

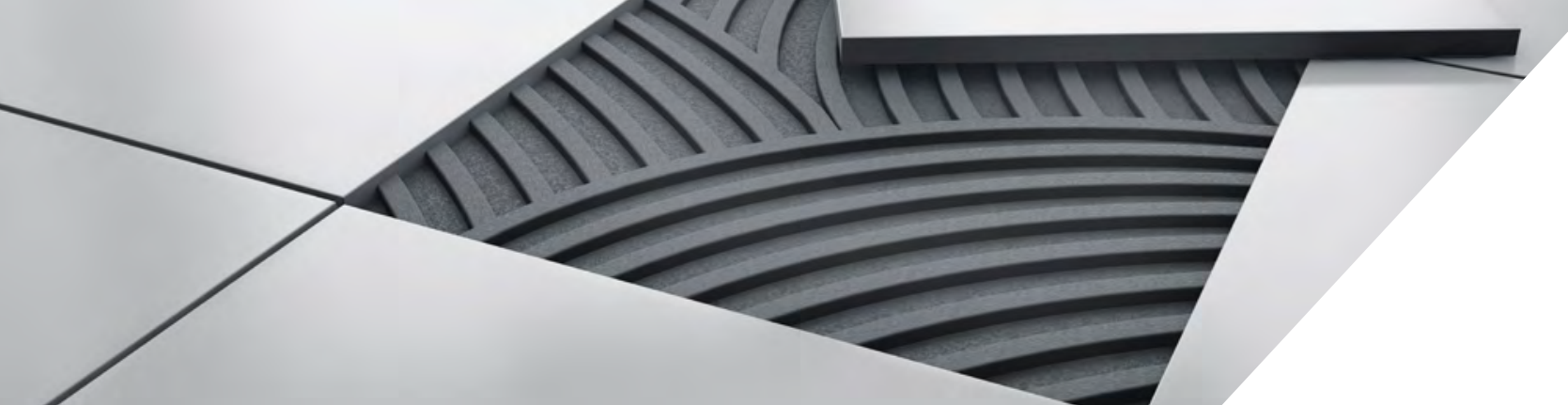
USAGE
RECOMMENDATION
MANUAL

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1. 1. PRESENTATION

The Usage Recommendation is an auxiliary tool that clarifies questions from users, architects, designers, and specifiers, facilitating product specifications. This USAGE RECOMMENDATION MANUAL has as a main objective to associate the ceramic tile to the appropriate usage for its best performance.

2. USAGE RECOMMENDATION CLASSES

Eliane's Usage Recommendation has now 3 (three) letters. The acronyms that start with the letter **F** (from the word Floor), indicate that the tiles should preferably be used on floors. All ceramic tiles used for floors can also be used on walls, because it is a location with characteristics less critical than floors. Acronyms that start with the letter **W** (from the word Wall), indicate that the tiles should be used exclusively on walls.

The next two letters that complement the acronyms of Eliane's new usage recommendation indicate the preferred applications for tiles, and their origin also comes from English:

FIR: Floor - Indoor Residential

FLC: Floor - Light Commercial

FMC: Floor - Medium Commercial

FHC: Floor - Heavy Commercial

FFO: Floor - Flat Outdoor

FRO: Floor - Ramp Outdoor

FWI: Floor - Wet Indoor Residential and Commercial

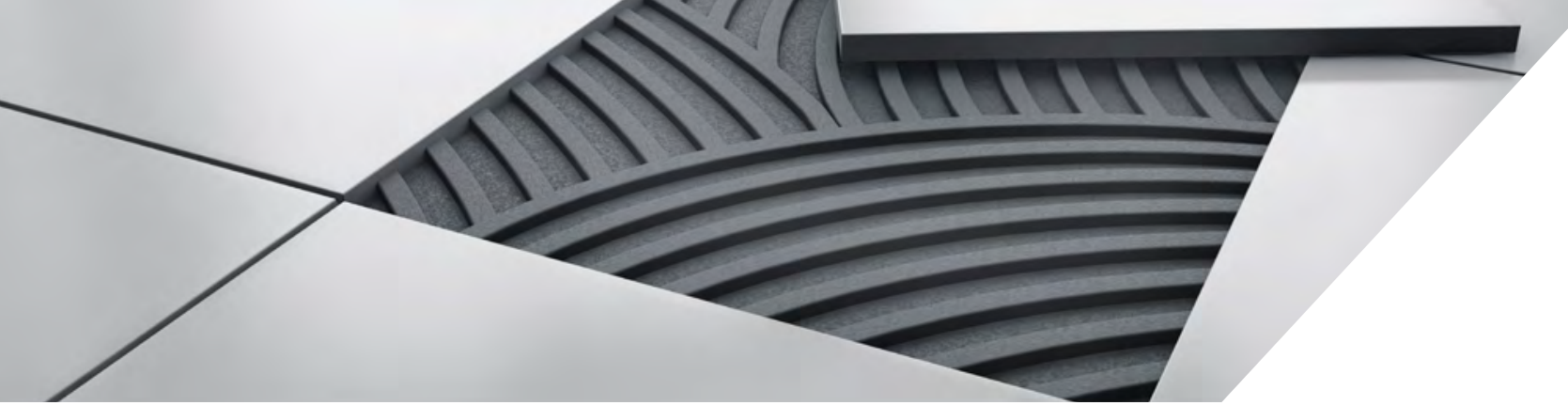
WRC: Wall - Residential and Commercial

WWS: Wall - Swimming Pool

WFA: Wall - Facade

WID: Wall Indoor Dry

To facilitate communication and marketing language, the Eliane's new Usage Recommendation will present the acronyms and a short and objective text indicating the meaning. Besides that, there will be a series of illustrative icons to complement communication and facilitate understanding:



FIR
ALL INTERIOR RESIDENTIAL AREAS



FLC
INDOOR COMMERCIAL AREAS,
WITH LIGHT TO MODERATE TRAFFIC
OF PEOPLE, INCLUDING FIR AREAS



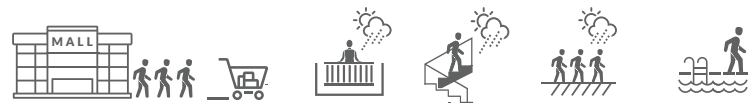
FMC
INDOOR COMMERCIAL AREAS, WITH
MODERATE TO HEAVY TRAFFIC OF PEOPLE
AND LIGHT EQUIPMENT, INCLUDING
FLC AND FIR AREAS



FHC
INDOOR COMMERCIAL AREAS, WITH
VERY HEAVY TRAFFIC OF PEOPLE AND
HEAVY EQUIPMENT AND VEHICLES,
INCLUDING FMC, FLC AND FIR AREAS



FMO
OUTDOOR COMMERCIAL AREAS, WITH
HEAVY, MODERATE AND LIGHT TRAFFIC
OF PEOPLE, LIGHT EQUIPMENT AND
OUTDOOR RESIDENTIAL AREAS



FHO
OUTDOOR COMMERCIAL AREAS, WITH VERY
HEAVY TRAFFIC OF PEOPLE AND HEAVY
EQUIPMENT AND VEHICLES, INCLUDING FMO AREAS



FRM
OUTDOOR COMMERCIAL AREAS, WITH SLOPES
AND RAMPS (MAXIMUM SLOPE 8.33%) WITH HEAVY,
MODERATE AND LIGHT TRAFFIC OF PEOPLE, LIGHT
EQUIPMENT AND OUTDOOR RESIDENTIAL AREAS,
INCLUDING FMO AREAS



FRH
OUTDOOR COMMERCIAL AREAS, WITH SLOPES
AND RAMPS (MAXIMUM SLOPE 8.33%) WITH VERY
HEAVY TRAFFIC OF PEOPLE, HEAVY EQUIPMENT
AND VEHICLES, INCLUDING FRM, FHO, AND FMO AREAS



