

PLACE OF USE

MANUAL

Elizabeth

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1. PRESENTATION

The classification of use is a tool that helps users, architects, designers, and specifiers to resolve any doubts, making product specifications easier. The main purpose of the **Place of Use Manual** is to provide the relationship between ceramic tile coating and the place of use that is suitable for its performance.

2. PLACE OF USE TABLE

The code of the place of use now has three (3) letters. The acronyms beginning with the **letter F (Floor)** indicate that the tile coating should preferably be used on floors. All ceramic tiles used in flooring can also be applied to walls, as they are places with less critical characteristics than floors. The acronyms beginning with the **letter W (wall)** indicate that the tile coating should be used exclusively on walls.

The two letters that complement the acronyms of Elizabeth' new places of use indicate the preferred applications for the tile coating, as follows:

FIR - Floor - Indoor Residential

FLC - Floor - Light to Medium Indoor Commercial

FMC - Floor - Medium to Heavy Indoor Commercial

FHC - Floor - Very Heavy Indoor Commercial

FMO - Floor - Light to Heavy Outdoor Commercial and Outdoor Residential

FHO - Floor - Very Heavy Outdoor Commercial and Outdoor Residential

FRM - Floor - Ramp Light to Heavy Outdoor Commercial and Outdoor Residential

FRH - Floor - Ramp Very Heavy Outdoor Commercial and Outdoor Residential

FWI - Floor - Wet Indoor

WRC - Wall - Residential and Commercial

WWS - Wall - Swimming Pool

WFA - Wall - Facade

WID - Wall - Indoor Dry Residential and Commercial



To facilitate communication and market language, the Elizabeth' new **Place of Use table** shows the acronyms and a short, straightforward text stating the meaning. In addition, a series of illustrative icons supplement the communication to make understanding easier:

FIR:

ALL INDOOR RESIDENTIAL SPACES



FLC:

INTERNAL COMMERCIAL SPACES, WITH LIGHT TO MODERATE PEOPLE'S FOOT TRAFFIC, INCLUDING FIR SPACES



FMC:

INTERNAL COMMERCIAL SPACES, WITH MODERATE TO HEAVY PEOPLE'S FOOT TRAFFIC, AND LIGHT EQUIPMENT, INCLUDING FLC AND FIR SPACES



FHC:

INTERNAL COMMERCIAL SPACES, WITH VERY HIGH PEOPLE'S FOOT TRAFFIC, HEAVY EQUIPMENT, AND VEHICLES, INCLUDING FMC, FLC AND FIR SPACES



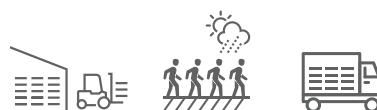
FMO:

EXTERNAL COMMERCIAL SPACES, WITH HIGH, MODERATE, AND LIGHT PEOPLE'S FOOT TRAFFIC, LIGHT EQUIPMENT, AS WELL AS EXTERNAL RESIDENTIAL SPACES



FHO:

EXTERNAL COMMERCIAL SPACES, WITH VERY HIGH PEOPLE'S FOOT TRAFFIC, HEAVY EQUIPMENT, AND VEHICLES, INCLUDING FMO SPACES

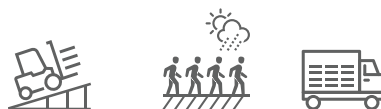


FRM:

EXTERNAL COMMERCIAL SPACES, WITH SLOPE AND RAMPS (MAXIMUM SLOPE 8.33%) WITH HIGH, MODERATE, AND LIGHT PEOPLE'S FOOT TRAFFIC, LIGHT EQUIPMENT, AND EXTERNAL RESIDENTIAL AREAS INCLUDING FMO SPACES

**FRH:**

EXTERNAL COMMERCIAL SPACES, WITH SLOPE AND RAMPS (MAXIMUM SLOPE 8.33%), WITH VERY HIGH PEOPLE'S FOOT TRAFFIC, HEAVY EQUIPMENT, AND VEHICLES, INCLUDING FRM, FHO AND FMO SPACES

**FWI:**

WET INDOOR SPACES

**WRC:**

ALL INTERNAL OR EXTERNAL RESIDENTIAL AND COMMERCIAL WALLS UP TO 3 M HIGH, INCLUDING WID SPACES

**WWS:**

WALLS AND BOTTOM POOLS, COVERING THE WRC AND WID SPACES. IN SUN SHELVES, ONLY WHEN SPECIFIED FOR THE FWI USE LOCATION

**WFA:**

EXTERNAL FAÇADES, INCLUDING WRC AND WID SPACES

**WID:**

ALL DRY INTERNAL RESIDENTIAL AND COMMERCIAL WALLS



ONLY PORCELAIN TILES ARE INDICATED FOR EXTERNAL USE IN TEMPERATURES LESS THAN 0°C.
CHECK FROST RESISTANCE IN THE DESCRIPTION OF EACH PLACE OF USE.

3. USE CLASSES

3.1 FIR

ALL INTERNAL RESIDENTIAL SPACES



The **FIR** use class covers tile coatings that can be used in internal residential spaces (such as living rooms, bedrooms, and kitchens) and private commercial areas with little foot traffic (maximum 20 people per day), such as hotel rooms and garages.

3.2 FLC

INTERNAL COMMERCIAL SPACES, WITH LIGHT TO MODERATE PEOPLE'S FOOT TRAFFIC, INCLUDING FIR SPACES



The **FLC** use class includes internal commercial sites with light to moderate foot traffic (20 to 150 people per day) as well as sites in the **FIR** use class. Examples: small mall stores up to 50m², hotel corridors, residential common areas, administrative offices, consulting rooms (except for wheeled equipment traffic, such as dental consulting rooms and aesthetic clinics) and garages for private use. The **FLC** tile coatings can also be applied in **FIR** class spaces.

3.3 FMC

INTERNAL COMMERCIAL SPACES, WITH MODERATE TO HEAVY PEOPLE'S FOOT TRAFFIC, AND LIGHT EQUIPMENT, INCLUDING FLC AND FIR SPACES



The **FMC** use class covers internal commercial spaces with moderate to heavy foot traffic (150 to 500 people per day), and light equipment¹, with a concentrated load of up to 4,000kgf. Tile coatings of this use class can be applied in areas up to 100m². **FMC** tile coatings can also be applied in **FIR** and **FLC** class spaces

3.4 FHC

COMMERCIAL SPACES WITH HEAVY PEOPLE'S FOOT TRAFFIC, HEAVY EQUIPMENT, AND VEHICLES



The **FHC** use class tile coatings are intended for industrial and urban indoor spaces with very heavy foot traffic (500 to 5,000 people per day) and heavy equipment² with a concentrated load of a maximum of 5,000kgf. These products have greater surface wear and mechanical strength, and therefore can be used in places with heavy people's foot traffic. In this use class are the UGL porcelain tiles, and products with a Natural finish can be used, without limitation, in soccer stadiums, shopping malls, bus stations, airports, supermarkets and public places (squares, parks, etc.). Products with a Polished finish can be used in shopping malls, airports, and large stores following the recommendations in this manual. The **FHC** tile coatings can also be applied in **FIR**, **FLC** and **FMC** class spaces.

The UGL porcelain tile also has high chemical resistance, and products with Acid Resistant (AR) finish are indicated for application in industrial designs (such as kitchens and other areas) that require this feature.

Polished UGL porcelain tiles, although they may be intended for the **FHC** use class, must be placed 5m from street access. It is important to bear in mind that polished products are more susceptible to scratches and eventual loss of shine.

If the surface shows substantial shines loss, repolishing is recommended for partial shine recovery. This procedure must be guided, evaluated, and released by the **Elizabeth' Technical Support Division**. It should be noted that this process aims to improve the product's look, and even recovering the shine of the repolished area, but will not cause the product to reach its original shine.

Applicable to countries requiring ANSI/ASTM compliance:

Note 01: For all these internal sites, the dry dynamic coefficient of friction (DCOF) must be > 0.42, classified as ID, according to ANSI A326.3. The use of entrance mats may be necessary in access areas where water or other contaminants may be carried to the coating surface.

IMPORTANT: Polished GL porcelain tiles are not part of this use classification.

