



Tiles & Bathware

APNEPANKAEHSAAS

CORPORATE PRESENTATION

TILES | SANITARY





ABOUT US

Welcome to the Home Square your premier destination for top-quality of tiles with an unwavering commitment to excellence and innovation, we have established ourselves as a leading player in the industry.

Our journey begin from 2012, where we dealt in retail and sub dealer. Over the years, we have grown and evolved, staying at the forefront of design trends and technological advancements. Today, we take great pride in offering an extensive range of different type of tiles.

OUR VISION



- Our vision is to have a widespread presence and accessibility for customers across various regions so that we can enhance brand visibility/ customer reach and become the preferred global choice for premium tiles & bathware.
- Committed to creating lasting impressions and enhancing the aesthetics of living and working spaces. Setting new industry standards through our innovative products and offerings.
- Recognition for excellence in design, craftsmanship, and customer service.
- Ambition to transform spaces into inspiring environments with our diverse range of tiles. Envisioning a world where every building and living space reflects beauty, quality, and creativity with our tiles.

OUR PLANS



- To create a healthy and enthusiastic work environment.
- Build a team who can write a new era in tiles and bathware industry.
- We are excited about the growth opportunities and partnerships that lie ahead.
- Expansion of Dealer and Sub-dealer network for reaching out to the end customer.
- To establish exclusive showrooms for Home Square in all district headquarters and different states.

OUR MANUFACTURING



- Established our own manufacturing unit for tiles & sanitaryware at **MORBI**.
- We have introduced ourselves as tiles & sanitary ware manufacturer having our own brand - **HOME SQUARE**
- Ceramic products aimed at enhancing the aesthetics and functionality of living spaces.
- The collection features the latest trends and timeless classics to cater to diverse design preferences.
- Offering something unique for every customer, ensuring a wide range of choices.
- Our commitment is to provide high-quality tiles and sanitary ware that elevate the overall ambiance of any space.

OUR FOCUS

- Successful penetration in the tiles and sanitaryware market thru projects (both Govt. & Private).
- Establishing strong connect with Government departments, Architects, and Builders.
- Obtaining product approvals from Government authorities/ architects and builders community.
- Significant portion of supply dedicated to ongoing projects in both Government and private sectors.
- Our brand holds a major stake in the overall market due to these successful partnerships and approvals.

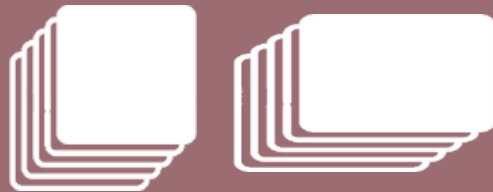
OUR STRENGTH



STRONG DISTRIBUTION NETWORK
& RETAIL PRESENCE



DIVERSE BRAND PORTFOLIO



LARGEST TILE COLLECTION



STRONG BRAND SALIENCE

ISO CERTIFICATE



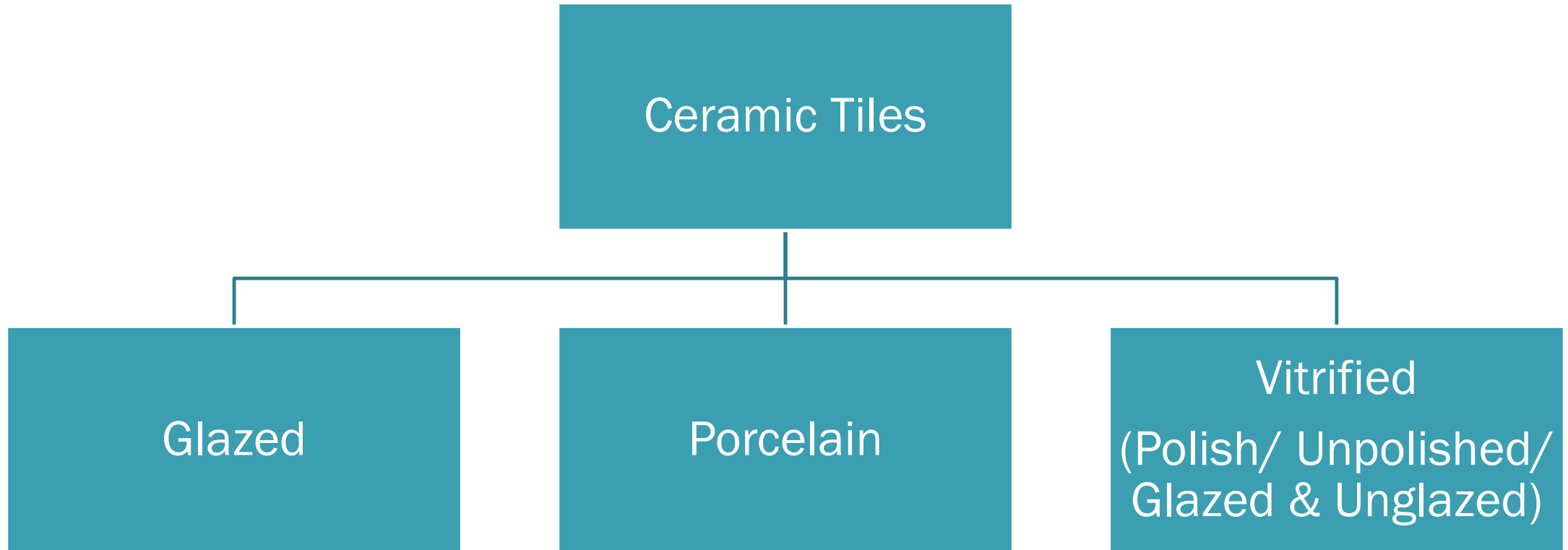
HOME SQUARE Tiles caters according to the latest certificate of : **ISO- 9001:2015**

