Clay Products

The various types of clay products or clay tiles are as follows,

- Clay tiles - They are thin slabs of burnt clay used to cover roof, walls or floor
- Porcelain tiles
- Vitrified and semi-vitrified tiles
- Terracotta tiles
- Glazed ceramic tiles
- Mosaic tiles
- Ceramic sanitary appliances

Clay Products

Clay products

Porcelain tiles:

- They are dry-pressed kaolin-based clay tiles with nearly no water absorption rate.
- They are used to cover floors and walls.
- It is much harder than ordinary clay tiles.
- It is more expensive and difficult to handle due to its hardness and high density.

Terracotta tiles:

- They are brownish unglazed vitrified clay tiles, mainly for ornamental purpose.
- They are made of laterite clay.
- They are hard but porous (>10%water absorption rate).
- They are used for facing and roofing tiles above concrete roofing.

Clay products

Vitrified and semi-vitrified tiles:

- They are made by baking fine clay at extremely high temperatures where the particles fuse to make a glassy surface.
- They are manufactured by dry-pressing.
- They have high density and less porosity.
- Vitrified tiles - 0% water absorption rate.
- Semi-vitrified tiles - 3%-6% water absorption rate.
- These are used in flooring, especially in kitchen floors.

Clay products

Glazed ceramic tiles:

- Special ceramic clay is ground, blended and pressed.
- The pressed clay body is then dried and partially fired.
- It is then coated with a colored glaze.
- The glaze is then permanently fused to the surface of the tile by firing it in kilns to form glazed ceramic tiles.
- They are used as wall tiles and also as flooring tiles.

Mosaic tiles:

- Mosaics are composed of a variety of product types.
- Mosaic tiles are used mainly for flooring and dadoing of walls.

Ceramic sanitary appliances

- They are made of a mixture of clay, quartz and feldspar.
- They are vitreous.
- Examples: Water Closet (W.C.), urinals, wash basins, fountains, sinks, etc.
- The exposed surface is glazed with impervious, resistant to fine cracks.
- For underground drainage, clay based pipes are used.

Sealants for joints

Sealant is a substance used to block the passage of fluids through the surface or **joints** or openings in materials, a type of mechanical seal. In building construction **sealant** is sometimes synonymous with caulking and also serve the purposes of blocking dust, sound and heat transmission.

The purpose of **joint sealant** is to minimize infiltration of surface water and incompressible material into the **joint** system

Silicone **sealants** are commonly **used** to bind surfaces such as plastic, metal, and glass together. For example, aquariums are often sealed with silicone. Since silicone **can** keep its **adhesive** properties when temperatures are high, it is commonly **used** in automobiles, electronic devices, and appliances.

Naturally, as its name suggests, it seals spaces that exist **between** one surface to the next. When a **sealant** is used the space becomes air and water tight. **Adhesives** on the other hand are primarily used to bind services together. ... **Sealants** should not be used to bond things together.

Sealants for joints

Properties of Good Sealant

Different types of sealants with good properties are available.

- The sealant should have good bond with building materials.
- The sealant should be soft.
- It should be flexible.
- It should not affected by the weather changes.
- It should strong against stress and stress relief cycle.

Types of Sealants Used for Joints in Buildings – Properties and Uses

There are several types of sealants are:

- Silicone based sealants
- Urethane based sealants
- Acrylic based sealants
- Polysulphide based sealants
- Out of the above sealants, Polysulphide sealants are more popular in construction world.