Manufacturer's Technical Support Division

Phone #:

4004-2971 (Capitals)

0300 789 7771 (Other sites)

(48) 3447 7777 (WhatsApp)

E-mail:

sac@ceramicaelizabeth.com

3.5 FMO

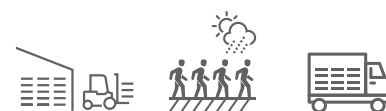
EXTERNAL COMMERCIAL SPACES, WITH HIGH, MODERATE, AND LIGHT PEOPLE'S FOOT TRAFFIC, LIGHT EQUIPMENT, AND EXTERNAL RESIDENTIAL SPACES



The **FMO** use class comprises tile coatings earmarked for flat outdoor areas with heavy, moderate, and light people's foot traffic, that is, they are products with slip resistance (wet coefficient of friction > 0.4) that can be applied to wet outdoor areas, such as sidewalks, public walking areas, and uncovered stairs, with heavy, moderate, and light foot traffic, (150 to 500 people per day), and light equipment¹, with a concentrated load of up to 4,000kgf. It is important to note that products with this classification cannot be used on ramps.

3.6 FHO

EXTERNAL COMMERCIAL SPACES, WITH VERY HIGH PEOPLE'S FOOT TRAFFIC, HEAVY EQUIPMENT, AND VEHICLES, INCLUDING FMO SPACES



The **FHO** use class covers tile coatings intended for flat outdoor areas with very heavy foot traffic, that is, they are products with slip resistance (wet coefficient of friction > 0.4) that can be applied to wet outdoor areas, such as sidewalks, public walking areas, and uncovered stairs, industrial and urban with very heavy foot traffic (500 to 5,000 people per day) and heavy equipment² with a concentrated load of a maximum of 5,000kgf. It is important to note that products with this classification cannot be used on ramps. The **FHO** tile coatings can also be applied in **FMO** class spaces.

Applicable to countries requiring ANSI/ASTM compliance:

Note 02: For all these external flat locations, the wet DCOF will be > 0.42 , classified as EW, according to ANSI A326.3.

3.7 FRM

EXTERNAL COMMERCIAL SPACES, WITH SLOPE AND RAMPS (MAXIMUM SLOPE 8.33%) WITH HIGH, MODERATE, AND LIGHT PEOPLE'S FOOT TRAFFIC, LIGHT EQUIPMENT, AND EXTERNAL RESIDENTIAL SPACES, INCLUDING FMO SPACES

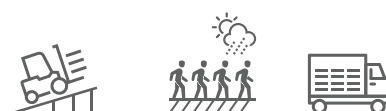


The **FRM** use class comprises tile coatings suitable for areas with heavy, moderate, and light foot traffic, light equipment, and external residential spaces with slope and ramps, (traffic from 150 to 500 people per day), and light equipment¹, with a concentrated load

of up to 4,000kgf. That is, they are products with slip resistance (wet coefficient of friction > 0.4), which, owing to the type of application, require a higher friction coefficient than in the other classes of use for external spaces. According to the Brazilian Accessibility Standard (NBR 9050) and the American Accessibility Standard (ANSI A117-2017), ramps cannot have a slope greater than 8.33%. The **FRM** use class tile coatings can also be applied in **FMO** class spaces. However, because they have a much higher coefficient of friction, increasing the safety required when walking over these areas, the impregnation of dirt also increases, requiring more frequent and heavy maintenance.

3.8 FRH

EXTERNAL COMMERCIAL SPACES, WITH SLOPE AND RAMPS (MAXIMUM SLOPE 8.33%), WITH VERY HIGH PEOPLE'S FOOT TRAFFIC, HEAVY EQUIPMENT, AND VEHICLES, INCLUDING FRM, FHO, AND FMO SPACES



The **FRH** use class includes tile coatings suitable for outdoor areas with very heavy people's foot traffic (500 to 5,000 people per day), heavy equipment², and vehicles, with a concentrated load of a maximum of 5,000kgf with slope and ramps, such as sidewalks, public walking areas, and uncovered, industrial, and urban stairs. That is, they are products with slip resistance (wet coefficient of friction > 0.4), which, owing to the type of application, require a higher friction coefficient than in the other classes of use for external spaces. According to the Brazilian Accessibility Standard (NBR 9050) and the American Accessibility Standard (ANSI A117-2017), ramps cannot have a slope greater than 8.33%. The **FRH** use class tile coatings can also be applied in **FMO**, **FHO**, and **FRM** class spaces. However, because they have a much higher coefficient of friction, increasing the safety required when walking over these areas, the impregnation of dirt also increases, requiring more frequent and heavy maintenance.

Applicable to countries requiring ANSI/ASTM compliance:

Note 03: For these external sloping locations, the wet DCOF will be > 0.50 .

Note 04: In outdoor spaces in areas where there is snowfall, the resistance of the tile coatings to frost should always be analyzed. Only porcelain tiles are indicated for external use in spaces that have a temperature equal to or less than 0°C.

3.9 FWI

WET INDOOR SPACES



The **FWI** use class comprises tile coatings for wet indoor spaces, i.e. areas with the possibility of water depth formation, such as bathrooms with shower. Products in this use class must also have a wet coefficient of friction > 0.4 , however, as these areas require greater ease of cleaning, this coefficient is lower compared to products intended for outdoor areas, such

as pool decks or ramps.

They are tile coatings that meet the coefficient of friction required by Performance Standard NBR 15575-3 and by the Fire Department.

Applicable to countries requiring ANSI/ASTM compliance: Also including the classification of wet DCOF > 0.42, classified as IW, according to ANSI A326.3.

The **FWI** use class will always be associated with one or more use classes, since the preferred use classes such as **FIR**, **FLC**, **FMC**, **FHC**, and **WWS** will be indicated, and slip resistance must be according to the requirements in NBR 15575-3, those issued by the Fire Department, and under ANSI A326.3. That is, a tile coating that does not feature the **FWI** use class does not feature slip resistance for wet indoor spaces.

Applicable to countries requiring ANSI/ASTM compliance:

Note 05: The DCOF is an important indicator for the slip resistance of ceramic tiles, especially in wet areas. However, slip resistance also depends on factors such as: shoe sole material, presence of contaminants, step speed and length, physical and mental conditions of individuals, whether the floor is flat or inclined, and floor drainage. These factors are beyond the manufacturer's control, and we cannot guarantee total slip resistance if any of them are outside the optimal parameters. We recommend that, in addition to the DCOF, these aspects should also be considered in the choice and use of tile coatings.

3.10 WRC

ALL INTERNAL OR EXTERNAL RESIDENTIAL AND COMMERCIAL WALLS UP TO 3M HIGH, INCLUDING WID SPACES



The **WRC** use class covers tile coatings for application on internal walls of residential and commercial spaces, as well as on external walls of residential and commercial spaces up to 3m high (follow NBR 13754 standard). The **WRC** coatings can also be applied in **WID** class spaces.

To ensure adequate adhesion of the tile coating on the wall, especially in cases of external walls that are exposed to the weather, the NBR 13755 guidelines must be followed. Only then will it be possible to ensure the product's good performance.

In outdoor spaces in areas where there is snowfall, the resistance of the tile coatings to frost should always be analyzed. Only porcelain tiles are indicated for external use in spaces that have a temperature equal to or less than 0°C.

3.11 WWS

**WALLS AND BOTTOM POOLS, COVERING
WRC AND WID SPACES, IN SUN SHELVES, ONLY WHEN
SPECIFIED FOR FWI PLACE OF USE**



The **WWS** use class comprises tile coatings for application to walls and interior bottoms of swimming pools and reflecting pools. For pools up to 60cm deep (children's pools, for instance), stairs, and shallow areas commonly called sun shelves, in addition to the **WWS** classification, the tile coatings must have the **FWI** use class (which has the coefficient of friction required by Performance Standard NBR 15575-3 and wet DCOF > 0.42 according to ANSI A326.3). The **WWS** tile coatings can also be applied in **WRC** and **WID** class spaces.

3.12 WFA

EXTERNAL FAÇADES, INCLUDING WRC AND WID SPACES



The **WFA** use class covers tile coatings for application on all types of external walls, without limitation of height, called facades. Facades can be of two types: bonded or ventilated. On bonded facades, mortar is used to fix the coating on the wall. On ventilated facades, parts are fixed to the wall by means of a mechanical system, usually a metal structure that allows a distance to be maintained between the tile coating and the wall, through which the air current circulates, creating a "chimney effect." The **WFA** tile coatings can also be applied in **WRC** and **WID** class spaces.