What is Ceramic Tiles?

When a combination of sand, stone and clay is molded into shape and then fired into Klin to make harder are ceramic tiles. They can be both glazed and non-glazed.



BROAD CLASSIFICATION OF TILES



CLASSIFICATION OF TILES AS PER CATEGORY

CERAMIC TILES

WALL TILES

VITRIFIED
WALL
TILES

CERAMIC
WALL TILES

CERAMIC
FLOOR TILES

FLOOR TILES

VITRIFIED FLOOR TILES

UNGLAZED

UNPOLISHED

Full
Body

POLISHED

Double
Charge

Soluble
Salt

GLAZED

POLISHED

UNPOLISHED

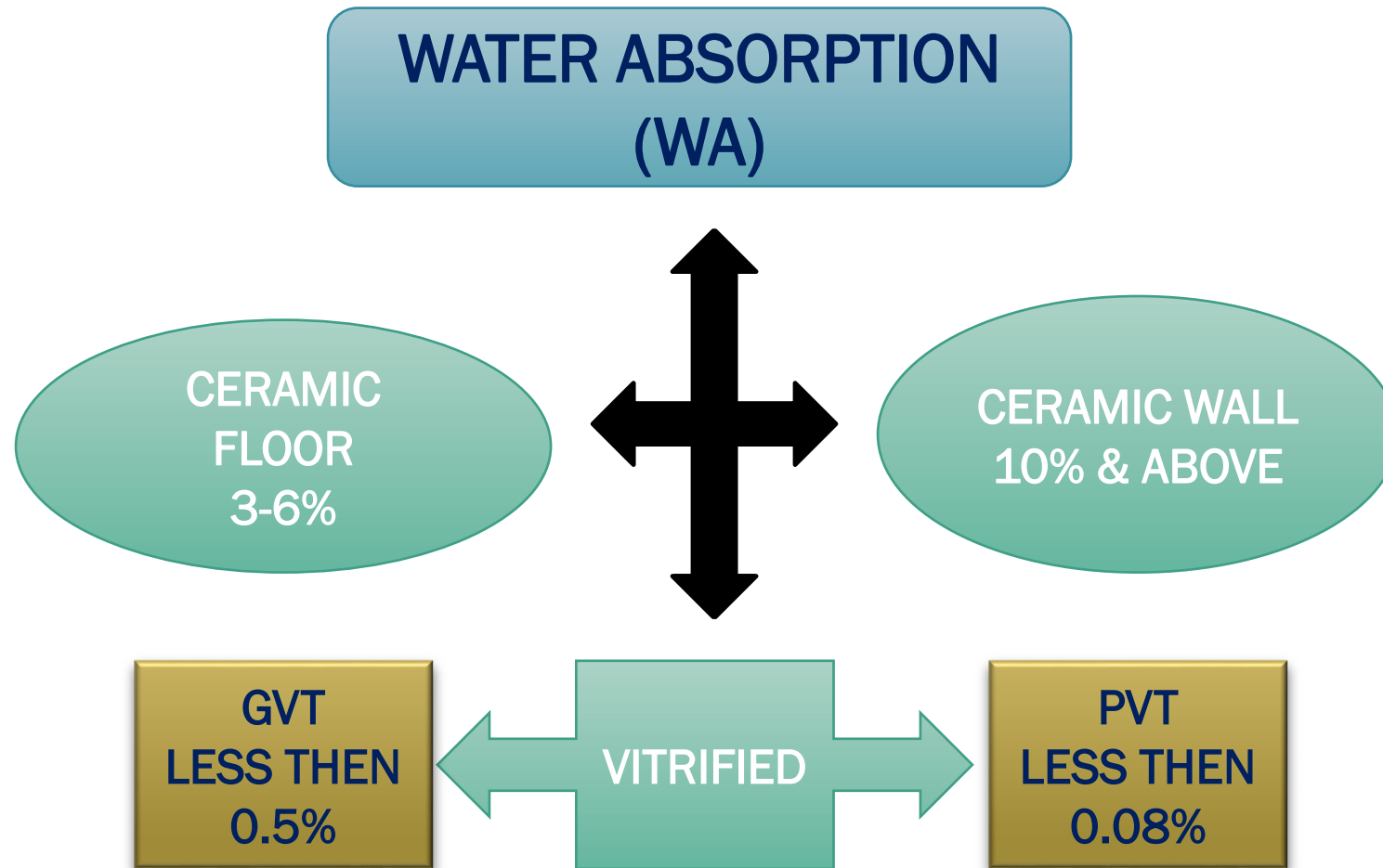
TEMPERATURE DIFFERENCE

FIRING TEMPERATURE

CERAMIC TILES - 1100° C to 1150° C

VITRIFIED TILES – 1200° C to 1250 °C

CLASSIFICATION AS PER WATER ABSORPTION



CLASSIFICATION AS PER WA - BIS

Classification as per IS 15622:2017

Details	Wall	Floor		Vitrified	
Groups	Group B III	Group B II a	Group B II b	Group B I a	Group B I b
Range (%)	> 10	3.0 to 6.0	6.0 to 10.0	≤ 0.08	0.5 to 3.0

Effects of Water Absorption

- Strength
- Porosity
- Crazing
- Delayed Expansion



DIMENSIONS



Products	IS Specifications	ISO Specifications
Wall	$\pm 0.15\%$	$\pm 0.50\%$
Floor	$\pm 0.10\%$	$\pm 0.60\%$
GVT	$\pm 0.10\%$	$\pm 0.60\%$
PVT	$\pm 0.10\%$	$\pm 0.60\%$



- ❖ We find that IS Specification are better than ISO Specification.
