

America's Indoor / Outdoor Unglazed Ceramic Quarry Tile





COMMERCIAL • RESIDENTIAL • INDOOR • OUTDOOR

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MEETING YOUR DESIGN NEEDS

Metropolitan Ceramics is the leader in manufacturing high quality unglazed quarry tile. Metropolitan quarry tile is an extremely durable ceramic quarry tile. Quarry tile is manufactured by the extrusion process, not pressed. Metropolitan Ceramics tile 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 over 100 years 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

CERTIFIED COLORS

QUARRYBASICS[®]

310 - Mayflower Red

220 - AUBURN

108 - CHESTNUT BROWN

ENVIROQUARRY[®]

850 - Enviroquarry

DURAQUARRY™

308 - DURAQUARRY

SOMERSET™

350 - HARVARD SQUARE

458 - CORDOBA

250 - GALAXY

DOWN TO EARTH

350 - RED PAVER

458 - BEDROCK

QUARRYBASICS® ABRASIVE

31A - Mayflower Red

57A - PURITAN GRAY

QUARRYBASICS[®] X-COLORS

31X - COMMERCIAL RED

57X - STONE GRAY

METRO TREAD®

31T - Mayflower Red

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.



ENVIRONMENTAL IMPACT AND 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.

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.

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.

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 nontoxic, water-based cleaners. A complete green cleaning and maintenance schedule is **available online.**

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

ENVIROQUARRY® Quarrybasics®	
Quarrybasics®	53.2%
#101 Oyster Bay	4.3%
#105 Buckskin	4.3%
#107 Boulevard	4.3%
#108 Chestnut Brown	5.6%
#205 Adobe	4.9%
#310 Mayflower Red	5.8%
#220 Auburn	5.4%
#505 Plaza Gray	4.3%
#507 Puritan Gray	4.3%
Quarrybasics [®] Abrasi	ive
#31A Mayflower Red	5.8%
#57A Puritan Gray	4.3%
#15A Buckskin	4.3%
Quarrybasics® X-Colo	ors
#31X Commercial Red	53.2%
#57X Stone Gray	52.1%
#15X Malibu Beach	4.3%
Somerset™	
#350 Harvard Square	53.2%
#458 Cordoba	5.6%
#250 Galaxy	5.4%
#255 Aztec	4.9%
#200 AZIEC	
Down to Earth®	
	53.2%
Down to Earth®	53.2% 5.6%
Down to Earth® #350 Red Paver	
Down to Earth® #350 Red Paver #458 Bedrock	5.6%

production data.



METROPOLITAN CERAMICS® AND LEED

Metropolitan Ceramics® quarry products are manufactured in Canton, Ohio U.S.A. To the left is a map showing cities within a 500 mile radius of the Metropolitan® manufacturing facility. Also, nearly all raw materials are mined within 50 miles of our facility.

Based on our review of LEED-NC Version 2009, we suggest that a LEED AP consider the following areas where Metropolitan Ceramics quarry tile may contribute to gaining LEED points.

· Based on LEED Version 2009

MR CREDIT 5: REGIONAL MATERIALS: 1-2 POINTS

Intent - Increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the use of indigenous resources and reducing the environmental impacts resulting from transportation.

Regional Materials Points

10% 1

20% 2

Mined within 50 miles of the manufacturing facility, Metropolitan's manufacturing plant is centrally located in Canton, Ohio.

MR CREDIT 4: RECYCLED CONTENT: 1-2 POINTS

Intent - Increase demand for building products that incorporate recycled content materials, thereby reducing impacts resulting from extraction and processing of virgin materials.

Recycled Content	Points
10%	1
20%	2

Metropolitan Ceramics' products are manufactured with up to in excess of 50% pre-consumer recycled material (EnviroQuarry). See Recycled Content Chart for content of individual offerings. Note: 1/2 of pre-consumer content may be claimed.

SS CREDIT 7.1: HEAT ISLAND EFFECT: NON-ROOF - 1 POINT

Intent - Reduce heat islands to minimize impact on micro climate and human and wildlife habitat.

Metropolitan Ceramics unglazed tiles are available in light-reflective colors and can be used outdoors for areas such as patios, walkways, pool surrounds and courtyards. Metropolitan Ceramics #101 Oyster Bay color has a Solar Reflective Index of 72, #105 Buckskin has a Solar Reflective Index of 55, and #15X Malibu Beach has a Solar Reflective Index of 48.

ID CREDIT 1: INNOVATION IN DESIGN - 1-5 POINTS

Intent - To provide design teams and projects the opportunity to be awarded points for exceptional performance above the requirements set by the LEED Green Building Rating System and/or innovative performance in Green Building categories not specifically addressed by the LEED Green Building Rating System.