The product (ceramic tile) may be used in the coating of facades, provided that it is indicated in a detailed construction design, being the sole responsibility of the designer, pursuant to ABNT NBR 13755.

For additional information on the appropriate installation and performance required by the US market see **Note 06**.

In outdoor spaces in areas where there is incidence of snow, the resistance of tile coatings to frost should always be analyzed. Only porcelain tiles are indicated for external use in spaces that have a temperature equal to or less than 0°C.

Applicable to countries requiring ANSI/ASTM compliance:

Note 06: To ensure appropriate installation and performance, especially in cases of outdoor walls that are exposed to the weather, it is essential to follow the guidelines of the TCNA Manual, ASTM C1780, and the ANSI A108, A118 and A136 series. Only then will it be possible to ensure the product's good performance.

3.13 WID

ALL DRY INDOOR RESIDENTIAL AND COMMERCIAL WALLS



The **WID** use class covers tile coatings for application to dry indoor walls of residential and commercial spaces. This use class includes tile coatings with special artistic finishes (artistic tiles and porcelain tiles) that have aesthetic effects with the application of noble and delicate raw materials, such as precious metals and stone chips. These materials cannot be applied to bathroom walls, that is, in places that have direct access to moisture. This guidance aims to avoid problems relating to the change in product aesthetics, which will occur over time, owing to chemical attack caused by conventional cleaning of areas subjected to this type of moisture.

NOTES

¹Light Objects:

Including equipment, tools, furniture, etc. that do not have great potential to cause damage to the ceramic coating, such as excessive wear and fracture. The influence of the applied load, support material, and the weight of the object itself on the ceramic coating were analyzed. Examples: **mechanical tools (wrenches, pliers, hammer, sledgehammers), mason's tools (cold chisels, floats, trowels) grinder, sander, power saw, slab cutter, lawn trimmer, drills, polisher, welding machine, hoes, shovels, scaffolding with protected feet, cars, pickup trucks, SUV's, furniture in general (except some later addressed exceptions).**

²Heavy Objects:

Including equipment, tools, furniture, etc. that have the greatest potential to cause damage to the ceramic coating, such as wear and fracture. The influence of the applied load, support material, and the weight of the object itself on the ceramic coating were analyzed. Examples: **mini excavator, loader, skid-steer loader, lifting platform, concrete mixer, trucks, drill, wheeled chair, supermarket and airport carts and forklift.**

4. USE CLASS OF SPACES

The following tables show in a clearer and more useful way the places of use of each of the classifications above. They cover the spaces and their respective subdivisions in application areas that will assist in the specification of the most diverse types of projects.

4.1 Residential

Table 01 shows the areas of use for residential spaces with as many possibilities as possible where the tile coatings can be applied. As these are residential spaces, the tile coatings are mostly of the **FIR** use class. The exception is residential areas with common access that may have different classifications because they are spaces that will be susceptible to greater people's foot traffic and subject to more aggressive conditions, such as the likely presence of sand.

Residential outdoor areas with possible water depth formation, such as decks and pool edges, deserve attention. The potential for slipping is greater owing to exposure to weather conditions. It should also be considered that these are areas where barefoot people circulate and use products such as sunscreen, suntan lotion, and oil, which increase the risk of slipping. These sites require tile coatings with the **FMO** or **FHO** use class, which have greater slip resistance.

Garages also demand coatings with greater resistance, since there is traffic of vehicles. Thus, all laying guidelines provided for in the standard must be strictly fulfilled. These are places that require more frequent and heavy cleaning and maintenance, owing to the circulation of vehicles that tend to transfer to the internal area the dirt accumulated on wheels. Suitable tile coatings for these spaces are of the **FLC** use class. In the specification, light- or single-color products should be avoided, which more easily show dirt and impregnation.

Residential walls are considered façades, so the guideline is to observe the maximum height of 3m for the **WRC** products. If the wall or the residential external façade is more than 3m high, the correct use class is **WFA**.



TABLE 01 – INDICATION FOR USE: RESIDENTIAL

SPACE	AREA	PLACE OF USE
Residential	Living Room	FIR
Residential	Dining Room	FIR
Residential	Bedroom	FIR
Residential	Kitchen	FIR
Residential	Closet	FIR
Residential	Service Area (Laundry)	FWI
Residential	Bathroom	FIR or FWI ³
Residential	Depot	FIR
Residential	Garage	FLC
Residential	Office / Study Room / Library	FIR
Residential	Balcony / Terrace / Penthouse	FIR
Residential	Half Bathroom	FIR
Residential	Indoor Stairs	FIR or FWI ³
Residential	Covered / Uncovered Stairs	FMO
Residential	Entrance Hall	FIR
Residential	Corridor	FIR
Residential	Covered / Uncovered Terrace	FMO
Residential	Pool	WWS or FWI ³
Residential	Ballroom	FIR
Residential	Uncovered Sidewalk	FMO
Residential	Pool Deck	FMO
Residential	Façade (over 3m high)	WFA
Residential	Façade / Wall (up to 3m high)	WFA or WRC

NOTES

³For residential designs that have wet areas, requiring compliance with the Brazilian Performance Standard NBR 15575, products must have the **FWI** use class specification, such as bathrooms with shower, service areas, and laundries. Products for these areas must have a wet coefficient of friction > 0.4 . For countries that require ANSI / ASTM compliance, the wet DCOF shall be > 0.42 pursuant to ANSI A326.3. For residential designs where this coefficient of friction is not required, specs must include tile coatings of the **FIR**, **FLC**, **FMC**, and **FHC** use classes.

⁴The **WRC**, except for artistic products classified as **WID**, (artistic tile and porcelain tile) that have special and noble aesthetic effects with application of precious metals and stone chips. In this case, artistic products cannot cover outdoor areas such as walls and façades. This rule is also valid for spaces with water vapor such as bathroom stalls, saunas, and thermal pools.

4.2 Restaurant & Bistro

Table 02 shows the usage specifications for the different restaurant and bistro areas.

Spaces with heavy people's foot traffic, such as public areas or kitchens, with heavy traffic of equipment, require tile coatings of the **FHC** use class (areas larger than 100m²), and **FMC** (areas smaller than 100m²). On the other hand, areas of moderate people's foot traffic require tile coatings of the use class **FMC** (areas larger than 100m²), and **FLC** (areas smaller than 100m²).



TABLE 02 – INDICATION FOR USE: RESTAURANT & BISTRO

SPACE	AREA	PLACE OF USE
Restaurant & Bistro	Indoor Dining Room	FMC
Restaurant & Bistro	Uncovered Dining Room	FMO
Restaurant & Bistro	Service Area	FHC
Restaurant & Bistro	Half Bathroom	FLC
Restaurant & Bistro	Kitchen	FHC
Restaurant & Bistro	Depot	FLC
Restaurant & Bistro	Entrance	FMC
Restaurant & Bistro	Reception	FMC
Restaurant & Bistro	Waiting Room	FMC
Restaurant & Bistro	Administrative Room	FLC
Restaurant & Bistro	Room with Circulation	FMC
Restaurant & Bistro	Room without Circulation	FLC

4.3 Snack Bar & Coffee Shop

Table 03 shows the specifications of use for the different areas of snack bars and cafes. These areas typically have reduced areas and light people's foot traffic.



TABLE 03 – INDICATION FOR USE: SNACK BAR & COFFEE SHOP

SPACE	AREA	PLACE OF USE
Snack Bar & Coffee Shop	Indoor Countertop	FMC
Snack Bar & Coffee Shop	Uncovered Countertop	FMO
Snack Bar & Coffee Shop	Indoor Circulation	FMC
Snack Bar & Coffee Shop	Indoor Dining Room	FMC
Snack Bar & Coffee Shop	Uncovered Dining Room	FMO
Snack Bar & Coffee Shop	Service	FMC
Snack Bar & Coffee Shop	Half Bathroom	FLC
Snack Bar & Coffee Shop	Kitchen	FMC
Snack Bar & Coffee Shop	Depot	FLC
Snack Bar & Coffee Shop	Entrance	FMC
Snack Bar & Coffee Shop	Reception	FMC
Snack Bar & Coffee Shop	Waiting Room	FMC
Snack Bar & Coffee Shop	Room with Circulation	FMC
Snack Bar & Coffee Shop	Room without Circulation	FLC

4.4 Bar

Table 04 shows the use specifications for the different bar areas, considered predominantly of the **FMC** use class, with an average area of 100m² and average/moderate people's foot traffic.



