UNGLAZED CERAMIC QUARRY TILE

commercial • residential • indoor • outdoor



METROCERAMICS.COM

Why Metropolitan Ceramics Quarry Tile?

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.







Product Quick Guide

Green Squared Page 4

Green Squared is North America's first sustainable product program written exclusively for tiles and tile installation material.

QuarryBasics XA Abrasive **Page 11**

All of the benefits of our Quarry Basics products plus TWO slip resisting additives. Use this product where added slip resistance is a must.

Specifications & Cleaning *Page 15*

Overview of installation, specifications, cleaning and maintenance. Detailed information can be found at metroceramics.com

Environmental & LEED V4 *Page 5-7*

Sustainability, manufacturing process, recycled content chart and LEED V4 information.

Metro Tread **Page 12**

This added slip resistance product features NINE raised treads across the surface of each tile.

QuarryBasics *Page 9*

Our most popular choice. This durable 1/2" tile is available in 7 color options and fits multi-use commercial and residential applications.

Down To Earth Page 13

When aesthetics is a priority. This flashed & textured quarry tile will meet all of your demanding design needs.

Trim Selection Page 17

Metropolitan Ceramics offers a variety of trim options as shown on page 17. Visit metroceramics.com or call customer service for detailed trim availability 1.800.325.3945.

Metro Pavers *Page 10*

Need even more durability? Metro Pavers are 3/4" thick and can meet the demands of heavy industrial applications.

Thin Brick **Page 14**

Metropolitan Ceramics offers both a tumbled thin brick and an architectural thin brick. Both products can be installed using the tile set method indoors and out.



Test Results **Page 16**

Metropolitan Ceramics' unglazed tile meets the ASTM standards, the ANSI A137.1 specification for quarry tile, and Metropolitan internal requirements as listed on page 16.

Green Squared Certified

All Metropolitan Ceramics Products are 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 and thin brick. Ironrock, maker of Metropolitan Ceramics quarry tile, METROBRICK thin brick, and Royal Thin Brick, has gone through the certification process with SCS - Scientific Certification Systems - and has obtained Green Squared Certification for all products.

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 products certified, all Metropolitan Ceramics quarry tile and thin brick products are Green Squared Certified.

Learn more about green squared certification on our website at *metroceramics.com*





Recycled Content

The following chart contains percentages of pre-consumer recycled material in Metropolitan Ceramics products.

$QuarryBasics^{ extsf{R}}$

#105 Buckskin	29%
#107 Boulevard	28%
#108 Chestnut Brown	25%
#310 Mayflower Red	26%
#505 Plaza Gray	29%
#507 Puritan Gray	28%
#710 Raven	27%

$METRO^{\mathbb{R}}$ Pavers

#310 Mayflower Red

QuarryBasics[®] XA Abrasive

26%

#15XA BUCKSKIN	29%
#18XA Chestnut Brown	25%
#31XA Mayflower Red	26%
#57XA Puritan Gray	28%

$\overline{METRO \ T}read^{\textcircled{R}}$

#15T Buckskin	29%
#31T Mayflower Red	26%
#57T Puritan Gray	28%

Down to $Earth^{ extsf{R}}$

#350 Red Paver	26%
#458 Bedrock	25%
#155 Cobblestone	29%
#255 Desert Floor	23%







Note: Percentages based on most current data.







Environmental Impact & Stewardship

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.

During Installation and Once Installed

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. Metropolitan Ceramics[®] quarry tile can be installed and sealed with low VOC products, providing air quality advantages during installation. 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 95% 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.

*92% of raw materials for 710 Raven are mined within 50 miles of our facility.

A brief overview of Metropolitan Ceramics® and LEED V4.

Please Note: The following are generalizations only. We do not currently have 3rd party certification for some of these specific LEED credits.

Materials & Resources

Building Life Cycle Impact Reduction | Metropolitan Ceramics products have a 60 plus 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, a copy of which is available to download on metroceramics.com

Product Disclosure {Source of Raw Material} | Metropolitan Ceramics products contain pre-consumer recycled waste material. Additionally, 92% or more of all raw materials are extracted within a 50 mile radius of the manufacturing facility.

Product Disclosure {Material Ingredients} | Metropolitan Ceramics has a Material Ingredient Disclosure verified by WAP Sustainability Consulting.

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.

Sustainable Sites

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

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.

Energy & Atmosphere

Optimize Energy Performance | The thermal mass of Metropolitan Ceramics products helps in the moderation of indoor temperature swings.

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 Ceramics products allows them to aid in creating a more consistent indoor environment.

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.



