

SPECIFICATION STANDARDS AND REGULATIONS

TRAFFICMASTER SUPPORTS SOLUTIONS FOR THE BETTERMENT OF OUR INDUSTRY. AS A MEMBER OF THE TILE COUNCIL OF NORTHAMERICA, WE TEST OUR PRODUCTS TO THE NEWEST INDUSTRY STANDARD INCLUDING DYNAMIC COEFFICIENT OF FRICTION (DCOF). DCOF ASSESSES A PRODUCT'S SUITABILITY FOR SPECIFIC USABILITY NEEDS OF THE APPLICATION.

FRICTION CHARACTERISTICS

Friction is the force that resists the slippage of one surface against another. Contaminants, such as liquids, can alter the measurement of friction. There are two types of friction: static (SCOF) and dynamic (DCOF). SCOF is the ratio of forces necessary to start two surfaces sliding. This is what the former American Society for Testing and Materials (ASTM) C1028 static test measured. DCOF is the ratio of forces necessary to keep two surfaces sliding.

Similar to measuring the speed of a car in both mph and kph, friction can also be measured on two scales (DCOF and SCOF). The new 0.42 wet (DCOF) is replacing the old reference of 0.60 COF wet, which has long been the benchmark for friction in commercial applications. The more stringent DCOF uses a portable robot that gives realistic values on very smooth surfaces.

WATER ABSORPTION, ASTM C373-88

Water absorption is measured using ASTM C373-88. Individual tiles are weighed, saturated with water, then weighed again. The percent difference between the two conditions is referred to as the water absorption value. Tiles are classified according to water absorption percentages as follows:

- Impervious Tiles exhibiting 0.5% or less.
- Vitreous Tiles exhibiting more than 0.5%, but not more than 3.0%.
- Semi-Vitreous Tiles exhibiting more than 3.0%, but not more than 7.0%.
- Non-Vitreous Tiles exhibiting more than 7.0%.

SCRATCH HARDNESS - MOHS SCALE RATINGS

The relative hardness of glazed tile is an important issue that should be addressed when selecting a tile. The test is performed by scratching the surface of the tile with different minerals and subjectively assigning a "Mohs Scale of Mineral Hardness" number to the glaze. The softest mineral used is talc ("1" rating)—the hardest is a diamond ("10" rating). Other minerals of varying hardness providing Mohs Scale of Mineral Hardness values of 5 or more are suitable for most residential floor applications. A value of 7 or greater is normally recommended for commercial applications.

BREAKING STRENGTH CERAMIC TILE, ASTM C648-04

Ceramic tiles used on floors and walls must be able to withstand the expected load bearing capacity of various installations. The tile industry uses ASTM C648-04 to determine the strength and durability of the tile. A force is applied to an unsupported specimen until breakage occurs. The ultimate breaking strength is recorded typically in pounds or Newtons. Tile integrity is critically dependent upon proper installation; TrafficMaster recommends adherence to industry installation guidelines set forth in ANSI A108, A118 and A136.

CHEMICAL RESISTANCE, ASTM C650-04

Chemical resistance is measured using ASTM C650-04. A tile sample is placed in continuous contact with a variety of chemicals for 24 hours, rinsing the surface and then examining the surface for visible variation.

FROST RESISTANCE

Commonly accepted industry criteria recommend that, for frost-prone areas, tiles must have 5% or less water absorption. Wall tile must not exceed 20% water absorption and can't be labeled as frost resistant.

CERAMIC TEST RESULTS



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SHADE VARIATIONS

Tiles range from complete consistency to a more random appearance. Here's an overview of color and shading of individual tile selections:

SHADE CLASSIFICATION	DESCRIPTION	WHAT TO EXPECT
V2	Medium Variation	Distinguishable differences in texture and/or pattern within similar colors

ABRASION RESISTANCE, ASTM C1027-99

The durability of glazed tile is measured by an abrasion test under ASTM C1027-99 testing procedure, which includes the following classification system:

ABRASION RESISTANCE CLASS	WHAT TO EXPECT
III	Tiles withstand normal footwear and regular traffic, with some dirt and/or other abrasives present in limited quantities. Tile in this class may be used in light commercial installations with limited foot traffic and with no direct access to the outside including residential kitchens and hallways, with limited traffic from the outside.

COEFFICIENT OF FRICTION, DCOF WET AREAS (MINIMUM 0.42)

Water, oil, grease or other fluids create slippery conditions. When installing floors in areas with exposure to these conditions, a minimum DCOF value of 0.42 is required. Additionally, extra caution is required with regards to product selection and proper maintenance. Visit www.tcnatile.com for complete information regarding the DCOF test method and values.

INDUSTRY STANDARDS

The American Society for Testing and Materials (ASTM) and the American National Standards Institute (ANSI) identify and develop industry test methods and technical standards.

ALL STANDARD GRADE CERAMIC TILE PRODUCTS MANUFACTURED
BY OR FOR TRAFFICMASTER MEET OR EXCEED THE
REQUIREMENTS OF ANSI A137.1.

CERAMIC
TEST RESULTS



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