FWI
INDOOR WET AREAS



WRC
ALL INTERNAL OR EXTERNAL RESIDENTIAL
AND COMMERCIAL WALLS UP TO 3 M HIGH



WWS
INTERNAL WALLS OF SWIMMING POOLS,
INCLUDING WRC AND WID ENVIRONMENTS

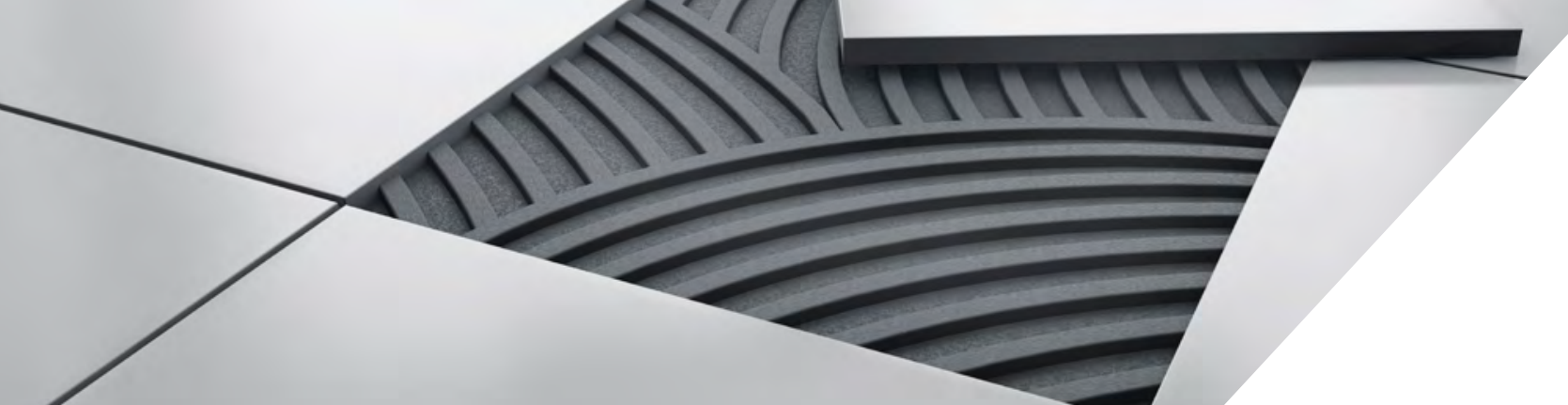


WFA
EXTERNAL FACADES, INCLUDING WRC
AND WID ENVIRONMENTS



WID
ALL DRY INTERNAL RESIDENTIAL
AND COMMERCIAL WALLS





3. USAGE RECOMMENDATION CLASSES - DETAILS

3.1. FIR - All Interior Residential Areas



The usage class FIR comprises products that can be used indoors in residential areas (such as living rooms, bedrooms, and kitchens) and private commercial areas with low foot traffic (maximum 20 people per day), such as hotel rooms and garages.

3.2. FLC – Indoor commercial areas, with light to moderate traffic of people, including FIR areas



The usage class FLC comprises commercial locations with light to moderate foot traffic (20 to 150 people per day) as well as locations in the usage class FIR. Examples: small stores up to 50 m² in shopping malls, hotel corridors, residential common areas, offices, doctor's offices (except those offices with moving equipment with wheels) and garages for private use. FLC tiles can also be applied in FIR areas.

3.3. FMC – Indoor commercial areas, with moderate to heavy traffic of people and light equipment, including FLC and FIR areas



The usage class FMC comprises commercial areas with moderate to heavy foot traffic (150 to 500 people per day), and light equipment¹, with a concentrated load of up to 4,000 kgf. Tiles in this class can be installed in areas of up to 100 m². FMC tiles can also be applied in FIR and FLC areas.



3.4. FHC – Indoor commercial areas, with very heavy traffic of people and heavy equipment and vehicles, including FMC, FLC and FIR areas



In the usage class FHC tiles are intended for industrial and urban indoor areas with very intense foot traffic (500 to 5,000 people per day) and heavy equipment² with a maximum load of 5,000 kgf). These products have greater mechanical and surface wear resistance, and therefore can be used in places with intense traffic of people. FHC usage class includes UGL porcelain tiles, and products with a Natural finish, suitable for football stadiums, shopping malls, bus stations, airports, supermarkets, public places (squares, parks, etc.), among others. Products with a Polished finish are suitable for shopping malls, airports and large stores following the recommendations in this manual. FHC tiles can also be applied in FIR, FLC and FMC areas.

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

Polished UGL porcelain tiles, although they may be suitable for the FHC areas, those must be installed at least 5 m from the street access. It is important to remember that the polished product is more susceptible to scratches and consequent loss of sheen.

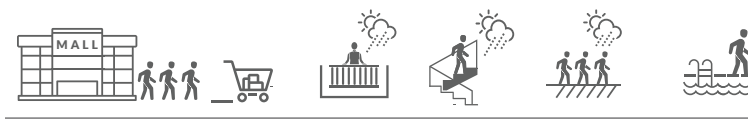
If the surface has a considerable loss of sheen, repolishing is recommended for partial sheen recovery. This procedure must be guided, evaluated and approved by Eliane Technical Assistance Department. It should be noted that this process aims to improve the appearance of the product, and even recovering the sheen of the repolished area, it will not result in the product's original sheen.

Important: Polished GL porcelain tiles are not part of this usage rating.



classification cannot be used on ramps. This category comprises the UGL porcelain tiles, but excludes GL products. FHO tiles can also be applied in FMO class areas.

3.5. FMO – Outdoor commercial areas, with heavy, moderate and light traffic of people, light equipment and outdoor residential areas



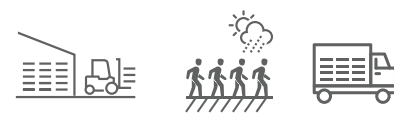
The FMO category comprises tiles indicated for flat outdoor areas with heavy, moderate and light traffic of people, that is, they are anti-slip products (Wet Friction Coefficient ≥ 0.4). These tiles can be applied in wet outdoor areas, such as sidewalks, public walkways and uncovered stairs, with heavy, moderate and light traffic of people (150 to 500 people per day), and light equipment¹ with a concentrated load of up to 4,000 kgf. It is important to point out that products with this classification cannot be used on ramps.

3.7. FRM – Outdoor commercial areas, with slopes and ramps (maximum slope 8.33%) with heavy, moderate and light traffic of people, light equipment and outdoor residential areas, including FMO areas



The FRO category comprises tiles indicated for areas with heavy, moderate and light traffic of people, light equipment and outdoor residential areas with slopes and ramps, (150 to 500 people per day), and light equipment¹, with a concentrated load of up to 4,000 kgf. That is, they are anti-slip products (wet friction coefficient ≥ 0.4), which, due to the type of application, require a higher coefficient of friction than in other categories for outdoor areas. According to the Brazilian Accessibility Standard, NBR 9050, ramps cannot have a slope greater than 8.33%. Tiles in the FRM category can also be applied in FMO class areas. However, because they have a much higher coefficient of friction, increasing the safety required when walking in these areas, the impregnation of dirt also increases, thus requiring more frequent and intense maintenance.

3.6. FHO – Outdoor commercial areas, with very heavy traffic of people and heavy equipment and vehicles, including FMO areas



The FHO class comprises tiles indicated for flat outdoor areas with very heavy traffic of people, that is, they are anti-slip products (Wet Friction Coefficient ≥ 0.4). These tiles can be applied in wet outdoor areas, such as sidewalks, public walking areas and uncovered stairs, and industrial and urban areas with very heavy traffic (500 to 5,000 people per day) and heavy equipment² with a maximum concentrated load of 5,000 Kgf). It is important to point out that products with this



3.8. FRH – Outdoor commercial areas, with slopes and ramps (maximum slope 8.33%) with very heavy traffic of people, heavy equipment and vehicles, including FRM, FHO, and FMO areas



The FRH category comprises tiles indicated for outdoor areas with very heavy traffic of people (500 to 5,000 people per day), heavy equipment² and vehicles, with a concentrated load of a maximum of 5,000 Kgf with slopes and ramps, such as sidewalks, public walking areas, uncovered stairs, and industrial and urban areas. That is, they are anti-slip products (wet friction coefficient ≥ 0.4), which, due to the type of application, require a higher coefficient of friction than in other categories for outdoor areas. According to the Brazilian Accessibility Standard, NBR 9050, ramps cannot have a slope greater than 8.33%. Tiles in the FRH category can also be applied in FMO, FHO and FRO areas. This category comprises the UGL porcelain tiles, but excludes GL products. However, because they have a much higher coefficient of friction, increasing the safety required when walking in these areas, the impregnation of dirt also increases, thus requiring more frequent and intense maintenance

3.9. FWI – Indoor wet areas



The usage class FWI comprises tiles for use on wet residential and commercial indoor areas, thus, areas with the possibility of water depths, such as showers. Products in this class must also have a wet friction coefficient ≥ 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. These are tiles that meet the friction coefficient required by the Performance Standard NBR 15575-3 and by the fire department.