TABLE 04 – INDICATION FOR USE: BAR

SPACE	AREA	PLACE OF USE
Bar	Indoor Circulation	FMC
Bar	Uncovered Circulation	FMC
Bar	Indoor Dining Room	FMC
Bar	Indoor Countertop	FMC
Bar	Half Bathroom	FMC
Bar	Kitchen	FMC
Bar	Light Material Depot	FMC
Bar	Heavy Material Depot	FMC
Bar	Entrance	FMC
Bar	Uncovered Patio	FMC
Bar	Covered Patio	FMC
Bar	Reception	FMC
Bar	Room with Circulation	FMC
Bar	Room without Circulation	FMC
Bar	Waiting Room	FMC

4.5 Social Club

Table 05 shows the usage specifications for the different social club areas. In general, these areas have heavy people's foot traffic and, therefore, have **FMC** use class.



TABLE 05 – INDICATION FOR USE: SOCIAL CLUB

SPACE	AREA	PLACE OF USE
Social Club	Indoor Circulation	FMC
Social Club	Uncovered Circulation	FMO
Social Club	Pool Deck	FMO
Social Club	Indoor Dining Room	FMC
Social Club	Uncovered Dining Room	FMO
Social Club	Service	FMC / FWI
Social Club	Auditorium	FLC
Social Club	Bathroom	FLC / FWI
Social Club	Indoor Bar	FLC
Social Club	Uncovered Bar	FMO
Social Club	Indoor Cabin	FMC
Social Club	Uncovered Cabin	FMO
Social Club	Kitchen	FLC
Social Club	Light Material Depot	FLC
Social Club	Heavy Material Depot	FMC
Social Club	Entrance	FMC
Social Club	Gym	FMC
Social Club	Hall	FMC
Social Club	Snack Bar	FLC
Social Club	Covered Patio	FMC
Social Club	Uncovered Patio	FMO
Social Club	Pool	WWS / FWI
Social Club	Indoor Playground	FMC
Social Club	Uncovered Playground	FMO
Social Club	Dance Room	FMC
Social Club	Fitness Room	FMC
Social Club	Playroom	FMC

SPACE	AREA	PLACE OF USE
Social Club	Administrative Room	FLC
Social Club	Room with Circulation	FMC
Social Club	Room without Circulation	FLC
Social Club	Sauna	FMC / FWI

4.6 Nightclub, Club, and Concert Hall

Table 06 shows the usage specifications for the different areas of nightclubs, clubs, and concert halls. They are considered areas with heavy people's foot traffic, being classified, preferably, as an **FHC** use class.



TABLE 06 – INDICATION FOR USE: NIGHTCLUB, CLUB, AND CONCERT HALL

SPACE	AREA	PLACE OF USE
Nightclub, Club, and Concert Hall	Stage	FHC
Nightclub, Club, and Concert Hall	Indoor Circulation	FHC
Nightclub, Club, and Concert Hall	Service	FHC
Nightclub, Club, and Concert Hall	Half Bathroom	FHC
Nightclub, Club, and Concert Hall	Indoor Bar	FHC
Nightclub, Club, and Concert Hall	Uncovered Bar	FHO
Nightclub, Club, and Concert Hall	Indoor Cabin	FHC

SPACE	AREA	PLACE OF USE
Nightclub, Club, and Concert Hall	Kitchen	FMC
Nightclub, Club, and Concert Hall	Light Material Depot	FMC
Nightclub, Club, and Concert Hall	Heavy Material Depot	FHC
Nightclub, Club, and Concert Hall	Reception	FHC
Nightclub, Club, and Concert Hall	Restaurant	FMC
Nightclub, Club, and Concert Hall	Dance Room	FHC

4.7 Shopping Mall

Table 07 shows the usage specifications for the different shopping mall areas. They are commercial spaces with heavy people's foot traffic in common spaces that require tile coatings of the **FHC** use class. On the other hand, more reserved areas without a large concentration of people require tile coatings of the **FMC** use class. In the case of shopping mall commercial stores, the specification will be according to the footage: greater than 100m² (**FMC** use class) and less than 100m² (**FLC** use class).

TABLE 07 – INDICATION FOR USE: SHOPPING MALL

SPACE	AREA	PLACE OF USE
Shopping Mall	Indoor Circulation	FHC
Shopping Mall	Uncovered Circulation	FHO
Shopping Mall	Indoor Dining Room	FHC
Shopping Mall	Uncovered Dining Room	FHO
Shopping Mall	Half Bathroom	FMC
Shopping Mall	Indoor Bar	FMC
Shopping Mall	Uncovered Bar	FMO
Shopping Mall	Cinema	FMC
Shopping Mall	Internal Service Circulation	FHC
Shopping Mall	Uncovered Service Circulation	FHO
Shopping Mall	Light Material Depot	FMC
Shopping Mall	Heavy Material Depot	FHC
Shopping Mall	Entrance	FHC

SPACE	AREA	PLACE OF USE
Shopping Mall	Indoor Parking Lot	FHC
Shopping Mall	Uncovered Parking Lot	FHO
Shopping Mall	Snack Bar	FMC
Shopping Mall	Store	FMC
Shopping Mall	Covered Patio	FHC
Shopping Mall	Uncovered Patio	FHO
Shopping Mall	Covered Playground	FMC
Shopping Mall	Restaurant	FMC
Shopping Mall	Administrative Room	FLC
Shopping Mall	Room with Circulation	FMC
Shopping Mall	Room without Circulation	FLC



4.8 Supermarket

Table 08 shows the usage specifications for the different supermarket areas. These areas predominantly have spaces with heavy people's foot traffic and equipment, such as shopping carts, which require tile coatings of the **FHC** use class, with Natural finish. Less critical areas, such as bathrooms and administrative rooms, require tile coatings of the **FLC** use class. Supermarkets with cold rooms require frost-resistant products, such as full-bodied porcelain tiles, with water absorption of less than 0.1%.

TABLE 08 – INDICATION FOR USE: SUPERMARKET

SPACE	AREA	PLACE OF USE
Supermarket	Indoor Circulation	FHC
Supermarket	Uncovered Circulation	FHO
Supermarket	Half Bathroom	FLC
Supermarket	Cold Room	FMC
Supermarket	Internal Service Circulation	FHC
Supermarket	Uncovered Service Circulation	FHO
Supermarket	Depot	FHC
Supermarket	Entrance	FHC
Supermarket	Indoor Parking Lot	FHC
Supermarket	Uncovered Parking Lot	FHO
Supermarket	Bakery	FLC
Supermarket	Reception	FHC
Supermarket	Administrative Room	FLC
Supermarket	Room with Circulation	FHC
Supermarket	Room without Circulation	FLC



4.9 Bakery

Table 09 shows the specifications of use for the different areas of bakeries, spaces with light people's foot traffic.

TABLE 09 – INDICATION FOR USE: BAKERY

SPACE	AREA	PLACE OF USE
Bakery	Indoor Circulation	FLC
Bakery	Uncovered Circulation	FMO
Bakery	Indoor Store	FLC
Bakery	Uncovered Store	FMO
Bakery	Service	FLC
Bakery	Kitchen (Bakery)	FLC
Bakery	Depot	FLC
Bakery	Administrative Room	FLC



4.10 Butchery

Table 10 shows the usage specifications for the different areas of butcheries. In general, in this type of space, there is no great people's foot traffic, however, there is heavy traffic of trolleys and equipment, requiring the specification of tile coatings of the **FMC** use class.

TABLE 10 – INDICATION FOR USE: BUTCHERY

SPACE	AREA	PLACE OF USE
Butchery	Indoor Circulation	FMC
Butchery	Uncovered Circulation	FMO
Butchery	Service Area	FMC
Butchery	Bathroom	FMC / FWI
Butchery	Cold Room	FMC ⁵
Butchery	Depot	FMC
Butchery	Entrance	FLC



OBSERVAÇÕES

⁵**Cold rooms** must be coated with full-bodied porcelain tiles only.

