Combining earth’s natural elements and components for captivating commercial and residential installations.”
Durable Pavers for Demanding Jobs

Metropolitan Ceramics' METRO® Pavers are the foremost natural, unglazed, high density pavers made in the United States. METRO® Pavers are engineered to meet the demands of heavy truck traffic and industrial applications.

Passes all applicable modulus of rupture testing.

Meets the ASTM standard for industrial floor brick ASTM C410. Die skin body resists cracking, spalling and erosion.

Resists thermal shock and can be used indoors and outdoors in any climate.

Dense vitreous body composition resists mold, bacteria and chemical attacks.

Meets the ASTM standard ASTM C279 for chemical resistant masonry units.

Note: installation methods should include 100% coverage for mortar especially when the application involves heavy static or rolling loads such as vats or vehicles. The recommended installation methods in the Tile Council of America's “Handbook for Ceramic Tile Installation”, and ANSI (American National Standards Institute) standards should be followed.
By ANSI Standard Specification A137.1 Metropolitan Ceramics’ unglazed tile is classified as quarry tile, however, the exceptional technical characteristics noted enable 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 requirements as listed.

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<td>Maximum value of 275 mm$^3$</td>
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</tr>
<tr>
<td>Absorption 5-hour</td>
<td>ASTM C373</td>
<td>Maximum 5%</td>
<td>Metropolitan tests at 3% maximum and qualifies as vitreous.</td>
</tr>
<tr>
<td>Breaking Strength</td>
<td>ASTM C648</td>
<td>Average ≥ 275 lbf.</td>
<td>Metropolitan 1/2” thick tests at 800 lbf. or better. Metropolitan 3/8” thick tests at 400 lbf. or better.</td>
</tr>
<tr>
<td>Thickness</td>
<td>ASTM C499</td>
<td>Max. range of .050”</td>
<td>Metropolitan meets the standard.</td>
</tr>
<tr>
<td>Nominal Size</td>
<td>ASTM C499</td>
<td>The facial dimension of each tile in the sample shall not vary more than ±2.00% from the nominal dimension.</td>
<td>Metropolitan meets the standard.</td>
</tr>
<tr>
<td>Freeze/ Thaw</td>
<td>ASTM C1026</td>
<td>Observations after 300 cycles. No visible damage.</td>
<td>Metropolitan meets the standard.</td>
</tr>
<tr>
<td>Shear Bond Strength</td>
<td>ASTM C482</td>
<td>50 P.S.I. or better</td>
<td>Metropolitan exceeds the standard.</td>
</tr>
<tr>
<td>DCOF Acu Test (wet)</td>
<td>ANSI A137.1 - 2012 BOT 3000</td>
<td>Threshold of 0.42</td>
<td>At time of manufacture, Metropolitan QUARRYBASICS® XA Abrasive tests at ≥0.70. All other Metropolitan products exceed 0.60.</td>
</tr>
<tr>
<td>Warpage</td>
<td>ASTM C485</td>
<td>Min. -1.5% Max. 1.5% along any edge. Min -1.0% Max 1.0% on either diagonal.</td>
<td>Metropolitan meets the standard.</td>
</tr>
<tr>
<td>Wedging</td>
<td>ASTM C502</td>
<td>Min. -1.0% Max. 1.0%</td>
<td>Metropolitan meets the standard.</td>
</tr>
<tr>
<td>Chemical Resistance</td>
<td>ASTM C650</td>
<td>As Reported</td>
<td>Class A Classification</td>
</tr>
<tr>
<td>Stain Resistance</td>
<td>ASTM C1378</td>
<td>As Reported</td>
<td>Metropolitan meets the standard.</td>
</tr>
<tr>
<td>Scratch Hardness</td>
<td>MOHS</td>
<td>No Industry Standard</td>
<td>7</td>
</tr>
</tbody>
</table>

Special Order Quarry Tile

METRO® ESQ
Designed with a square edge specifically to be used with epoxy grout. For jobs that specify epoxy.
Available Colors: 310 Mayflower Red, 105 Buckskin, & 507 Puritan Gray
Available Sizes: 6x6

ECO QUARRY™
Eco Quarry has all of the features and benefits of Metropolitan Ceramics’ unglazed quarry tile in an economical 3/8” thickness.
Available Colors: 310 Mayflower Red, 105 Buckskin, & 507 Puritan Gray
Available Size: 6x6

“1.800.325.3945
Please call customer service for details on special order items.”
A typical specification to assure the use of Metropolitan Ceramics’ unglazed tile on your next job should be written as follows: Ceramic tile shall be,

QUARRYBASICS®, DOWN TO EARTH®, SOMERSET™, QUARRYBASICS® XA ABRASIVE, METRO TREAD®, ECO QUARRY™, METRO®E.S.Q or METRO®

PAVERS. as manufactured by Metropolitan Ceramics, Canton, Ohio 44711. The body composition shall be of the finest shale and clays producing a uniformly dense body with slip-resisting texture. Color shall be: Size shall be: Patterns: As per drawing. Grout: Compatible color, as approved by architect. Test results shall be available upon request.

For best installation results, we recommend that the following be included in the specifications: Nominal 3/8” joint widths. Mix tile from several cartons for best shading during installation. Use beating block to embed tile and align surfaces and edges. Clean grout with grout sponge, cheese cloth or toweling for uniform grout color and most uniform grout level and texture. Grout joints may be damaged by some acid cleaners. Test a small area first. Wet floor with clean water before applying any acid cleaner. Do not use any product containing Hydrofluoric acid since it will attack both grout and tile. See our web site for complete downloadable specification information.

The secret to a successful tile maintenance program is to begin with a clean surface. It should be the responsibility of the tile installer to thoroughly clean and remove all the grout residue and the dulling film inherent in the installation process.

Ironrock Capital, Inc., (Ironrock), warrants as limited below, that our products will meet the testing standards and specifications set forth in our current product literature. In the event of a defect or failure to conform to this written warranty, Ironrock Capital, Inc. will remedy shipment shortages and replace defective tile F.O.B. plant if timely notice of the defect is received by Ironrock prior to installation of the tile. Because specific installation details, structural design and environmental conditions are beyond Ironrock’s control, we are not responsible for the performance of our products after they are installed except in the case of latent defects. Please see our web site for further details. www.metroceramics.com.