

About Abrasion

The term abrasion relates to the degree of friction a floor tiles surface will withstand. In other words the amount of foot traffic.

Ceramic Tile

The ISO abrasion resistance standards for glazed tiles ISO 10545-7 classify tile in groups 1 to 5 in accordance with their capacity to resist abrasion.

PEI Ratings (Porcelain Enamel Institute)

This rating only applies to glazed product.

Class 1 – PEI 1

These tiles are recommended for use on interior walls or bathroom floors without direct access to the building exterior. Ideal for light foot traffic, bath and shower rooms only.

PEI II

Tiles with this rating can be used where abrasive foot traffic is slight; bathrooms, family rooms, dining rooms. Residential applications only in locations not subjected to compulsory or high traffic eg. kitchens.

PEI III

For normal foot traffic in all residential locations including kitchens, entrances and passages.

PEI IV

Tiles with this rating can be used in all residential environments subjected to normal foot traffic, including external locations eg. Decks, steps. PEI IV tiles can also be used in areas subjected to foot traffic including kitchens, hotel rooms and moderate size offices and shops.

PEI V

Generally suited for all residential and commercial applications where heavy compulsory foot traffic can be expected; including shopping centres, hotel lobbies, hospitals and many industrial environments.

Notes

- i) Light coloured tiles generally show less effect from general wear and tear than dark glazed tiles.
- ii) For really heavy duty wear consider unglazed porcelain tile in an appropriate colour.
- iii) Tiles chosen for a specific location should have appropriate porosity and slip resistance values.

Natural Stone

Wear or abrasion resistance is an essential factor in any assessment of a stones capacity to withstand foot traffic. ASTM C241 is a test method which evaluates the volume of material worn or abraded from the surface of a specific piece of stone. The abrasion index is generally scaled from 0-100.

Marble or limestone intended for heavy traffic areas generally requires an index rating of at least 12. Granite requires an index rating of 25.

Weight loss is typically measured before and after 3 test pieces are abraded, then the density of the specimen is determined.

The abrasion resistance of a particular stone can be affected by the surface treatment it receives.