The usage class FWI will always be associated to one or more usage classes among the preferred classes FIR, FLC, FMC and FHC, and to the indication of the slip resistance required by NBR 15575-3 and by the Firefighters. Thus, a tile that does not have the usage class FWI does not have slip resistance for wet indoor areas.



3.8. WRC - All internal or external residential and commercial walls up to 3 m high, including WID areas



The usage class WRC comprises tiles for applications on internal walls of residential and commercial areas, as well as on external walls of residential and commercial areas up to 3 m high (following the Brazilian NBR 13754 standard). WRC tiles can also be applied in WID areas.

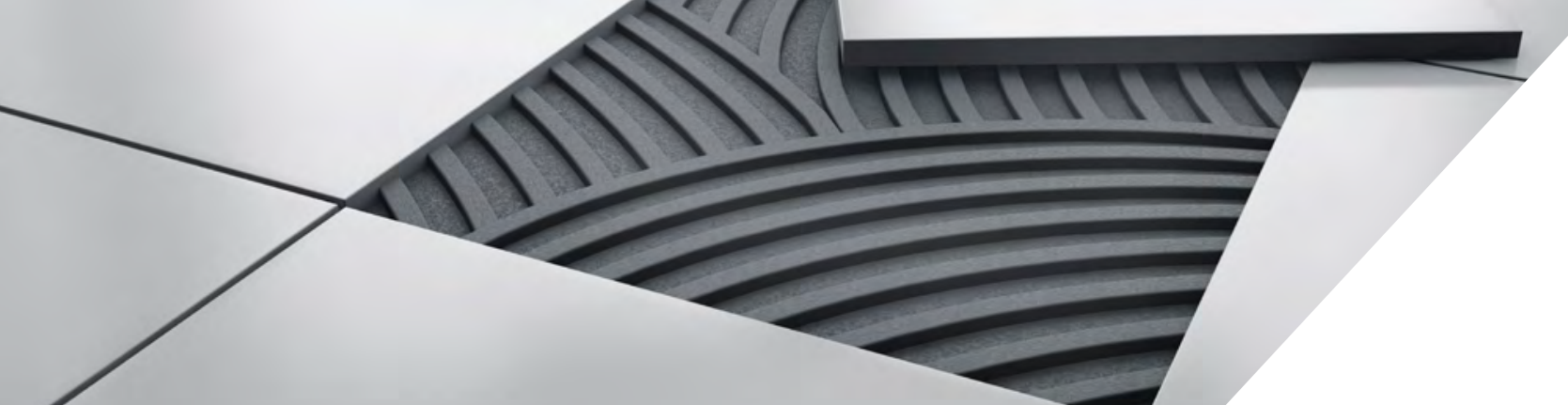
To ensure adequate adhesion of the tile on the wall, especially in the case of external walls that are exposed to the weather, the guidelines should be followed according to the Brazilian NBR 13755 Standard. This is the only way to guarantee the product's good performance.

In external areas in regions where there is incidence of snow, the resistance of the tiles to frost must always be required. Only porcelain tiles are indicated for external use in areas where the temperature is equal to or below 0°C.

3.9. WID - All dry internal residential and commercial walls.



The usage class WID comprises tiles for application on dry and internal walls in residential and commercial areas. This class includes tiles 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 glaze. These materials cannot be applied on bathroom walls, thus, on places that have direct access to humidity. This orientation aims to avoid problems related to the change in the product's appearance, which will occur over time, as a result of chemical attack caused by conventional cleaning of areas subjected to this humidity.



3.10. WWS - Internal walls of swimming pools, including WRC and WID environments



The usage class WWS comprises tiles for applications on the internal walls of swimming pools and water mirrors. For pools up to 60 cm deep (children's pools, for example), steps and shallow areas commonly called "prainhas" (small beaches), in addition to the WWS classification, the tile must have the usage class FWI (which has the friction coefficient required by Performance Standard NBR 15575-3). WWS tiles can also be applied in WRC and WID areas.

3.11. WFA - External Facades, including WRC and WID environments



The usage class WFA comprises tiles to be applied on all external walls, without height limitation, called facades. Facades can be of two types: adhered or ventilated. On adhered facades, grout is used to fix the tiles on the wall. On the other hand, on ventilated facades, the tiles are fixed to the wall by means of a mechanical system, generally a metallic structure that allows a distance between the tile and the wall, through which the air circulates, creating a "chimney effect". WFA class tiles can also be applied in WRC and WID areas.

The product (ceramic tile) can be used on facades, if the application is previewed in the construction and executive projects, being the exclusive responsibility of the designer, according to ABNT NBR 13575 norm.

In external areas in regions where there is incidence of snow, the resistance of the tiles to frost must always be required. Only porcelain tiles are indicated for external use in areas where the temperature is equal to or below 0°C.

Notes:

¹ Light objects: These are equipment, tools, furniture, etc., that do not present a great potential for causing damage to the ceramic tile, such as excessive wear and fracture. Associated studies have been done on the influence of the applied force, supporting material and the weight of the object itself on the ceramic tile. Examples of light objects: mechanical tools (wrenches, pliers, hammers, sledgehammers), masonry tools (chisels, flushers, spoon) grinders, sanders, power saws, floor cutters, lawn mowers, drills, polishers, welding machines, hoes, shovels, scaffolding with protected feet, cars, vans, SUV'S, furniture in general (except some exceptions described later).

² Heavy objects: These are equipment, tools, furniture, etc., that have a higher potential to cause damage to the ceramic tile, such as wear and fracture. Associated studies have been done on the influence of the applied force, supporting material and the weight of the object itself on the ceramic tile. Examples of heavy objects: mini excavators, wheel loaders, skid steer loaders, platform lifts, concrete mixers, trucks, drilling machines, wheeled chairs, supermarket and airport trolleys, forklifts, pallet trucks.

Whenever there is any doubt related to the classification of the objects, consult Eliane Technical Assistance for clarification.



RESIDENTIAL

4. USAGE RECOMMENDATION - TABLES

The following tables present a more clear and practical usage recommendation for various locations.

4.1. RESIDENTIAL

In table 01 we present the usage recommendation for residential areas with as many possibilities for where tiles can be applied. Because these are residential areas, the tiles are mostly of the FIR class. The exception is the residential areas with common areas that may have different classifications because these are areas that will be susceptible to a greater foot traffic and subject to the most aggressive conditions, such as the probable presence of sand.

Outdoor residential areas with possible formation of pools, such as decks and edges of pools, deserve attention. The potential for slipping is greater due to exposure to adverse weather conditions. It is also necessary to consider that these are areas where there is traffic of barefoot people and who make use of products such as sunscreen, tanning lotion, and oils, which increase the risk of slipping. These locations require tiles with FFO class, which have greater resistance to slipping.

Garages also require tiles with greater resistance since the vehicles transit these areas. All guidelines of tile installation in the Norms should be rigorously followed.

They are places that require more frequent and intense cleaning and maintenance, due to the circulation of vehicles that tend to transmit the dirt accumulated on the wheels to indoor areas. The tiles suitable for these areas are of the FLC usage class. In the specification, clear or mono-color products should be avoided, which show more easily evidence of dirt and impregnation.

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

RESIDENTIAL

TABLE 01 – LOCATION: RESIDENTIAL

LOCATION	AREA	USAGE
Residential	Living Room	FIR
Residential	Dining Room	FIR
Residential	Bedroom	FIR
Residential	Kitchen	FIR
Residential	Closet	FIR
Residential	Laundry Room	FWI
Residential	Bathroom	FIR or FWI ³
Residential	Storage	FIR
Residential	Garage	FLC
Residential	Office / study room / library	FIR
Residential	Balcony / Patio / Porch	FIR
Residential	Wash-room	FIR
Residential	Indoor Stairs	FIR or FWI ³
Residential	Covered / Uncovered Stairs	FMO
Residential	Entry Hall	FIR
Residential	Hallway	FIR

LOCATION	AREA	USAGE
Residential	Covered/Uncovered Terrace	FMO
Residential	Pool	WWS or FWI ³
Residential	Party room / Lounge	FIR
Residential	Uncovered Sidewalk	FMO
Residential	Pool Deck	FMO
Residential	Facade (above 3m height)	WFA
Residential	Facade/Wall (up to 3m height)	WFA or WRC ⁴

³For residential projects with wet areas, requiring the Brazilian Standard of Performance, NBR 15575, products with **FWI** class of use should be specified, such as for bathrooms with a shower, service areas and laundries. Products for these areas must have a coefficient of wet friction ≥ 0.4 . Now, for residential projects not requiring this coefficient of friction, tile from the classes **FIR**, **FLC**, **FMC** and **FHC** can be specified.

