



METROPOLITAN[®]
C E R A M I C S

Ironrock Since 1866

ENVIRONMENTAL - PRODUCT INFORMATION



LEED V4 & METROPOLITAN CERAMICS by Credit Category

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

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.

SUSTAINABLE SITES

**Open Space* | The durability, freeze/thaw resisting, and slip resisting 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.

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.

ENERGY & ATMOSPHERE

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





**GREEN
SQUARED
CERTIFIED**



**VERIFIED BY
SCS Global Services**

GREEN SQUARED CERTIFIED

CERTIFIED COLORS

QUARRYBASICS®

310 - MAYFLOWER RED
220 - AUBURN
108 - CHESTNUT BROWN

DURAQUARRY™

308 - DURAQUARRY

SOMERSET™

350 - HARVARD SQUARE
458 - CORDOBA
250 - GALAXY

DOWN TO EARTH®

350 - RED PAVER
458 - BEDROCK

METRO TREAD®

31T - MAYFLOWER RED

QUARRYBASICS® XA ABRASIVE

18XA - CHESTNUT BROWN
31XA - MAYFLOWER RED
57XA - PURITAN GRAY

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.

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 ≥ 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.

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**.

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

Quarrybasics®

#101 Oyster Bay	4.0%
#105 Buckskin	4.0%
#107 Boulevard	4.0%
#108 Chestnut Brown	5.8%
#205 Adobe	6.1%
#310 Mayflower Red	9.5%
#220 Auburn	11.6%
#505 Plaza Gray	4.0%
#507 Puritan Gray	4.0%

Somerset™

#350 Harvard Square	9.5%
#458 Cordoba	5.8%
#250 Galaxy	11.6%
#255 Aztec	6.1%

Down to Earth®

#350 Red Paver	9.5%
#458 Bedrock	5.8%
#155 Cobblestone	4.0%
#255 Desert Floor	6.1%

Quarrybasics® XA Abrasive

#15XA Buckskin	4.0%
#18XA Chestnut Brown	5.8%
#31XA Mayflower Red	9.5%
#57XA Puritan Gray	4.0%

Note: Percentages based on most current data