- ❖ Means, ISO specifications are definitely followed, if we are following the IS Specification.

WARPAGE/ CURVATURE

Types of Warpage	IS Specification	ISO Specification
Centre Warpage	$\pm 0.50\%$	$\pm 0.50\%$
Edge Warpage	$\pm 0.50\%$	$\pm 0.50\%$
Corner Down	$\pm 0.50\%$	$\pm 0.50\%$
Corner Up	$\pm 0.50\%$	$\pm 0.50\%$



- ❖ There are Four types of warpage namely Centre, Edge, Corner up & Corner Down Warpage.
- ❖ In this warpage we calculate the edge warpage as per the nominal size of the product & rest three are calculated as per diagonal of the nominal size of the product.
- ❖ Here, given example is of Group B I (b) products.
- ❖ Like this, all groups have different specification as per IS & ISO

MODULUS OF RUPTURE (MOR)

Product	MOR as per ISO	MOR as per IS
PVT	35 N/mm ²	35 N/mm ²
GVT	30 N/mm ²	30 N/mm ²
Floor	22 N/mm ²	22 N/mm ²
Wall	12 N/mm ²	12 N/mm ²

This reflects mechanical strength and it is a result of body composition, pressing and firing temperature.

Through this test, tile's body toughness is tested by creating large amount of pressure on it.

As vitrified is fired at high-temperature it becomes 30% more harder compared to stone.



PORCELAIN ENAMEL INSTITUTE (PEI)



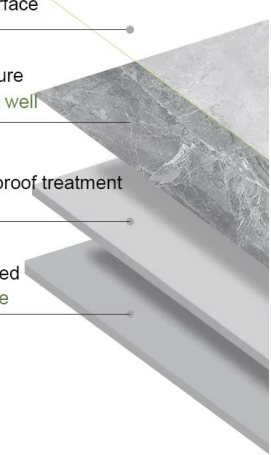
4 Main Features, Rest Assured To Choose.