⁴**WRC**, WRC, except for artistic products classified as WID, (tile and artistic porcelain tiles) that have special aesthetic, noble, and delicate effects with the application of precious metals and granites. In this case, artistic products cannot be applied on exterior areas such as walls and facades. This rule is also valid for areas with water vapor such as bathroom showers, saunas, and thermal pools.

GYM

4.2. GYM

Table 02 shows the usage recommendation in the different areas of gyms. It should always be noted that the size of the commercial enterprise is a factor to be evaluated even with the indications described, since it is directly related to the number of people circulating in the place and, consequently, the degree of resistance that the product should present.

TABLE 02 - LOCATION: GYM

LOCATION	AREA	USAGE
Gym	Indoor Circulation	FMC
Gym	Uncovered flat circulation	FMO
Gym	Pools decks	FMO
Gym	Indoor Cafeteria	FMC
Gym	Uncovered cafeteria	FMO
Gym	Public bathroom	FMC/FWI
Gym	Private bathroom	FLC/FWI
Gym	Kitchen	FLC
Gym	Storage for light material	FMC
Gym	Storage for Heavy material	FMC
Gym	Entry Hall	FMC

LOCATION	AREA	USAGE
Gym	Diner	FMC
Gym	Uncovered Patio	FMO
Gym	Pool	WWS
Gym	Reception	FMC
Gym	Gymnastic Room	FMC
Gym	Dance room	FMC
Gym	Room with traffic	FMC
Gym	Room without traffic	FLC
Gym	Sauna	FMC/FWI
Gym	Dressing room	FMC/FWI

Saunas are humid places by the high concentration of water vapor, the tiles suitable for this type of environment are FWI for the floor, and WRC for the walls.



BUTCHER SHOP

4.3. BUTCHER SHOP

Table 03 shows the usage recommendation in the different areas of butcher shops. In general, in this type of environment, there is no large foot traffic, however, there is the heavy traffic of carts and equipment, requiring tiles of FMC class specification.

TABLE 03 – LOCATION: BUTCHER SHOP

LOCATION	AREA	USAGE
Butcher shop	Indoor Circulation	FMC
Butcher shop	Uncovered circulation	FMO
Butcher shop	Service area	FMC
Butcher shop	Bathroom	FMC/FWI
Butcher shop	Cold chamber	FMC ⁵
Butcher shop	Storage	FMC
Butcher shop	Entry	FLC

⁵Cold chambers should be covered only with technical porcelain (water absorption <=0.1%).



AIRPORT

4.4. AIRPORT

Table 04 shows the usage recommendation in the different areas of airports. Since there are different sizes of airports with equally different circulation, it was considered here that there is an intense foot traffic and equipment such as carts and suitcases. Therefore, the specified usage for most areas of airports is **FHC**. Polished technical porcelain tiles can be indicated for this type of environment, provided that some criteria and rules are observed. The application should take place 5m away from the street access. It is important to remember that the polished product is more susceptible to scratch and consequently in loss of sheen.

If the surface shows considerable loss of sheen, it is recommended to repolish it for partial recovery of the shiny aspect. This procedure must be guided, evaluated and approved by Eliane Technical Assistance. It should be noted that this process aims to improve the appearance of the product, and even recovering the sheen on the repolished area, it will not cause the surface to reach its original sheen.

TABLE 04 - LOCATION: AIRPORT

LOCATION	AREA	USAGE
Airport	Indoor circulation	FHC
Airport	Uncovered circulation	FHO
Airport	Indoor arrival	FHC
Airport	Uncovered arrival	FHO

TABLE 04 - LOCATION: AIRPORT

LOCATION	AREA	USAGE
Airport	Departure	FHC
Airport	Restroom	FHC
Airport	Indoor bar	FHC
Airport	Uncovered bar	FHO
Airport	Indoor Circulation of service	FHC
Airport	Uncovered circulation of service	FHO
Airport	Entry	FHC
Airport	Lunchroom	FHC
Airport	Indoor shop	FMC
Airport	Restaurant	FMC



NURSING HOME

4.5. NURSING HOME

Table 05 shows the usage recommendation in the different areas of nursing homes. These are areas with moderate foot traffic, therefore, the usage recommendation is predominantly class **FMC**.

TABLE 05 – LOCATION: NURSING HOMES

LOCATION	AREA	USAGE
Nursing Home	Indoor Circulation	FMC
Nursing Home	Uncovered circulation	FMO
Nursing Home	Indoor Cafeteria	FMC
Nursing Home	Service	FMC
Nursing Home	Bathroom	FMC/FWI
Nursing Home	Kitchen	FMC
Nursing Home	Entry Hall	FMC
Nursing Home	Dormitory	FMC
Nursing Home	Uncovered patio	FMO
Nursing Home	Covered patio	FMC
Nursing Home	Laundry room	FMC/FWI
Nursing Home	Reception	FMC

TABLE 05 – LOCATION: NURSING HOMES

LOCATION	AREA	USAGE
Nursing Home	Room with traffic	FMC
Nursing Home	Room without traffic	FMC
Nursing Home	Waiting room	FMC
Nursing Home	Administrative room	FMC
Nursing Home	Consultation room	FMC
Nursing Home	Exam room	FMC
Nursing Home	Room for physical therapy	FMC
Nursing Home	Dressing room	FMC/FWI



AUDITORIUM

4.6. AUDITORIUM

TABLE 06 shows the usage recommendation in the different areas of auditoriums. These are considered as **FHC** class (heavy commercial) due to the possibility of a large quantity of foot traffic.

TABLE 06 - LOCATION: AUDITORIUM

LOCATION	AREA	USAGE
Auditorium	Main stage	FHC
Auditorium	Indoor circulation	FHC
Auditorium	Outdoor uncovered circulation	FHO
Auditorium	Seating room	FHC
Auditorium	Restroom	FHC
Auditorium	Entry	FHC
Auditorium	Hall	FHC
Auditorium	Cafeteria	FHC



BANK AGENCY

4.7. BANK AGENCY

Table 07 shows the usage recommendation in the different areas of bank agencies. In these areas, the class depends on the foot traffic, class **FHC** in the areas with customer traffic and **FLC** class in the areas for employees only.

TABLE 07 - LOCATION: BANK AGENCY

LOCATION	AREA	USAGE
Bank Agency	Indoor Circulation areas (private)	FLC
Bank Agency	Service Area	FHC
Bank Agency	Restroom	FHC
Bank Agency	Diner	FLC
Bank Agency	Kitchen	FLC
Bank Agency	Entry	FHC
Bank Agency	Room with traffic (public)	FHC
Bank Agency	Room without traffic	FLC

A photograph of a modern public bathroom with three stone washbasins on white pedestals, set against a background of vertical wood slats and a glass partition. A red banner with the text 'PUBLIC BATHROOM' is overlaid on the right side of the image.

PUBLIC BATHROOM

4.8. PUBLIC BATHROOM

Table 08 shows the usage recommendation in the different areas of public restrooms, predominantly considered as **FHC** class because of daily foot traffic.

TABLE 08 - LOCATION: PUBLIC RESTROOMS

LOCATION	AREA	USAGE
Public restroom	Bathroom with shower	FHC/FWI
Public restroom	Bathroom without shower	FHC
Public restroom	Urinal	FHC
Public restroom	Sinks area	FHC
Public restroom	Dressing room	FHC
Public restroom	Storage	FHC



BAR

4.9. BAR

Table 09 shows the usage recommendation in the different areas of bars, predominantly considered class **FMC** with an average area of 100m² and average/moderate foot traffic.