2 Silos Brewing Co. - Manassas, VA METRO® Pavers - 310 Mayflower Red

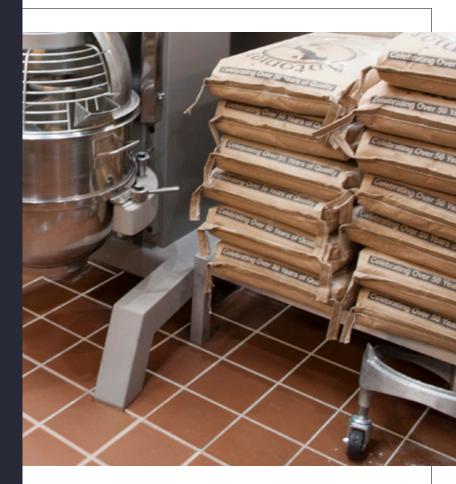
QuarryBasics® Unglazed Quarry Tile

Available Sizes - 1/2" thick 8x8, 6x6 & 4x8*

*310, 507 & 710 4x8's available in stock. All other 4x8 colors available for special order only.

CTDA Shade Variation V1 - Uniform Appearance

Trim Options All Trim Shapes





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.

310 Mayflower Red



105 Buckskin

505 Plaza Gray



107 Boulevard



108 Chestnut Brown



507 Puritan Gray



710 Raven (Premium Color)

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.

QUARRYBASICS[®]

METRO® Pavers 3/4" Thick Paver Tile

Available Sizes - 3/4" thick 6x9 Only

CTDA Shade Variation V1 - Uniform Appearance

Trim Options Call Customer Service for Details 1.800.325.3945





310 Mayflower Red

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.

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.



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QuarryBasics® **XA-Abrasive** Slip Resisting Tile

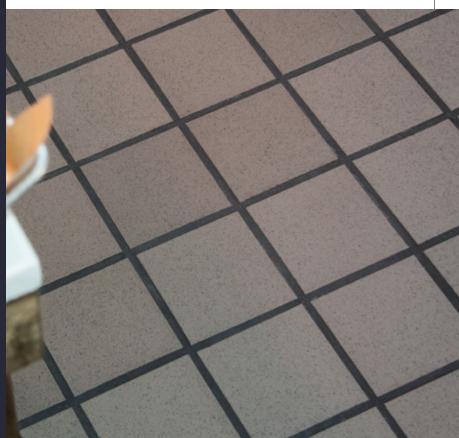
Available Sizes - 1/2" thick 8x8, 6x6 & 4x8*

*31XA & 57XA 4x8's available in stock. All other 4x8 colors available for special order only.

CTDA Shade Variation V1 - Uniform Appearance

Trim Options Q1665 Bullnose Q1665C Bullnose Corner

Q1665 & Q1665C contain XA Abrasive additive. For additional trim options use corresponding QUARRYBASICS color.



31XA Mayflower Red



57XA Puritan Gray



15XA Buckskin



18XA Chestnut Brown

******Added Slip Resistance

Silicon carbide embedded in the surface combined with a through-the-body me-tallic additive. 99



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 \geq 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.



METRO Tread® Raised Treads Tile

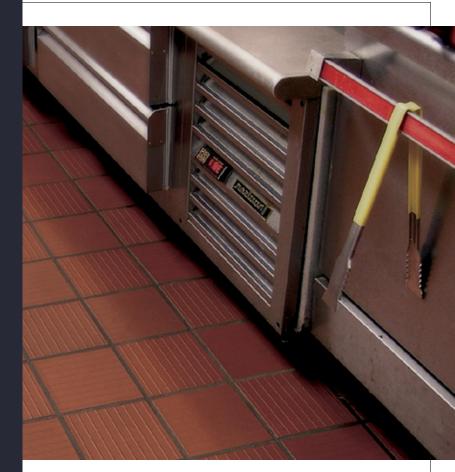
Available Sizes - 1/2" thick 6x6 Only

CTDA Shade Variation V1 - Uniform Appearance

Trim Options

Q1665 Bullnose Q1665C Bullnose Corner Q3565 Cove Base Q3565L/R Cove Base Outside Corner Q3565B Cove Base Inside Corner

Trim Does NOT have raised treads. Use corresponding QUARRYBASICS color.







31T Mayflower Red

57T Puritan Gray

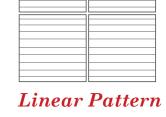


15T Buckskin



Grid Pattern

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



When traffic flows across the tread such as in a hallway or ramp.

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-thebody natural earth tones in the 6" x 6" size.

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





Down To Earth® Flashed/Textured Tile

Available Sizes - 1/2" thick 4x8 (velour texture) 6x9 (stone texture) | Special Order 4x12 (slate texture) | Special Order

Texture is specific to size.

CTDA Shade Variation V3 - Moderate Shade Variation

Trim Options Call Customer Service for details 1.800.325.3945



155 Cobblestone (velour texture)



255 Desert Floor (velour texture)

350 Red Paver (velour texture)



458 Bedrock (velour texture) 4 x 8 with Velour Texture | Shown Grouted

Flashed Quarry Tile With Texture

Down to Earth Textures are specific to size. Textures below shown in 458 Bedrock





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. 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.