4.11 Bank Branch

Table 11 shows the usage specifications for the different areas of bank branches. In these spaces, the classification of use depends on the people's foot traffic, and it is possible to specify tile coatings of the **FHC** use class in areas with customer traffic, and the **FLC** tile coatings in areas with employee traffic only.

TABLE 11 – INDICATION FOR USE: BANK BRANCH

SPACE	AREA	PLACE OF USE
Bank Branch	Indoor Circulation Area (Private)	FLC
Bank Branch	Service Area	FHC
Bank Branch	Half Bathroom	FHC
Bank Branch	Pantry	FLC
Bank Branch	Kitchen	FLC
Bank Branch	Entrance	FHC
Bank Branch	Room with Circulation (Public)	FHC
Bank Branch	Room without Circulation	FLC



4.12 Commercial Office

Table 12 shows the usage specifications for the different commercial office areas. They are areas with low people's foot traffic, and are sorted into the **FLC** use class.

TABLE 12 – INDICATION FOR USE: COMMERCIAL OFFICE

SPACE	AREA	PLACE OF USE
Commercial Office	Indoor Circulation Area (Private)	FLC
Commercial Office	Service Area	FHC
Commercial Office	Half Bathroom	FHC
Commercial Office	Pantry	FLC
Commercial Office	Kitchen	FLC
Commercial Office	Entrance	FHC
Commercial Office	Room with Circulation (Public)	FHC
Commercial Office	Room without Circulation	FLC



4.13 Commercial Store

Table 13 shows the usage specifications for the different commercial store areas. The indication is based on the relevant establishment's size, as there are small stores (areas less than 100m²), usually with low concentration and moderate people's foot traffic; and large stores (areas greater than 100m²), and department stores, for instance, with high concentration and heavy foot traffic. In **table 30**, the classification addresses the two situations above, with the **FMC** and **FLC** use classes, with title coatings of adequate resistance for each case. Equipment such as trolleys used in commercial stores should also be considered in the specification, since the wheels tend to cause greater wear on the ceramic surface, requiring tile coatings of the **FHC** use class, and a Natural finish.

TABLE 13 – INDICATION FOR USE: COMMERCIAL STORE

SPACE	AREA	PLACE OF USE >100 M ²	PLACE OF USE <100 M ²
Commercial Store	Indoor Circulation	FMC	FLC
Commercial Store	Indoor Store	FMC	FLC
Commercial Store	Uncovered Store	FMC	FLC
Commercial Store	Pantry	FLC	FLC
Commercial Store	Light Material Depot	FLC	FLC
Commercial Store	Heavy Material Depot	FMC	FLC
Commercial Store	Reception	FMC	FLC
Commercial Store	Room with Circulation	FMC	FLC
Commercial Store	Room without Circulation	FLC	FLC



4.14 Beauty Parlor & Barber Shop

Table 14 shows the use specifications for the different areas of beauty parlors and barber shops, which require tile coatings of the **FLC** use class, owing to the typical light people's foot traffic.

TABLE 14 – INDICATION FOR USE: BEAUTY PARLOR & BARBER SHOP

SPACE	AREA	PLACE OF USE
Beauty Parlor & Barber Shop	Service	FLC
Beauty Parlor & Barber Shop	Half Bathroom	FLC
Beauty Parlor & Barber Shop	Pantry	FLC
Beauty Parlor & Barber Shop	Depot	FLC
Beauty Parlor & Barber Shop	Reception	FLC
Beauty Parlor & Barber Shop	Haircut Room	FLC
Beauty Parlor & Barber Shop	Waiting Room	FLC
Beauty Parlor & Barber Shop	Room with Circulation	FLC
Beauty Parlor & Barber Shop	Room without Circulation	FLC



4.15 Public Laundry

Table 15 shows the use specifications for the different areas of public laundries, which are spaces with light people's foot traffic, predominantly of the **FLC** use class.

TABLE 15 – INDICATION FOR USE: PUBLIC LAUNDRY

SPACE	AREA	PLACE OF USE
Public Laundry	Indoor Circulation	FLC
Public Laundry	Service	FLC
Public Laundry	Depot	FLC
Public Laundry	Reception	FMC



4.16 Public Toilet

Table 16 shows the use specifications for the different areas of public toilets, considered predominantly of the **FHC** use class owing to the daily people's foot traffic.

TABLE 16 – INDICATION FOR USE: PUBLIC TOILET

SPACE	AREA	PLACE OF USE
Public Toilet	Toilet with Shower	FHC / FWI
Public Toilet	Toilet without Shower	FHC
Public Toilet	Urinal	FHC
Public Toilet	Half Bathroom	FHC
Public Toilet	Changing Room	FHC
Public Toilet	Depot	FHC



4.17 Hotel and Flat

Table 17 shows the usage specifications for the different areas of hotels and flats. They are places with shared residential spaces, such as dormitories, bedroom bathrooms, and suites. However, public traffic areas have a high concentration and heavy people's foot traffic, and require tile coatings of other use classes.

TABLE 17 – INDICATION FOR USE: HOTEL AND FLAT

SPACE	AREA	PLACE OF USE
Hotel and Flat	Indoor Circulation	FMC
Hotel and Flat	Pool Deck	FMO
Hotel and Flat	Indoor Dining Room	FMC
Hotel and Flat	Uncovered Dining Room	FMO
Hotel and Flat	Service	FMC
Hotel and Flat	Auditorium	FMC
Hotel and Flat	Restricted Bathroom	FMC / FWI
Hotel and Flat	Indoor Bar	FMC
Hotel and Flat	Uncovered Bar	FMO
Hotel and Flat	Kitchen	FMC
Hotel and Flat	Light Material Depot	FLC
Hotel and Flat	Heavy Material Depot	FMC
Hotel and Flat	Dorm	FIR
Hotel and Flat	Entrance	FMC
Hotel and Flat	Hall	FMC
Hotel and Flat	Snack Bar	FMC
Hotel and Flat	Laundry	FMC
Hotel and Flat	Covered Patio	FMC
Hotel and Flat	Pool	WWS / FWI
Hotel and Flat	Playground	FMC
Hotel and Flat	Reception	FMC
Hotel and Flat	Restaurant	FMC

SPACE	AREA	PLACE OF USE
Hotel and Flat	Fitness Room	FMC
Hotel and Flat	Playroom	FMC
Hotel and Flat	Room with Circulation	FMC
Hotel and Flat	Room without Circulation	FLC
Hotel and Flat	Sauna	FMC / FWI



4.18 Auditorium

Table 18 shows the usage specifications for the different auditorium areas. They are sorted into the **FHC** (heavy commercial) use class owing to the possibility of traffic of a large number of people.

TABLE 18 – INDICATION FOR USE: AUDITORIUM

SPACE	AREA	PLACE OF USE
Auditorium	Main Stage	FHC
Auditorium	Indoor Circulation	FHC
Auditorium	Uncovered Outdoor Circulation	FHO
Auditorium	Audience	FHC
Auditorium	Half Bathroom	FHC
Auditorium	Entrance	FHC
Auditorium	Hall	FHC
Auditorium	Snack Bar	FHC



4.19 Religious Temple

Table 19 shows the use specifications for the different areas of religious temples, spaces with a high concentration of people, which require tile coatings of the **FMC** use class for common areas, and the **FLC** use class for private areas, such as toilets.

TABLE 19 – INDICATION FOR USE: RELIGIOUS TEMPLE

SPACE	AREA	PLACE OF USE
Religious Temple	Internal Public	FMC
Religious Temple	Uncovered Outdoor Public	FMO
Religious Temple	Half Bathroom	FLC
Religious Temple	Entrance	FMC



4.20 Gym

Table 20 shows the specifications of use of the ceramic coatings for the different areas of gyms. It should always be noted that the size of the commercial enterprise is a factor to be taken into account even with the indications described, since it is directly related to the number of people circulating in the place and, as a result, to the degree of resistance that the product should present.