TABLE 09 - LOCATION: BAR

LOCATION	AREA	USAGE
Bar	Indoor Circulation	FMC
Bar	Uncovered circulation	FMO
Bar	Lunchroom	FMC
Bar	Indoor bar	FMC
Bar	Restroom	FMC
Bar	Kitchen	FMC
Bar	Storage for light material	FMC
Bar	Storage for heavy material	FMC
Bar	Entry	FMC
Bar	Uncovered patio	FMO
Bar	Covered patio	FMC
Bar	Reception	FMC
Bar	Room with traffic	FMC
Bar	Room without traffic	FLC
Bar	Waiting room	FMC



LIBRARY

4.10. LIBRARY

Table 10 shows the usage recommendation in the different areas of libraries. Public, school and university libraries are considered areas with moderate foot traffic and therefore, preferably use the **FMC** class. The reserved areas of the libraries, with light foot traffic, can use **FLC** class.

TABLE 10 – LOCATION: LIBRARY

LOCATION	AREA	USAGE
Library	Archives	FMC
Library	Indoor Circulation	FMC
Library	Service	FLC
Library	Restroom	FLC
Library	Diner	FLC
Library	Entry	FMC
Library	Reception	FMC
Library	Room with traffic (public	FHC
Library	Room without traffic	FLC



NIGHTCLUB, CLUB AND CONCERT HALLS

4.11. NIGHTCLUB, CLUB AND CONCERT HALLS

Table 11 shows the usage recommendation in the different areas of nightclubs, clubs, and concert halls. These are considered areas with intense foot traffic, classified, preferably, with the **FHC** class.

TABLE 11 - LOCATION: NIGHTCLUB, CLUB, AND CONCERT HALL

LOCATION	AREA	USAGE
Nightclub, club, concert hall	Stage	FHC
Nightclub, club, concert hall	Indoor Circulation	FHC
Nightclub, club, concert hall	Service	FHC
Nightclub, club, concert hall	Restrooms	FHC
Nightclub, club, concert hall	Indoor bar	FHC
Nightclub, club, concert hall	Uncovered bar	FHO
Nightclub, club, concert hall	Indoor dressing room	FHC
Nightclub, club, concert hall	Kitchen	FMC
Nightclub, club, concert hall	Storage for light material	FMC
Nightclub, club, concert hall	Storage for heavy material	FHC
Nightclub, club, concert hall	Reception	FHC
Nightclub, club, concert hall	Restaurant	FMC
Nightclub, club, concert hall	Dance hall	FHC

CEMETERY AND MORTUARY CHAPEL

4.12. CEMETERY AND MORTUARY CHAPEL

Table 12 shows the usage recommendation in the different areas of cemeteries and mortuary chapels. These are locations with different intensity of foot traffic. In this way, common areas with intense foot traffic, tiles should be **FHC**, class, and in areas with lower foot traffic, **FLC** class.

TABLE 12 - LOCATION: CEMETERY AND MORTUARY CHAPEL

LOCATION	AREA	USAGE
Cemetery and Mortuary Chapel	Restroom	FLC
Cemetery and Mortuary Chapel	Diner	FLC
Cemetery and Mortuary Chapel	Burial plot	WRC/WFA/FIR
Cemetery and Mortuary Chapel	Covered patio	FHC
Cemetery and Mortuary Chapel	Uncovered patio	FHO
Cemetery and Mortuary Chapel	Crematory	FHC
Cemetery and Mortuary Chapel	Wake room	FHC

Tiles for walls for the burial plots should be **WRC** class, for interior and exterior walls up to a height of 3m, and **WFA** for exterior walls higher than 3m. Floor tiles for burial plots should be, preferably, **FIR** class.



CINEMA AND THEATER

4.13. CINEMA AND THEATER

Table 13 shows the usage recommendation in the different areas of cinemas and theaters. These are considered areas with a high concentration of people, but from the characteristics, there is a predominance of them remaining static (seated) for long periods of time, favoring the **FMC** class for the majority of the areas.

TABLE 13 - LOCATION: CINEMA AND THEATER

LOCATION	AREA	USAGE
Cinema and theater	Indoor Circulation	FMC
Cinema and theater	Restroom	FLC
Cinema and theater	Hall	FMC
Cinema and theater	Snack bar	FMC
Cinema and theater	Reception	FMC
Cinema and theater	Auditorium	FMC
Cinema and theater	Room with traffic	FMC
Cinema and theater	Room without traffic	FLC



CLINIC

4.14. CLINIC

Table 14 shows the usage recommendation in the different areas of clinics. For these areas, we observed the places with intense movement / traffic of people, with **FMC** class, and areas where there is no intense circulation of people, like in exam rooms and laboratories, considered **FLC** class. For areas with movement of chairs with rollers (dentist chairs, for example), the specification should be with tiles of the **FMC** class, with a natural finish. For these areas, we recommend using rugs, preventing wear of ceramic tiles.

TABLE 14 - LOCATION: CLINIC

LOCATION	AREA	USAGE
Clinic	Indoor Circulation	FMC
Clinic	Uncovered circulation	FMO
Clinic	Service	FMC
Clinic	Indoor Diner	FMC
Clinic	Restroom	FLC
Clinic	Indoor Circulation of service	FMC
Clinic	Kitchen	FLC
Clinic	Storage	FMC
Clinic	Nursery	FMC

LOCATION	AREA	USAGE
Clinic	Entry	FMC
Clinic	Indoor stairwell	FMC
Clinic	Uncovered stair	FMO
Clinic	Laboratory	FLC
Clinic	Lunchroom	FMC
Clinic	Laundry room	FLC/FWI
Clinic	Covered patio	FMC
Clinic	Patient's Room	FLC
Clinic	Reception	FMC
Clinic	Waiting room	FMC
Clinic	Admin. room	FLC
Clinic	Room with traffic	FMC
Clinic	Consultation room	FLC
Clinic	Exam room	FLC
Clinic	Physical therapy	FLC
Clinic	Room without traffic	FLC

SOCIAL CLUB

4.15. SOCIAL CLUB

Table 15 shows the usage recommendation in the different areas of social clubs. Generally, these areas have intense foot traffic, however, **FMC** class is recommended for the majority of the areas.

TABLE 15 - LOCATION: SOCIAL CLUB

LOCATION	AREA	USAGE
Social club	Indoor Circulation	FMC
Social club	Uncovered circulation	FMO
Social club	Pool deck	FMO
Social club	Indoor Cafe	FMC
Social club	Uncovered cafeteria	FMO
Social club	Service	FMC/FWI
Social club	Auditorium	FLC
Social club	Restroom	FLC/FWI
Social club	Indoor bar	FLC
Social club	Uncovered bar	FMO
Social club	Interior lounge	FMC
Social club	Uncovered lounge	FMO

LOCATION	AREA	USAGE
Social club	Kitchen	FLC
Social club	Storage for light material	FLC
Social club	Storage for heavy material	FMC
Social club	Entry	FMC
Social club	Gym	FMC
Social club	Hall	FMC
Social club	Diner	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 hall	FMC
Social club	Gymnastics	FMC
Social club	Game room	FMC
Social club	Admin. room	FLC
Social club	Room with traffic	FMC
Social club	Room without traffic	FLC
Social club	Sauna	FMC/FWI



DEALERSHIP

4.16. DEALERSHIP

Table 16 shows the usage recommendation in the different areas of dealerships that, because these are areas with vehicle traffic demanding greater mechanical resistance, are classified as **FMC**. In the areas where there is no vehicles traffic, the class of tiles is **FLC**.

TABLE 16 - LOCATION: DEALERSHIP

LOCATION	AREA	USAGE
Dealership	Restroom	FLC
Dealership	Entry	FLC
Dealership	Indoor auto service	FHC
Dealership	Parking lot	FHO
Dealership	Reception	FLC
Dealership	Indoor car exhibition hall	FMC
Dealership	Uncovered car exhibition hall	FHO
Dealership	Admin. Room	FLC
Dealership	Room with traffic	FLC
Dealership	Room without traffic	FLC



MEDICAL PRACTICE

4.17. MEDICAL PRACTICE

Table 17 shows the usage recommendation in the different areas of the Medical Practices. These areas have as a main characteristic low foot traffic and, that way, are classified, preferably, as **FLC**. The exception is the reception area, since it requires tile from the **FMC** class because of the higher foot traffic and the possibility of having direct access to the street, more easily wearing down the ceramic tile.