New sustainability certification. Metropolitan Ceramics® is Green Squared Certified by SCS Certification.

IEQ CREDIT 4.3: LOW-EMITTING MATERIALS: FLOORING SYSTEMS - 1 POINT

Intent - Reduce the quality of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installer and occupants.

Metropolitan Ceramics unglazed quarry tile is kiln fired to temperatures in excess of 2000°F thus burning out any potential VOC's (Volatile Organic Compounds). In addition, the vitreous state of the product after firing makes it both mold and bacteria resistant.

IEQ CREDIT 4.1: LOW-EMITTING MATERIALS: ADHESIVES & SEALANT - 1 POINT

Intent - Reduce the quality of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installer and occupants.

Most manufacturers of ceramic tile installation materials have moved to - no or low - VOC products.

AMERICA'S QUARRY TILE







QUARRYBASICS®

V1

≥ .65

RECYCLED CONTENT (SEE CHART)

JNIFORM SLIP COEFFICIENT PEARANCE D.C.O.F

UNGLAZED QUARRY TILE

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.

• 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.

• A VARIETY OF COLORS, SHAPES AND SIZES

Combine and create the design best suited for your application.

• PROVEN PERFORMANCE

Millions of square feet specified and installed every year from airports to restaurants, to hotels and homes.



8x8 850 - EnviroQuarry **ENVIROQUARRY®**

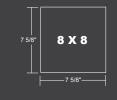
RECYCLED QUARRY TILE

AVAILABLE COLOR



AVAILABLE SIZES

(All sizes are 1/2" thick)







IN EXCESS OF 50% RECYCLED CONTENT (Pre-consumer)

Metropolitan Ceramics® is pleased to bring to market a product that performs so well and has the potential to divert hundreds of tons of material from the waste stream.

RECYCLED CONTENT

The production of our extruded quarry tile creates an unfired waste product that cannot be added, in large volume, to our existing colors. The manufacturing process also creates fired scrap.

SLIP COEFFICIENT

MODERATE

Through additional blending and reprocessing of large quantities of these waste products and then blending further with new material, we are now able to offer a product with a pre-consumer* recycled content of over 50%. ENVIROQUARRY[®] meets the same tough standards as our regular quarry product and is kiln flashed for random color variation and added appeal.

NOTE: Because of the nature of ENVIROQUARRY[®] (high recycled content) there may be some shade variation from run to run and within longer runs of the material. Flashing of the product will help in the blending of color variations, but some variation is to be expected in a product of this sort

*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.



FLASHED QUARRY TILE SOMERSET™ COLORS (458 Cordoba 350 Harvard Square 250 Galaxy 255 Aztec 4x8 458 - Cordoba **AVAILABLE SIZES** (All sizes are 1/2" thick)



FLASHED QUARRY TILE

Metropolitan Ceramics has successfully recreated the conditions that made naturally fired tile so richly varied in depth of color and tone.

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. Combine Somerset with traditional architecture and furnishings and you have a classic floor.

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

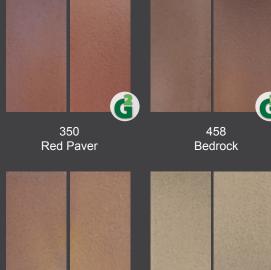
- The perfect answer for restoration and renovation projects, indoors and out.
- Suitable for commercial installations such as a courtyard or entryway.
- The right fit for residential applications such as a patio, walkway or foyer.





FLASH TEXTURED QUARRY TILE

DOWN TO EARTH® COLORS



255 Desert Floor 155 Cobblestone

AVAILABLE SIZES

(All sizes are 1/2" thick)







DOWN TO EARTH®



≥.60

SLIP COEFFICIENT D.C.O.F



FLASHED QUARRY TILE WITH TEXTURE

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

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 simi-

lar 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.



SILICON CARBIDE QUARRY TILE

Metropolitan Leads The Way -

with the introduction of QUARRYBASICS® Abrasive. Your best abrasive tile value with more Silicon Carbide Abrasive per tile - at the right price.

QUARRYBASICS® ABRASIVE COLORS

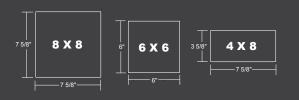


Abrasive Abrasive Abrasive is also avail-

NOTE: QUARRYBASICS® Abrasive is also available in any Metropolitan Ceramics color by special order. Please call customer service for details. 1.800.325.3945

AVAILABLE SIZES

(All sizes are 1/2" thick)





QUARRYBASICS® ABRASIVE







SILICON CARBIDE SURFACE - ADDED SLIP RESISTANCE

A true abrasive with a silicon carbide enhanced surface.