TABLE 20 – INDICATION FOR USE: GYM

SPACE	AREA	PLACE OF USE
Gym	Indoor Circulation	FMC
Gym	Uncovered Flat Circulation	FMO
Gym	Pool Deck	FMO
Gym	Indoor Dining Room	FMC
Gym	Uncovered Dining Room	FMO
Gym	Public Toilet	FMC / FWI
Gym	Private Toilet	FMC / FWI
Gym	Pantry	FLC
Gym	Light Material Depot	FMC
Gym	Heavy Material Depot	FMC

SPACE	AREA	PLACE OF USE
Gym	Entrance Hall	FMC
Gym	Living Room	FMC
Gym	Uncovered Patio	FMO
Gym	Pool	WWS
Gym	Reception	FMC
Gym	Fitness Room	FMC
Gym	Dance Room	FMC
Gym	Room with Circulation	FMC
Gym	Room without Circulation	FLC
Gym	Sauna	FMC / FWI
Gym	Changing Room	FMC / FWI

Saunas are wet places owing to the high concentration of water vapor, and the suitable tile coatings for this type of space are the **FWI** for the floor and the **WRC** for the walls.

4.21 Sports Gym

Table 21 shows the usage specifications for the different areas of sports gyms. They are spaces with heavy people's foot traffic, but usually smaller than other spaces of the kind, such as stadiums, for instance. Therefore, the tile coatings suitable for sports gyms must be of the **FMC** or **FHC** use class, according to each area.

TABLE 21 – INDICATION FOR USE: GYM

SPACE	AREA	PLACE OF USE
Sports Gym	Indoor Circulation	FHC
Sports Gym	Uncovered Circulation	FHO
Sports Gym	Indoor Bleachers	FHC
Sports Gym	Uncovered Bleachers	FHO
Sports Gym	Half Bathroom	FMC
Sports Gym	Indoor Bar	FHC

SPACE	AREA	PLACE OF USE
Sports Gym	Uncovered Bar	FHO
Sports Gym	Indoor Cabin	FMC
Sports Gym	Uncovered Cabin	FMO
Sports Gym	Entrance	FHC
Sports Gym	Snack Bar	FHC
Sports Gym	Indoor Store	FMC



4.22 Stadium

Table 22 shows the usage specifications for the different stadium areas. They are spaces where there is heavy circulation and concentration of people; therefore, they require tile coatings of the **FHC** use class with Natural finish. In turn, areas with a lower concentration of people require tile coatings of the **FMC** use class with a Natural finish, because, despite not receiving a great concentration, their foot traffic is heavy.

TABLE 22 – INDICATION FOR USE: STADIUM

SPACE	AREA	PLACE OF USE
Stadium	Indoor Circulation	FHC
Stadium	Uncovered Circulation	FHO
Stadium	Indoor Bleachers	FHC
Stadium	Uncovered Bleachers	FHO
Stadium	Half Bathroom	FMC
Stadium	Indoor Bar	FHC
Stadium	Uncovered Bar	FHO
Stadium	Indoor Cabin	FMC
Stadium	Uncovered Cabin	FMO
Stadium	Entrance	FHC
Stadium	Snack Bar	FHC
Stadium	Indoor Store	FMC



4.23 Nursing Home

Table 23 shows the usage specifications for the different areas of nursing homes. They are spaces of moderate people's foot traffic, so the indicated use class is predominantly the **FMC**.



TABLE 23 – INDICATION FOR USE: NURSING HOME

SPACE	AREA	PLACE OF USE
Nursing Home	Indoor Circulation	FMC
Nursing Home	Uncovered Circulation	FMO
Nursing Home	Indoor Dining Room	FMC
Nursing Home	Service	FMC
Nursing Home	Bathroom	FMC / FWI
Nursing Home	Kitchen	FMC
Nursing Home	Entrance Hall	FMC
Nursing Home	Dorm	FMC
Nursing Home	Uncovered Patio	FMO
Nursing Home	Covered Patio	FMC
Nursing Home	Laundry	FMC / FWI
Nursing Home	Reception	FMC

SPACE	AREA	PLACE OF USE
Nursing Home	Room with Circulation	FMC
Nursing Home	Room without Circulation	FMC
Nursing Home	Waiting Room	FMC
Nursing Home	Administrative Room	FMC
Nursing Home	Consultation Room	FMC
Nursing Home	Examination Room	FMC
Nursing Home	Physiotherapy Room	FMC
Nursing Home	Changing Room	FMC / FWI

4.24 Clinic

Table 24 shows the usage specifications for the different areas of clinics. For these areas, we observed the places where there is heavy circulation / people's foot traffic, sorted into the **FMC** use class, and areas where there is no heavy circulation, such as examination rooms and laboratories, considered of the **FLC** use class. For places with traffic of wheeled chairs (dental chair, for instance), the specification must be of times coatings of the **FMC** use class and Natural finish. For these areas, the use of carpets is recommended, preventing the wearing of ceramic tiles.

TABLE 24 – INDICATION FOR USE: CLINIC

SPACE	AREA	PLACE OF USE
Clinic	Indoor Circulation	FMC
Clinic	Uncovered Circulation	FMO
Clinic	Service	FMC
Clinic	Indoor Dining Room	FMC
Clinic	Half Bathroom	FLC
Clinic	Internal Service Circulation	FMC
Clinic	Kitchen	FLC
Clinic	Depot	FMC
Clinic	Ward	FMC
Clinic	Entrance	FMC

SPACE	AREA	PLACE OF USE
Clinic	Indoor Stairs	FMC
Clinic	Uncovered Stairs	FMO
Clinic	Laboratory	FLC
Clinic	Snack Bar	FMC
Clinic	Laundry	FLC / FWI
Clinic	Covered Patio	FMC
Clinic	Patient's Room	FLC
Clinic	Reception	FMC
Clinic	Waiting Room	FMC
Clinic	Administrative Room	FLC
Clinic	Room with Circulation	FMC
Clinic	Room without Circulation	FLC
Clinic	Consultation Room	FLC
Clinic	Examination Room	FLC
Clinic	Physiotherapy Room	FLC



4.25 Consulting Room

Table 25 shows the usage specifications for the different consulting rooms areas. These areas have as their main characteristic a low people's foot traffic and, thus, are preferably classified as **FLC**. The exception is in the reception, as it demands tile coatings of the **FMC** use class due to the greater flow of people and the possibility of direct access to the street, and the ceramic surface can wear more easily.

TABLE 25 – INDICATION FOR USE: CONSULTING ROOM

SPACE	AREA	PLACE OF USE
Consulting Room	Half Bathroom	FLC
Consulting Room	Pantry	FLC
Consulting Room	Depot	FLC
Consulting Room	Laboratory	FLC
Consulting Room	Reception	FMC
Consulting Room	Waiting Room	FLC
Consulting Room	Administrative Room	FLC
Consulting Room	Room with Circulation	FLC
Consulting Room	Room without Circulation	FLC
Consulting Room	Consultation Room	FLC
Consulting Room	Examination Room	FLC
Consulting Room	Physiotherapy Room	FLC



4.26 Hospital

Table 26 shows the usage specifications for the hospital areas. They are places that have certain particularities and different technical requirements. Areas with heavy people's foot traffic, bathrooms, and laboratories require tile coatings with Natural finish.

Coatings with Cleantec technology must also be considered for walls of hospital spaces, improving the specs performance requirement. Thus, we recommend a Natural finish if full-bodied porcelain tiles are used. The application of Cleantec on hospital floors is not recommended.

One must also observe the chemical resistance of tile coatings to cleaning substances used in hospitals, since many of them have a high concentration and unknown composition. For these situations, please refer to the **Elizabeth' Technical Support Division** before any cleaning specification and/or maintenance that is not described on the packaging.

TABLE 26 – INDICATION FOR USE: HOSPITAL

SPACE	AREA	PLACE OF USE
Hospital	Indoor Circulation	FMC
Hospital	Uncovered Circulation	FHO
Hospital	Indoor Dining Room	FMC
Hospital	Uncovered Dining Room	FMO
Hospital	Service	FMC
Hospital	Bathroom	FMC / FWI
Hospital	Internal Service Circulation	FMC
Hospital	Uncovered Service Circulation	FHO
Hospital	Kitchen	FMC
Hospital	Depot	FMC
Hospital	Ward	FMC
Hospital	Entrance	FHC
Hospital	Laboratory	FMC
Hospital	Snack Bar	FMC
Hospital	Laundry	FMC
Hospital	Covered Patio	FHC

SPACE	AREA	PLACE OF USE
Hospital	Patient's Room	FLC
Hospital	Reception	FMC
Hospital	Waiting Room	FMC
Hospital	Administrative Room	FLC
Hospital	Room with Circulation	FHC
Hospital	Room without Circulation	FLC
Hospital	Consultation Room	FMC
Hospital	Examination Room	FMC
Hospital	Physiotherapy Room	FMC
Hospital	Changing Room	FLC / FWI



4.27 School and University

Table 27 shows the usage specifications for the different areas of schools and universities. They are spaces with high concentration and heavy people's foot traffic, having their areas classified, for the most part, under the **FHC** use class, preferably with Natural finish coatings.