TABLE 17 – LOCATION: MEDICAL PRACTICE

LOCATION	AREA	USAGE
Medical Practice	Restroom	FLC
Medical Practice	Cafe	FLC
Medical Practice	Storage	FLC
Medical Practice	Laboratory	FLC
Medical Practice	Reception	FMC
Medical Practice	Waiting room	FLC
Medical Practice	Administrative Room	FLC
Medical Practice	Room with traffic	FLC
Medical Practice	Consultation room	FLC
Medical Practice	Exam room	FLC
Medical Practice	Physical Therapy room	FLC
Medical Practice	Room without traffic	FLC



POLICE STATION

4.18. POLICE STATION

Table 18 shows the usage recommendation in the different areas of Police Stations. These areas have different levels of foot traffic, and because of this, they also have diverse classes of use.

TABLE 18 – LOCATION: POLICE STATION

LOCATION	AREA	USAGE
Police Station	Indoor Circulation	FHC
Police Station	Restroom	FLC
Police Station	Cell	FLC
Police Station	Cafe	FLC
Police Station	Storage for light material	FLC
Police Station	Storage for heavy materials	FMC
Police Station	Covered patio	FLC
Police Station	Recept.	FMC
Police Station	Waiting room	FLC
Police Station	Administrative room	FLC
Police Station	Room with traffic	FMC
Police Station	Room without traffic	FLC



SCHOOL AND UNIVERSITY

4.19. SCHOOL AND UNIVERSITY

Table 19 shows the usage recommendation in the different areas of the schools and universities. These are areas with a high concentration of people and intense foot traffic, classified mostly as **FHC** and, preferably, require tiles with a Natural finish.

TABLE 19 – LOCATION: SCHOOL AND UNIVERSITY

LOCATION	AREA	USAGE
School/University	Circulation	FHC
School/University	Pool deck	FHO
School/University	Indoor Cafeteria	FHC
School/University	Auditorium	FMC
School/University	Restroom	FMC
School/University	Cafe	FLC
School/University	Kitchen	FMC
School/University	Gym	FHC
School/University	Laboratory	FMC
School/University	Diner	FMC
School/University	Covered patio	FHC
School/University	Uncovered patio	FHO



COMMERCIAL OFFICE

4.20. COMMERCIAL OFFICE

Table 20 shows the usage recommendation in the different areas of commercial offices. These are areas with low foot traffic and considered as **FLC**.

TABLE 20 – LOCATION: COMMERCIAL OFFICE

LOCATION	AREA	USAGE
Commercial Office	Restroom	FLC
Commercial Office	Cafe	FLC
Commercial Office	Reception	FLC
Commercial Office	Waiting room	FLC
Commercial Office	Meeting room	FLC
Commercial Office	Administrative room	FLC
Commercial Office	Room with traffic	FLC
Commercial Office	Room without traffic	FLC



PARKING LOT

4.21. PARKING LOT

Table 21 shows the usage recommendation in the different areas of parking lots, areas with an intense traffic of vehicles, requiring tiles from the class of **FMC**. Areas without circulation of vehicles, such as the reception and Restrooms, can be specified as tile from the class of **FLC**.

TABLE 21 - LOCATION: PARKING LOT

LOCATION	AREA	USAGE
Parking Lot	Indoor Parking Lot	FMC
Parking Lot	Uncovered Parking Lot	FHO
Parking Lot	Restroom	FLC
Parking Lot	Reception	FLC



STADIUM

4.22. STADIUM

Table 22 shows the usage recommendation in the different areas of stadiums. These are areas where there is an intense circulation and concentration of people, that is why these require the class of **FHC** with a Natural finish. Areas with a lower concentration of people, require tile from the class **FMC** with a Natural finish because they do not receive a large concentration and intense traffic.

TABLE 22 - LOCATION: STADIUM

LOCATION	AREA	USAGE
Stadium	Indoor Circulation	FHC
Stadium	Uncovered circulation	FHO
Stadium	Indoor Bleachers	FHC
Stadium	Uncovered bleachers	FHO
Stadium	Restroom	FHC
Stadium	Indoor bar	FHC
Stadium	Uncovered bar	FHO
Stadium	Indoor VIP Lounge	FMC
Stadium	Uncovered VIP Lounge	FMO
Stadium	Entry	FHC
Stadium	Snack bar	FHC
Stadium	Shop	FMC



MUSEUM AND GALLERY

4.23. MUSEUM AND GALLERY

Table 23 shows the usage recommendation in the different areas of museums and galleries. Since there are projects of different sizes and foot traffic, a large gallery and museum with intense foot traffic was considered here.

TABLE 23 - LOCATION: GALLERY AND MUSEUM

LOCATION	AREA	USAGE
Gallery and museum	Indoor Circulation	FHC
Gallery and museum	Uncovered Circulation	FHO
Gallery and museum	Indoor Exhibit	FHC
Gallery and museum	Uncovered Exhibit	FHO
Gallery and museum	Indoor cafeteria	FMC
Gallery and museum	Auditorium	FMC
Gallery and museum	Restroom	FMC
Gallery and museum	Cafe	FLC
Gallery and museum	Kitchen	FLC
Gallery and museum	Storage for light material	FMC
Gallery and museum	Storage for heavy materials	FMC
Gallery and museum	Entry	FHC

LOCATION	AREA	USAGE
Gallery and museum	Lunchroom	FMC
Gallery and museum	Workshop	FMC
Gallery and museum	Covered patio	FHC
Gallery and museum	Uncovered patio	FHO
Gallery and museum	Reception	FHC
Gallery and museum	Restaurant	FMC
Gallery and museum	Classroom	FMC
Gallery and museum	Meeting room	FLC
Gallery and museum	Administrative room	FLC
Gallery and museum	Room with traffic	FHC
Gallery and museum	Room without traffic	FLC



SPORTS GYM

4.24. SPORTS GYM

Table 24 shows the usage recommendation in the different areas of sports gyms. These areas have intense foot traffic, however, are normally smaller than other areas of the type, like stadiums, for example. In this manner, the adequate tiles for sports gyms should be of the class of **FMC** or **FHC**, according to each area.

TABLE 24 - LOCATION: GYM

LOCATION	AREA	USAGE
Gym	Indoor Circulation	FHC
Gym	Uncovered Circulation	FFO
Gym	Indoor bleachers	FHC
Gym	Uncovered bleachers	FFO
Gym	Restroom	FMC
Gym	Indoor bar	FHC
Gym	Uncovered bar	FFO
Gym	Indoor VIP Lounge	FMC
Gym	Uncovered VIP Lounge	FFO
Gym	Entry	FHC
Gym	Lunch room	FHC
Gym	Indoor shop	FMC

HOSPITAL

4.25. HOSPITAL

Table 25 shows the usage recommendation in the different areas of hospitals. These are places that present certain particularities and different technical requirements. Areas with intense foot traffic, bathrooms, and laboratories demand tiles with a Natural finish.

Tiles with Cleantec technology should be considered for walls for hospital areas, improving the performance of the specifications. For this, it is recommended choosing a Natural finish if porcelain is technical. The application of Cleantec on floors of hospitals is not recommended.

It is still necessary to observe the chemical resistance of the tile to cleaning substances used in hospitals, since many of them have a high concentration and unknown composition. For these situations, we recommend Consulting Eliane's Technical Assistance before any specification and/or cleaning maintenance that is not described on the packaging.

TABLE 25 - LOCATION: HOSPITAL

LOCATION	AREA	USAGE
Hospital	Indoor Circulation	FMC
Hospital	Uncovered Circulation	FHO
Hospital	Indoor Cafeteria	FMC
Hospital	Uncovered Cafeteria	FMO
Hospital	Service	FMC

LOCATION	AREA	USAGE
Hospital	Restroom	FMC/FWI
Hospital	Indoor service circulation	FMC
Hospital	Uncovered service circulation	FHO
Hospital	Kitchen	FMC
Hospital	Storage	FMC
Hospital	Nursery	FMC
Hospital	Entry	FHC
Hospital	Laboratory	FMC
Hospital	Lunchroom	FMC
Hospital	Laundry room	FMC
Hospital	Covered patio	FHC
Hospital	Patient's room	FLC
Hospital	Recept.	FMC
Hospital	Waiting room	FMC
Hospital	Admin. Room	FLC
Hospital	Room with traffic	FHC
Hospital	Room without traffic	FLC
Hospital	Consultation room	FMC
Hospital	Exam room	FMC
Hospital	Physical therapy room	FMC
Hospital	Locker	FLC/FWI

HOTEL & FLAT

4.26. HOTEL AND FLAT

Table 26 shows the usage recommendation in the different areas of hotels and flats. These are places with shared residential areas, such as bedrooms, bathrooms for rooms and suites. However, the areas with public access have a large concentration of people and intense foot traffic and require tiles from another class.