Metropolitan Ceramics is pleased to introduce QUARRYBASICS® Abrasive to its line of quarry tile options. The addition of silicon carbide enhanced quarry tile will add a true abrasive to the Metropolitan quarry tile line, giving customers still another option in enhanced slip resisting tile.

The silicon carbide additive in QUARRYBASICS® Abrasive is embedded throughout the surface of each tile creating a slip resisting surface with a dynamic coefficient of friction (DCOF) of 0.80 at time of manufacture.

QUARRYBASICS® Abrasive is available in stock in three color options, 31A Mayflower Red Abrasive, 57A Puritan Gray Abrasive, and 15A Buckskin Abrasive. Because of how the silicon carbide is applied, it can also be applied to other Metropolitan Ceramics® products (creating abrasive versions of these colors) by special order.

QUARRYBASICS® Abrasive has the same great features and benefits of all other Metropolitan Ceramics quarry tile products.





RAISED TREADS QUARRY TILE

METRO TREAD® COLORS





15T Buckskin



57T Puritan Gray

AVAILABLE SIZES (All sizes are 1/2" thick)



METRO TREAD®

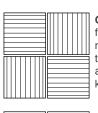


≥.60
SLIP COEFFICIENT



RAISED TREAD - 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 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.
- METRO TREAD® tiles should be installed in one of two patterns depending on the application.



Grid Pattern: for use in multidirectional traffic such as commercial kitchens



Linear Pattern: when traffic flows across the tread such as in a hallway or ramp



QUARRYBASICS® X-COLORS

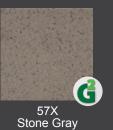
ADDED SLIP RESISTANCE

Features a metallic additive dispersed throughout the body of the tile for added slip resistance. Quarrybasics® X-Colors have a dynamic coefficient of friction (DCOF) of 0.75.

QUARRYBASICS® X-COLORS









SPECIAL ORDER PRODUCTS

METRO® ESQ

Designed with a square edge specifically to be used with epoxy grout. For jobs that specify epoxy.

ECO® QUARRY

Eco Quarry has all of the features and benefits of Metropolitan Ceramics' unglazed quarry tile in an economical 3/8" thickness.

METRO® PAVERS

3/4" Thick Paver Tile. Engineered to meet the demands of heavy truck traffic and industrial applications.

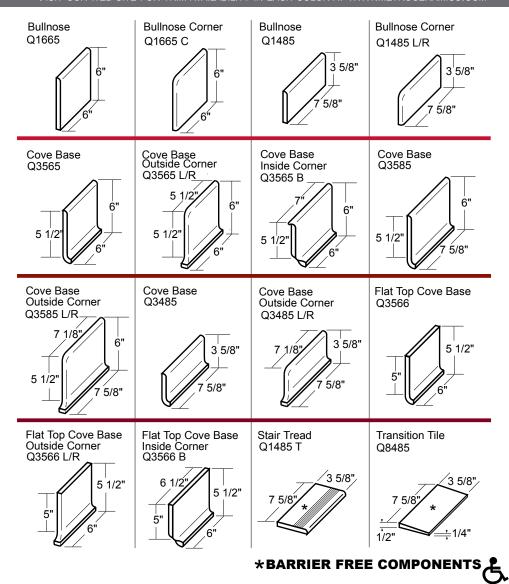
PERFORMANCE SPECIFICATION

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.

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 (wet)	ANSI A137.1 - 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 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

TRIM SELECTION

VISIT OUR WEB SITE FOR TRIM AVAILABILITY IN EACH COLOR AT WWW.METROCERAMICS.COM



The **Tile Council Of North America** commissioned an independent construction cost consulting firm, to conduct a Life Cycle Cost study comparing various types of ceramic tile including glazed and unglazed, porcelain, mosaic, and quarry tile to twelve other floor finishes such as hardwood, laminate, concrete, stone, carpet, terrazzo, vinyl and poured epoxy. The results proved **QUARRY TILE, TO BE THE MOST ECONOMICAL OF ALL FLOOR FINISHES!**

FLOOR FINISH: QUARRY TILE

INSTALLED COST: \$6.83

LIFE CYCLE COST: \$16.13

COST PER YEAR: \$0.32

EXPECTED LIFE: 50 YEARS

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®, ENVIROQUARRY®, DOWN TO EARTH®, SOMERSET™, QUARRYBASICS® ABRASIVE, QUARRYBASICS® X-COLORS, 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.

CLEANING AND 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 should be allowed to permit proper curing-28 days for 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.

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











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