TABLE 27 – INDICATION FOR USE: SCHOOL AND UNIVERSITY

SPACE	AREA	PLACE OF USE
School and University	Circulation	FHC
School and University	Pool Deck	FHO
School and University	Indoor Dining Room	FHC
School and University	Auditorium	FMC
School and University	Half Bathroom	FMC
School and University	Pantry	FLC
School and University	Kitchen	FMC
School and University	Gym	FHC
School and University	Laboratory	FMC
School and University	Snack Bar	FMC
School and University	Covered Patio	FHC
School and University	Uncovered Patio	FHO

4.28 Library

Table 28 shows the usage specifications for different library areas. Public, school, and university libraries are considered areas of moderate people's foot traffic and, therefore, preferably of the **FMC** use class. The reserved areas of libraries, with light foot traffic, are sorted into the **FLC** use class.

TABLE 28 – INDICATION FOR USE: LIBRARY

SPACE	AREA	PLACE OF USE
Library	Collection	FMC
Library	Indoor Circulation	FMC
Library	Service	FLC
Library	Half Bathroom	FLC
Library	Pantry	FLC
Library	Entrance	FMC
Library	Reception	FMC
Library	Room with Circulation (Public)	FHC
Library	Room without Circulation	FLC



4.29 Museum & Gallery

Table 29 shows the usage specifications for museum and gallery areas. As there are designs of different sizes and foot traffic, we took into consideration large galleries or museums with heavy people's foot traffic.

TABLE 29 – INDICATION OF USE: MUSEUM & GALLERY

SPACE	AREA	PLACE OF USE
Museum & Gallery	Indoor Circulation	FHC
Museum & Gallery	Uncovered Circulation	FHO
Museum & Gallery	Indoor Exhibit	FHC
Museum & Gallery	Uncovered Exhibit	FHO
Museum & Gallery	Indoor Dining Room	FMC
Museum & Gallery	Auditorium	FMC
Museum & Gallery	Half Bathroom	FMC
Museum & Gallery	Pantry	FLC
Museum & Gallery	Kitchen	FLC
Museum & Gallery	Light Material Depot	FMC
Museum & Gallery	Heavy Material Depot	FMC
Museum & Gallery	Entrance	FHC
Museum & Gallery	Snack Bar	FMC
Museum & Gallery	Workshop	FMC
Museum & Gallery	Covered Patio	FHC
Museum & Gallery	Uncovered Patio	FHO
Museum & Gallery	Reception	FHC
Museum & Gallery	Restaurant	FMC
Museum & Gallery	Classroom	FMC
Museum & Gallery	Meeting Room	FLC
Museum & Gallery	Administrative Room	FLC
Museum & Gallery	Room with Circulation	FHC
Museum & Gallery	Room without Circulation	FLC



4.30 Cinema & Theater

Table 30 shows the usage specifications for the different areas of cinemas and theaters. They are considered areas with a high people’s foot traffic, but due to their characteristics, there is a predominance of remaining static (sitting) for long periods, favoring the **FMC** use class for most areas.



TABLE 30 – INDICATION FOR USE: CINEMA & THEATER

SPACE	AREA	PLACE OF USE
Cinema & Theater	Indoor Circulation	FMC
Cinema & Theater	Half Bathroom	FLC
Cinema & Theater	Hall	FMC
Cinema & Theater	Snack Bar	FMC
Cinema & Theater	Reception	FMC
Cinema & Theater	Indoor Audience	FMC
Cinema & Theater	Room with Circulation	FMC
Cinema & Theater	Room without Circulation	FLC

4.31 Public Space

Table 31 shows the usage specifications for the different areas of public spaces. They are considered urban areas of heavy people's foot traffic, and require tile coatings of the **FHC** use class.

Public spaces can be defined as areas administered by the government and in common use by the population. Examples: squares, parks, and boardwalks.



TABLE 31 – INDICATION FOR USE: PUBLIC SPACE

SPACE	AREA	PLACE OF USE
Public Space	Indoor Circulation Area	FHC
Public Space	Covered Circulation Area	FHC
Public Space	Uncovered Circulation Area	FHO
Public Space	Half Bathroom	FHC
Public Space	Garden	FHC
Public Space	Uncovered Patio	FHO

4.32 Public Transport Terminal

Table 32 shows the usage specifications for different areas of public transport terminals. These spaces are considered urban areas and concentrate a large number of people and heavy daily foot traffic, which require tile coatings of the **FHC** use class and a Natural finish.



TABLE 32 – INDICATION FOR USE: PUBLIC TRANSPORT TERMINAL

SPACE	AREA	PLACE OF USE
Public Transport Terminal	Indoor Circulation	FHC
Public Transport Terminal	Uncovered Circulation	FHO
Public Transport Terminal	Indoor Landing	FHC
Public Transport Terminal	Uncovered Landing	FHO

SPACE	AREA	PLACE OF USE
Public Transport Terminal	Indoor Boarding	FHC
Public Transport Terminal	Uncovered Boarding	FHO
Public Transport Terminal	Half Bathroom	FHC
Public Transport Terminal	Entrance	FHC
Public Transport Terminal	Snack Bar	FHC
Public Transport Terminal	Covered Patio	FHC
Public Transport Terminal	Uncovered Patio	FHO
Public Transport Terminal	Room with Circulation	FHC
Public Transport Terminal	Room without Circulation	FHC

4.33 Airport

Table 33 shows the usage specifications for the different areas of airports. As there are different sizes of airports with equally different circulation, we took into consideration that there is a heavy people's foot traffic and traffic of devices such as carts and bags. Therefore, the specified place of use for most airport areas is **FHC**.

Polished full-bodied porcelain tiles can be indicated for this type of space, provided that some criteria and rules are observed. The application must take place 5m away from the access to the street. It is important to bear in mind that polished products are more susceptible to scratches and eventual loss of shine. If the surface shows substantial shines loss, repolishing is recommended for partial shine recovery. This procedure must be guided, evaluated, and released by the **Elizabeth' Technical Support Division**. It should be noted that this process aims to improve the product's look, and even recovering the shine of the repolished area, but will not cause the product to reach its original shine.



TABLE 33 – INDICATION FOR USE: AIRPORT

SPACE	AREA	PLACE OF USE
Airport	Indoor Circulation	FHC
Airport	Uncovered Circulation	FHO
Airport	Indoor Landing	FHC
Airport	Uncovered Landing	FHO
Airport	Shipping	FHC
Airport	Half Bathroom	FHC
Airport	Indoor Bar	FHC
Airport	Uncovered Bar	FHO
Airport	Internal Service Circulation	FHC
Airport	Uncovered Service Circulation	FHO
Airport	Entrance	FHC
Airport	Snack Bar	FHC
Airport	Indoor Store	FMC
Airport	Restaurant	FMC

4.34 Gas Station

Table 34 shows the usage specifications for the different gas station areas. In these spaces, areas with heavy vehicle traffic require tile coatings of the **FHC** use class, and areas without vehicle traffic, only with people's foot traffic, require tile coatings of the **FLC** use class. Supply runways must be specified with Natural finishing products.



TABLE 34 – INDICATION FOR USE: GAS STATION

SPACE	AREA	PLACE OF USE
Gas Station	Service	FHC
Gas Station	Half Bathroom	FLC
Gas Station	Depot	FHC
Gas Station	Snack Bar	FHC
Gas Station	Store	FHC
Gas Station	Covered Supply Runway	FHC
Gas Station	Administrative Room	FLC

4.35 Auto Dealer

Table 35 shows the specifications of use for the different areas of auto dealers that, because they are spaces with vehicle circulation requiring greater mechanical resistance, are sorted into the **FMC** use class. In areas where there will be no circulation of automobiles, the use class of tile coatings is the **FLC**.