TABLE 26 – LOCATION: HOTEL & FLAT

LOCATION	AREA	USAGE
Hotel and flat	Indoor Circulation	FMC
Hotel and flat	Pool deck	FMO
Hotel and flat	Indoor Cafeteria	FMC
Hotel and flat	Uncovered Cafeteria	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	Storage for light material	FLC
Hotel and flat	Storage for heavy material	FMC

LOCATION	AREA	USAGE
Hotel and flat	Bedroom	FIR
Hotel and flat	Entry	FMC
Hotel and flat	Hall	FMC
Hotel and flat	Lunch room	FMC
Hotel and flat	Laundry room	FMC
Hotel and flat	Cov. patio	FMC
Hotel and flat	Pool	WWS/FWI
Hotel and flat	Playground	FMC
Hotel and flat	Reception	FMC
Hotel and flat	Restaurant	FMC
Hotel and flat	Gymnastics room	FMC
Hotel and flat	Game room	FMC
Hotel and flat	Room with traffic	FMC
Hotel and flat	Room without traffic	FLC
Hotel and flat	Sauna	FMC/FWI



DINER AND CAFE

4.27. DINER AND CAFE

Table 27 shows the usage recommendation in the different areas of diners and cafes. These areas normally have a reduced space and light foot traffic.

TABLE 27 - LOCATION: DINER AND CAFE

LOCATION	AREA	USAGE
Diner	Indoor counter	FMC
Diner	Uncovered conter	FMO
Diner	Indoor Circulation	FMC
Diner	Indoor snacks	FMC
Diner	Uncovered lunchroom	FMO
Diner	Service	FMC
Diner	Restroom	FLC
Diner	Kitchen	FMC
Diner	Storage	FLC
Diner	Entry	FMC
Diner	Reception	FMC
Diner	Waiting room	FMC
Diner	Room with traffic	FMC
Diner	Room without traffic	FLC



LAUNDROMAT

4.28. LAUNDROMAT

Table 28 shows the usage recommendation in the different areas of laundromats, which are areas with light foot traffic, predominantly, of the class **FLC**.

TABLE 28 - LOCATION: LAUNDROMAT

LOCATION	AREA	USAGE
Laundromat	Indoor Circulation	FLC
Laundromat	Service	FLC
Laundromat	Storage	FLC
Laundromat	Reception	FMC



PUBLIC SPACES

4.29. PUBLIC SPACES

Table 29 shows the usage recommendation in the different areas of public spaces. These are considered urban areas with intense foot traffic and require tiles from the class of **FHC**.

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

TABLE 29 – LOCATION: PUBLIC SPACES

LOCATION	AREA	USAGE
Public Spaces	Indoor Circulation	FHC
Public Spaces	Covered circulation	FHC
Public Spaces	Uncovered circulation	FHO
Public Spaces	Restroom	FHC
Public Spaces	Planters	FHC
Public Spaces	Uncovered patio	FHO



COMMERCIAL STORE

4.30. COMMERCIAL STORE

Table 30 shows the usage recommendation in the different areas of commercial stores. The indication is relative to the size of the establishment, since there are small stores (areas smaller than 100m²), normally with a low concentration of people and moderate foot traffic; and large stores (areas larger than 100 m²) and department stores, for example, with a high concentration of people and intense foot traffic. In Table 30, the usage recommendation is presented in the two situations cited above as **FMC** and **FLC**, with tiles with adequate resistance for each case.

Equipment with carts used in commercial stores should also be considered for the specifications, since the casters tend to provoke more wear on the ceramic surface, demanding tiles of the **FHC** class, with a Natural finish.

TABLE 30 - LOCATION: COMMERCIAL STORE

LOCATION	AREA	USAGE	
		>100 m ²	<100 m ²
Commercial Store	Indoor Circulation	FMC	FLC
Commercial Store	Indoor Store	FMC	FLC
Commercial Store	Uncovered Store	FMC	FLC
Commercial Store	Cafe	FLC	FLC
Commercial Store	Storage for light material	FLC	FLC
Commercial Store	Storage for heavy material	FMC	FLC
Commercial Store	Reception	FMC	FLC
Commercial Store	Room with traffic	FMC	FLC
Commercial Store	Room without traffic	FLC	FLC



MECHANIC SHOP

4.31. MECHANIC SHOP

Table 31 shows the usage recommendation in the different areas of mechanic shops. These areas have light foot traffic, but intense traffic of vehicles in the main areas, requiring tiles of the **FHC** class, with a Natural finish.

TABLE 31 - LOCATION: MECHANIC SHOP

LOCATION	AREA	USAGE
Mechanic Shop	Uncovered shop	FhO
Mechanic Shop	Indoor shop	FHC
Mechanic Shop	Restroom	FLC
Mechanic Shop	Reception	FLC
Mechanic Shop	Waiting room	FLC
Mechanic Shop	Room with traffic	FLC
Mechanic Shop	Room without traffic	FLC



BAKERY

4.32. BAKERY

Table 32 shows the usage recommendation in the different areas of bakeries, areas with light foot traffic.

TABLE 32 - LOCATION: BAKERY

LOCATION	AREA	USAGE
Bakery	Indoor Circulation	FLC
Bakery	Uncovered circulation	FMO
Bakery	Indoor store	FLC
Bakery	Uncovered store	FMO
Bakery	Service	FLC
Bakery	Kitchen (bakery)	FLC
Bakery	Storage	FLC
Bakery	Administrative room	FLC



GAS STATION

4.33. GAS STATION

Table 33 shows the usage recommendation for different areas of gas stations. In these environments, the areas with intense vehicular traffic require tiles of the **FHC** class and areas without vehicular traffic, only foot traffic, require the **FLC** class. Fuel lanes area (flooring) must be specified with products with a Natural finish.

TABLE 33 - LOCATION: GAS STATION

LOCATION	AREA	USAGE
Gas Station	Service	FHC
Gas Station	Restroom	FLC
Gas Station	Storage	FHC
Gas Station	Diner	FHC
Gas Station	Store	FHC
Gas Station	Covered Fuel lane	FHC
Gas Station	Administrative room	FLC

PRISON AND PENITENTIARY

4.34. PRISON AND PENITENTIARY

Table 34 shows the usage recommendation in the different areas of prisons and penitentiaries. These areas require different classes of use, according to the concentration of people and foot traffic.

TABLE 34 - LOCATION: PRISON AND PENITENTIARY

LOCATION	AREA	USAGE
Prison and penitentiary	Indoor Circulation	FHC
Prison and penitentiary	Uncovered circulation	FHO
Prison and penitentiary	Indoor lunchroom	FHC
Prison and penitentiary	Service	FHC
Prison and penitentiary	Bathroom	FHC/FWI
Prison and penitentiary	Cell	FLC
Prison and penitentiary	Cafe	FLC
Prison and penitentiary	Kitchen	FLC
Prison and penitentiary	Storage	FMC
Prison and penitentiary	Uncovered patio	FHO
Prison and penitentiary	Reception	FMC

LOCATION	AREA	USAGE
Prison and penitentiary	Waiting room	FLC
Prison and penitentiary	Administrative room	FLC
Prison and penitentiary	Room with traffic	FMC
Prison and penitentiary	Room without traffic	FLC
Prison and penitentiary	Locker room	FLC/FWI



RESTAURANT AND BISTRO

4.35. RESTAURANT AND BISTRO

Table 35 shows the usage recommendation in the different areas of restaurants and bistros. Areas with intense foot traffic, such as public areas or kitchens, with intense traffic of equipment, require tiles of the **FHC** class (areas larger than 100 m²) and **FMC** (areas smaller than 100 m²). Now, areas with moderate foot traffic require tiles of the **FMC** class (areas larger than 100 m²) and **FLC** (areas smaller than 100 m²).

