

## The Porcelain Enamel Institute Scale

Class	Application
Group I	The softest tile. Suitable for walls and hobby crafts only, no floors.
Group II	Residential use in low foot traffic areas. In rooms where there is usually no through traffic, this tile might work. But, in kitchens, where there is often a lot of through traffic, this tile would be suspect.
Group III	All residential, medium commercial, normal foot traffic (interior only). Any bathroom or kitchen, mudroom, laundry room or hallway, but nothing outside.
Group IV	Heavy commercial. Any interior use. Suited for residential floors that get a lot of use and for exterior applications where there is not a hard freeze in winter.
Group IV+ (or V)	The hardest tile. Extra heavy, high traffic, commercial (interior or exterior use).

## ANSI Rating: Resistance to Water Penetration

The rating developed by The American National Standards Institute (ANSI A137.1) is a test of resistance to permeability by water. It consists of boiling the tile in water and measuring its gain in weight from the original dry state. Four ratings resulted from their studies of clay-fired tiles. These are, from lowest to highest:

Rating	Description	Application
Non-vitreous	Water absorption of more than 7.0% by volume.	Tile for non-wet areas. Around fireplaces, for example. Typically intended for walls, hobby and crafts use.
Semi-vitreous	Water absorption of more than 3.0 percent, but not more than 7.0 percent.	Tile for areas that may get wet on occasion, but are unlikely to see constant or standing water. Kitchen backsplashes or countertops, for example.
Vitreous	Water absorption of	Virtually any indoor application including

	more than 0.5 percent, but not more than 3.0 percent.	shower walls and floors. Outdoors in areas that do not freeze. (Although some vitreous tiles will pass the frost test, and can be used outdoors. The frost test is discussed later in this article.)
<b>Impervious</b>	Water absorption of 0.5 percent or less.	Any indoor or outdoor application.