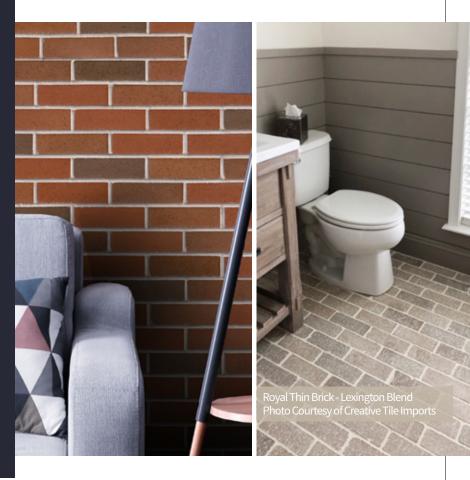
^{**CC} For Every Environment**</sup>

Combining earth's natural elements and components for captivating commercial and residential installations.

Thin Brick Products

Metropolitan Ceramics[®] offers two thin brick product lines as part of their product offering.

Thin brick veneer is fast becoming one of the most attractive finishes available. You can Install thin brick in a variety of areas using straightforward tile setting methods and quickly achieve a brick finish in remodeling and new construction projects.





Royal Thin Brick® Tumbled Thin Brick for a worn reclaimed look

Royal Thin Brick [®] is decorative unglazed thin brick veneer. The bricks have a classic wire-cut texture. They are tumbled for a distressed, worn appearance that works well for adding the aesthetic of traditional brick in both residential and commercial settings.

METROBRICK®

Architectural Thin Brick with precise crisp edges

METROBRICK[®] Architectural Thin Brick is made to stringent guidelines with straight edges and strict size tolerances for a traditional brick finish. The METROBRICK Fast Ship Program offers METROBRICK's most popular colors and blends in modular size. Use METROBRICK Thin Brick for all types of brick veneer applications indoors and out.



Slip Resisting Tile for Peace of Mind

Metropolitan Ceramics products have a dynamic coefficient of friction that meets or exceeds 0.60 wet at time of manufacture.



Installation & Specification

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[®], QUARRYBASICS[®] XA ABRASIVE, METRO TREAD[®], 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.

Cleaning & Maintenance

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.

After initial clean up, a period of 28 days should be allowed for proper curing and maximum grout hardness. Prior to this period, it is recommended that the installer mop the floor with a temporary coating solution of a neutral chemical cleaner in a ratio of one part cleaner to one part water. Neutral chemical cleaners both clean and enhance the natural soil-resisting character of Metropolitan Ceramics unglazed quarry tile. See our web site for complete downloadable cleaning and maintenance information.



Test Results

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 the ASTM standards, the ANSI A137.1 specification for quarry tile, and Metropolitan internal requirements as listed.

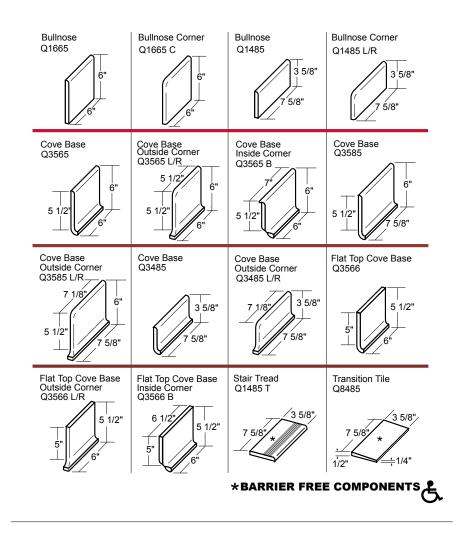
Specification	Test	Standard	Result
Abrasion Resistance	ASTM C1243	Maximum Value of 275 mm ³	Metropolitan tests at < 275 mm ³
Absorption 5-hour boil	ASTM C373	Maximum 5%	Metropolitan tests at 3% maximum and qualities as vitreous
Breaking Strength	ASTM C648	Average ≥ 275 lbf.	Metropolitan 1/2" thick tests at 800 lbf. or better. Metropolitan 3/8" thick 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 (wet)	ANSI A326.3-2017 BOT 3000	No Industry Standard. Threshold of 0.42	At time of manufacture, Metropolitan QUARRYBASICS [®] XA Abrasive tests at ≥0.70. All other Metropolitan products exceed 0.60.
Warpage	ASTM C485	Min1.5% Max. 1.5% along any edge. Min -1.0% Max 1.0% on either diagonal.	Metropolitan meets the standard
Wedging	ASTM C502	Min1.0% 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

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Trim Selection

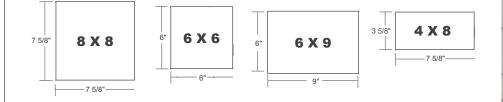
metroceramics.com

Visit our website for trim availability in each color.



Sizes

See product page(s) for availability in each size.







WARRANTY INFORMATION 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