TABLE 35 – LOCATION: RESTAURANT AND BISTRO

LOCATION	AREA	USAGE
Restaurant and bistro	Indoor Cafeteria	FMC
Restaurant and bistro	Uncovered Cafeteria	FMO
Restaurant and bistro	Service area	FHC
Restaurant and bistro	Restroom	FLC
Restaurant and bistro	Kitchen	FHC
Restaurant and bistro	Storage	FLC
Restaurant and bistro	Entry	FMC
Restaurant and bistro	Reception	FMC
Restaurant and bistro	Waiting room	FMC
Restaurant and bistro	Administrative room	FLC
Restaurant and bistro	Room with traffic	FMC
Restaurant and bistro	Room without traffic	FLC



BEAUTY SALON AND BARBER SHOP

4.36. BEAUTY SALON AND BARBER SHOP

Table 36 shows the usage recommendation in the different areas of beauty salons and barber shops, that require tiles of the **FLC** class, for the characteristics of light foot traffic.

TABLE 36 – LOCATION: BEAUTY SALON AND BARBER SHOP

LOCATION	AREA	USAGE
Beauty salon and barber shop	Service	FLC
Beauty salon and barber shop	Restroom	FLC
Beauty salon and barber shop	Cafe	FLC
Beauty salon and barber shop	Storage	FLC
Beauty salon and barber shop	Reception	FLC
Beauty salon and barber shop	Hair-cutting room	FLC
Beauty salon and barber shop	Waiting room	FLC
Beauty salon and barber shop	Room with traffic	FLC
Beauty salon and barber shop	Room without traffic	FLC



SHOPPING CENTER

4.37. SHOPPING CENTER

Table 37 shows the usage recommendation in the different areas of shopping centers. These are commercial areas with intense foot traffic in the common areas that require tiles of the **FHC** class. In more reserved areas, without a large concentration of people, tiles can be of the **FMC** class. In the case of commercial stores in shopping centers, the specification will be in accordance with the square footage: larger than 100 m² (**FMC** class) and smaller than 100 m² (**FLC** class).

TABEL 37 - LOCATION: SHOPPING CENTER

LOCATION	AREA	USAGE
Shopping center	Indoor Circulation	FHC
Shopping center	Uncovered Circulation	FHO
Shopping center	Indoor Cafeteria	FHC
Shopping center	Uncovered Cafeteria	FHO
Shopping center	Restroom	FMC
Shopping center	Indoor bar	FMC
Shopping center	Uncovered Bar	FMO
Shopping center	Cinema	FMC

LOCATION	AREA	USAGE
Shopping center	Indoor service circulation	FHC
Shopping center	Uncovered service circulation	FHO
Shopping center	Storage for light materials	FMC
Shopping center	Storage for heavy material	FHC
Shopping center	Entry	FHC
Shopping center	Indoor parking Lot	FHC
Shopping center	Uncovered Parking Lot	FHO
Shopping center	Diner	FMC
Shopping center	Store	FMC
Shopping center	Covered patio	FHC
Shopping center	Uncovered patio	FHO
Shopping center	Covered playground	FMC
Shopping center	Restaurant	FMC
Shopping center	Administrative room	FLC
Shopping center	Room with traffic	FMC
Shopping center	Room without traffic	FLC



SUPERMARKET

4.38. SUPERMARKET

Table 38 shows the usage recommendation in the different areas of supermarkets. These areas predominantly have intense foot traffic and equipment, such as shopping carts, that require tiles of the **FHC** class, with a Natural finish. Less critical areas, such as bathrooms and administrative rooms, require tiles of the **FLC** class. Supermarket with cold chambers require products resistant to frost, like technical porcelain, with water absorption lower than 0.1%.

TABLE 38 - LOCATION: SUPERMARKET

LOCATION	AREA	USAGE
Supermarket	Indoor Circulation	FHC
Supermarket	Uncovered circulation	FHO
Supermarket	Restroom	FLC
Supermarket	Cold chamber	FMC
Supermarket	Indoor service circulation	FHC
Supermarket	Uncovered service circulation	FHO
Supermarket	Storage	FHC
Supermarket	Entry	FHC

LOCATION	AREA	USAGE
Supermarket	Indoor parking Lot	FHC
Supermarket	Uncovered parking Lot	FHO
Supermarket	Bakery	FLC
Supermarket	Reception	FHC
Supermarket	Administrative Room	FLC
Supermarket	Room with traffic	FHC
Supermarket	Room without traffic	FLC



RELIGIOUS TEMPLE

4.39. RELIGIOUS TEMPLE

Table 39 shows the usage recommendation in the different areas of religious temples, areas with a large concentration of people, which require tiles of the **FMC** class for common areas and **FLC** for private areas such as Restrooms.

TABLE 39 – LOCATION: RELIGIOUS TEMPLE

LOCATION	AREA	USAGE
Religious temple	Indoor congregation	FMC
Religious temple	Exterior Uncovered congregation	FMO
Religious temple	Restroom	FLC
Religious temple	Entry	FMC



BUS TERMINAL

4.40. BUS TERMINAL

Table 40 shows the usage recommendation in the different areas of bus terminals. These areas are considered as urban areas and concentrate a large amount of people and intense daily foot traffic, which demand tiles of the **FHC** class, with a Natural finish.

TABLE 40 – LOCATION: BUS TERMINAL

LOCATION	AREA	USAGE
Bus Terminal	Indoor Circulation	FHC
Bus Terminal	Uncovered circulation	FHO
Bus Terminal	Indoor Arrival	FHC
Bus Terminal	Uncovered Arrival	FHO
Bus Terminal	Indoor Departure	FHC
Bus Terminal	Uncovered Departure	FHO
Bus Terminal	Restroom	FHC
Bus Terminal	Entry	FHC
Bus Terminal	Diner	FHC

LOCATION	AREA	USAGE
Bus Terminal	Covered patio	FHC
Bus Terminal	Uncovered patio	FHO
Bus Terminal	Room with traffic	FHC
Bus Terminal	Room without traffic	FHC



INDUSTRIAL ENVIRONMENT

4.41. INDUSTRIAL ENVIRONMENT

Table 41 shows the usage recommendation in the different areas of industrial environments. Independently of the nature, industrial areas require tiles with a high technical performance and specific characteristics. Besides the **FHC** class, the products should meet the requirements of resistance to acids and alkalis in high concentrations, if necessary.

In the case of industrial areas that use chemicals, it is necessary to do a thorough evaluation of the tile performance to certify the resistance to the specific chemical product. Prior to the specification, the Eliane Technical Assistance shall evaluate and test tiles with the products that will be used for maintenance, if products are not in the Eliane's Cleaning and Operation manual.

TABLE 41 – LOCATION: INDUSTRIAL ENVIRONMENT

LOCATION	AREA	USAGE
Industrial Environment	Industrial kitchen	FHC
Industrial Environment	Refrigerating Industry	FHC
Industrial Environment	Food Industry	FHC
Industrial Environment	Beverages Industry	FHC
Industrial Environment	Dairy industry	FHC
Industrial Environment	Electrical industry	FHC
Industrial Environment	Industry in general	FHC
Industrial Environment	Heavy industry	FHC
Industrial Environment	Chemical industry	FHC
Industrial Environment	Thermal industry	FHC



SPECIAL

4.42. SPECIAL

Table 42 shows the usage recommendation for different areas in special applications.

TABLE 42 – LOCATION: SPECIAL

LOCATION	AREA	USAGE
Special	Uncovered by seashore	FFO
Special	Masonry Grill	FLC ⁶
Special	Chemical/Biochemical Laboratory	FHC
Special	Fireplace	FLC ⁶
Special	Ceiling	FIR e WFA ⁷
Special	Countertop	FLC ⁷

⁶Fireplaces and barbecue areas should preferably be coated with enameled or technical porcelain tiles, however the use of BIb and BIla tiles are also allowed. These areas must be built with appropriate thermal insulation following the designer's specifications.

⁷Ceramic products have no restrictions for ceiling tiles, but the form of installation and the materials used in it are the responsibility of the designer.

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)


Note: The use of ceramic tiles on countertops is recommended for UGL porcelain tiles, but you must follow the designer's specifications and be careful with impacts (the edges of the pieces are more susceptible to chipping).

eliane

CONTATOS

Assistência Técnica

(48) 3447-7767

 (48) 3447-7777

DETEC - DEPARTAMENTO
DE TECNOLOGIA CERÂMICA

LCPA - LABORATÓRIO
DE CARACTERIZAÇÃO
DE PRODUTO ACABADO