TABLE 35 – INDICATION FOR USE: AUTO DEALER

SPACE	AREA	PLACE OF USE
Auto Dealer	Half Bathroom	FLC
Auto Dealer	Entrance	FLC
Auto Dealer	Indoor Mechanical Workshop	FHC
Auto Dealer	Parking Lot	FHO
Auto Dealer	Reception	FLC
Auto Dealer	Indoor Auto Show	FMC
Auto Dealer	Uncovered Auto Show	FHO
Auto Dealer	Administrative Room	FLC
Auto Dealer	Room with Circulation	FLC
Auto Dealer	Room without Circulation	FLC

4.36 Mechanical Workshop

Table 36 shows the usage specifications for the different mechanical workshop areas. These spaces have light people's foot traffic, but heavy traffic of vehicles in the main areas, requiring tile coatings of the **FHC** use class and Natural finish.



TABLE 36 – INDICATION FOR USE: MECHANICAL WORKSHOP

SPACE	AREA	PLACE OF USE
Mechanical Workshop	Uncovered Mechanical Workshop	FHO
Mechanical Workshop	Indoor Mechanical Workshop	FHC
Mechanical Workshop	Half Bathroom	FLC
Mechanical Workshop	Reception	FLC
Mechanical Workshop	Waiting Room	FLC
Mechanical Workshop	Room with Circulation	FLC
Mechanical Workshop	Room without Circulation	FLC

4.37 Parking Lot

Table 37 shows the use specifications for the different parking lot areas, spaces with heavy circulation of vehicles, requiring tile coatings of the **FMC** use class. Areas without vehicle circulation, such as reception and toilets, can be specified with tile coatings of the **FLC** use class.



TABLE 37 – INDICATION FOR USE: PARKING LOT

SPACE	AREA	PLACE OF USE
Parking Lot	Indoor Parking Lot	FMC
Parking Lot	Uncovered Parking Lot	FHO
Parking Lot	Half Bathroom	FLC
Parking Lot	Reception	FLC

4.38 Industrial Plant

Table 38 shows the usage specifications for the different areas of industrial plants. Regardless of the nature, industrial plant spaces demand tile coatings of high technical performance and specific characteristics. In addition to the **FHC** use class, products must meet the requirements for resistance to high concentration acids and alkalis, if necessary.

In the case of industrial plants that use chemicals, it is necessary to carry out a thorough evaluation of the performance of the tile coating to certify the resistance to the specific chemical. Before specification, **Elizabeth' Technical Support Division** must evaluate and test the tile coatings with the products that will be used for maintenance, if they are not in the Elizabeth cleaning and operation manual.

TABLE 38 – INDICATION FOR USE: INDUSTRIAL PLANT

SPACE	AREA	PLACE OF USE
Industrial Plant	Industrial Kitchen	FHC
Industrial Plant	Slaughterhouse	FHC
Industrial Plant	Food Industry	FHC
Industrial Plant	Beverage Industry	FHC
Industrial Plant	Dairy Industry	FHC
Industrial Plant	Electrical Industry	FHC
Industrial Plant	General Industry	FHC
Industrial Plant	Heavy Industry	FHC
Industrial Plant	Chemical Industry	FHC
Industrial Plant	Thermal Industry	FHC



4.39 Cemetery and Mortuary Chapel

Table 39 shows the usage specifications for cemetery and mortuary chapel areas. They are places with different intensities of people's foot traffic. Thus, in common areas with large circulation, tile coatings must be of the **FHC** use class; in areas of less movement, the indicated class is the **FLC**.

Wall coverings for the depots must be of the use class WRC for indoor and outdoor walls up to 3m high, and the **WFA** use class for outdoor walls over 3m high. The floor coverings for depots can preferably be of the **FIR** use class.

TABLE 39 – INDICATION FOR USE: CEMETERY AND MORTUARY CHAPEL

SPACE	AREA	PLACE OF USE
Cemetery and Mortuary Chapel	Half Bathroom	FLC
Cemetery and Mortuary Chapel	Pantry	FLC
Cemetery and Mortuary Chapel	Grave	WRC / WFA / FIR
Cemetery and Mortuary Chapel	Covered Patio	FHC
Cemetery and Mortuary Chapel	Uncovered Patio	FHO
Cemetery and Mortuary Chapel	Crematorium	FHC
Cemetery and Mortuary Chapel	Wake Room	FHC



4.40 Police Station

Table 40 shows the use specifications for police station areas. They are space with different people's foot traffic and, in this way, they also have different use classes.

TABLE 40 – INDICATION FOR USE: POLICE STATION

SPACE	AREA	PLACE OF USE
Police Station	Indoor Circulation Area	FHC
Police Station	Half Bathroom	FLC
Police Station	Cell	FLC
Police Station	Pantry	FLC
Police Station	Light Material Depot	FLC
Police Station	Heavy Material Depot	FMC
Police Station	Covered Patio	FLC
Police Station	Reception	FMC
Police Station	Waiting Room	FLC
Police Station	Administrative Room	FLC
Police Station	Room with Circulation	FMC
Police Station	Room without Circulation	FLC



4.41 Prison and Correctional Facility

Table 41 shows the use specifications for different prison and correctional facility areas. These areas require different use classes, according to the concentration and people's foot traffic.

TABLE 41 – INDICATION FOR USE: PRISON AND CORRECTIONAL FACILITY

SPACE	AREA	PLACE OF USE
Prison and Correctional Facility	Indoor Circulation	FHC
Prison and Correctional Facility	Uncovered Circulation	FHO
Prison and Correctional Facility	Indoor Dining Room	FHC
Prison and Correctional Facility	Service	FHC
Prison and Correctional Facility	Bathroom	FHC / FWI
Prison and Correctional Facility	Cell	FLC
Prison and Correctional Facility	Pantry	FLC
Prison and Correctional Facility	Kitchen	FLC
Prison and Correctional Facility	Depot	FMC
Prison and Correctional Facility	Uncovered Patio	FHO
Prison and Correctional Facility	Reception	FMC
Prison and Correctional Facility	Waiting Room	FLC
Prison and Correctional Facility	Administrative Room	FLC
Prison and Correctional Facility	Room with Circulation	FMC
Prison and Correctional Facility	Room without Circulation	FLC
Prison and Correctional Facility	Changing Room	FHC / FWI

4.42 Special

Table 42 shows the usage specifications for different areas for special applications.

TABLE 42 – INDICATION FOR USE: SPECIAL

SPACE	AREA	PLACE OF USE
Special	Uncovered Seafront Area	FHO
Special	Barbecue Area	FLC ⁶
Special	Chemical/Biochemical Laboratory	FHC
Special	Fireplace	FLC ⁶
Special	Ceiling	FIR and WFA ⁷
Special	Countertop	(See Note 07)

NOTES

⁶ Fireplaces and barbecue areas should preferably be coated with glazed or full-bodied porcelain tile, but the use of the BIb and BIla tile coatings is also allowed. These areas must be built with adequate thermal insulation following the designer's criteria.

⁷ Ceramic products do not have restrictions for Ceiling coatings, but the form of installation and materials used in it is the responsibility of the designer.

Note 07: The use of ceramic tiles on countertops is recommended for porcelain tile typologies, but it must follow the designer's criteria, and carefully take impacts into account (the edges of the pieces are more susceptible to chipping).

Ceramic products are tested for chemical resistance as specified by ISO 10545. The chemicals tested and their respective concentrations are as follows:

- Ammonium Chloride (100g/L);
- Sodium Hypochlorite (20mg/L);
- Potassium Hydroxide (30g/L);
- Potassium Hydroxide (100g/L);
- Hydrochloric Acid (3% v/v);
- Citric Acid (100g/L);
- Hydrochloric Acid (18% v/v);
- Lactic Acid (5% v/v).



Technical Support Division

Phone #:

4004-2971 (Capitals)

0300 789 7771 (Other sites)

(48) 3447 7777 (WhatsApp)

E-mail:

sac@ceramicaelizabeth.com

QUALITY ASSURANCE DIVISION

LCPA – FINISHED PRODUCT ANALYSIS LABORATORY

AUGUST/2026

Elizabeth

Fábrica Paraíba

Rua Capitão José Rodrigues, 870
Distrito Industrial
João Pessoa - PB CEP: 58082-060

Fábrica Santa Catarina

Rodovia Luiz Rosso, 8480, Dagostin
Criciúma - SC
CEP: 88812-000

Espaço Elizabeth São Paulo

Av. Brasil, 526
Jardim Paulista
São Paulo - SP
CEP: 01430-000