Layer-by-layer Analysis,
In-depth Understanding

Peace
of mind
:

Glossy Tile-Full Body Marble Tile

- 1 Glazed layer, polished surface
- 2 Sagging process, tile texture
Pattern layer, 3D sense is well
- 3 Impermeable layer, waterproof treatment
Use waterproof materials
- 3 High pressure dense glazed
Hard and thick and durable



PEI Values	Revolutions Nos.	Observations
PEI-I	150 Revolutions	Subject to light use in rooms free from abrasive and cutting agents such as sand or grit . Can be used in bedrooms/bathrooms of private dwellings
PEI-II	600 Revolutions	Subject to medium/light use in rooms free from abrasive and cutting agents such as sand & grit . Ideal for any part of the house except for the kitchen
PEI-III	1500 Revolutions	Subject to medium use in rooms free from abrasives and cutting agents such as sand and grit. Ideal for any part of the house including kitchen (Matt Finish)
PEI-IV	5000 Revolutions	Subject to medium /heavy use, in rooms which in contact with to abrasive and cutting agents such as sand and grit or have direct access to the outdoor. Ideal for terraces and spaces with a medium level of use. (Normal Matt products)
PEI-V	>12000 Revolutions	Subject to heavy use, in rooms which in contact with to abrasive and cutting agents such as sand and grit or have direct access to the exteriors. Ideal for public places such as restaurants, hotels, offices, schools etc. (Desert Stone series)

SCRATCH HARDNESS

- Resistance to scratch on tile surface.
- MOH's scale is used to measure the hardness. MOH scale is assigned till the scratch doesn't appear on the surface of the tile by using the level wise mineral mentioned in the adjacent picture.
- Harder the material, higher the scratch resistance.

Moh's Hardness Scale

1 TALC



2 GYPSUM



3 CALCITE



4 FLOURITE



5 APATITE



6 FELDSPAR



7 QUARTZ



8 TOPAZ



9 CORUNDUM



10 DIAMOND



SLIP RESISTANCE (CO-EFFICIENT OF FRICTION)



This Test gives the risk of slipping when walked on the tiles surface. It Depends upon surface texture, type of foot wear, surface condition (dry, wet, oily) etc.

DIN 51130	Slip Angle	COF	Examples
R9	>3° - 10° Low static friction	0.11-0.18	GVT/Structure
R10	>10° - 19° Normal static friction	0.18- 0.34	Slip Shield
R11	> 19° - 27° Increased Static Friction	0.34- 0.51	Slip Shield
R12	>27° - 35° High Static friction	0.51 - 0.70	N.A
R13	> 35° Very High Static friction	>0.70	N.A

As a thumb rule Floor with COF of less than 0.25 are likely to have a high slip potential & Floor with COF 0.36 are likely to be low slip potential. **DIN** is formulated by **German Institute of Standardization**. It is calculated from the rate of angle. As per **OHSAS COF 0.50** is the best skid resistance.

CRAZING DEFECT

- Tile is made of two distinguished layers: body & glaze.
- These two layers have different chemical and physical properties.
- These two layers act differently during process and usages.
- If properties of these two layers are not properly matched, fine hairline cracks known as crazing are developed on surface.



CHEMICAL & ACID RESISTANCE

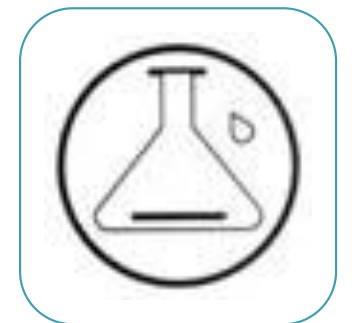
1. Stain Resistance:

Methylene Blue solution(10 g/l) is placed on the glazed surface for 24 hrs. then cleaned and depending on the strength of cleaning agent, stain resistance class is reported.



2. Resistance to household chemicals:

Tile's piece is dipped into the Ammonium Chloride solution(100 g/l) for 6 hrs. and then surface is inspected



3. Resistance to acids and alkalies (exception HF):

Separate tile's pieces are dipped into the Hydrochloric acid solution(3% v/v) and Potassium Hydroxide(200 g/l) alkali solution for 7 days to examine surface.

SANITARYWARE



Home Square Sanitary Items: Revolutionizing Hygiene and Comfort

Home Square is your one-stop solution for high-quality sanitary items designed to enhance hygiene, comfort, and convenience in daily life. Whether for home, office, or travel, our extensive range of products ensures you stay fresh, clean, and confident.

Why Choose Home Square?

- **Premium Quality:** All Home Square sanitary items are made from durable, skin-friendly, and eco-conscious materials to guarantee safety and reliability.
- **Innovative Design:** With a commitment to innovation, our products are ergonomically designed to offer maximum functionality and ease of use.
- **Wide Variety:** We cater to all your needs, offering products that range from personal hygiene essentials to cleaning solutions.



OUR OFFICES



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THANK YOU