

Building materials

CLAY PRODUCTS AND REFRACTORIES

1. Ceramic is an inorganic, non-metallic solid prepared by the action of heat and subsequent cooling.
2. Ceramics have crystalline or partly crystalline structure or may be amorphous like glass.
3. Ceramics are hard and brittle
4. Ceramics are strong in compression and weak in shear and tension
5. Ceramics withstand high temperature and chemical erosion.
6. Based on the internal structure, Ceramics are mainly classified as: Clay Products, Refractories and Glass.
7. Types of clay products: Bricks, Tiles, Earthenware, Stoneware, Terracotta
8. Process involved in the manufacture of tile : Preparation of clay, moulding, drying, burning
9. Tiles used for roofing and flooring are : Common tiles
10. Tiles used for decorative purpose in floors, roofs : Encaustic tiles
11. Burning of tile is done in : Sialkot kiln
12. Tiles used in waterlogged areas : Drain tiles
13. Tile in which porous texture is maintained after burning is : Drain tile
14. Thickness of floor tiles varies from : 12mm-50mm
15. Size of square tiles varies from : 150 mm to 300 mm
16. Tiles used to cover pitched roof : Roof tile
17. Different types of roof tile are : Allahabad tiles, corrugated tile, flat tile, Mangalore tile, pan tile, pot tile
18. Terra cotta means: Baked earth
19. The percentage of iron oxide and lime in terracotta is: 5-8% and 1% respectively
20. Furnace used in burning of terracotta: Muffle furnace
21. Temperature in muffle furnace is about: 1200 degree Celsius
22. Type of terracotta prepared by adding saw dust or ground cork to clay before the stage of moulding is : Porous terra cotta
23. Polished terracotta is also known as : Fine terra cotta or faience
24. In the preparation of polished terracotta, first burning is known as : Biscuiting (650 °C)(and final burning at 1200 °C)
25. Articles prepared from clay which is burnt at low temperature and cooled down slowly : Earthenware
26. Articles prepared from refractory clays which are mixed with stone and crushed pottery :Stoneware
27. Fine earthenware which is white, thin and semi-transparent is : Porcelain (white ware)

28. Porcelain is also known as : **White ware / china / fine china**
29. Porcelain is prepared from : **Clay (kaolin), feldspar, quartz and minerals**
30. Porcelain are used as : **Sanitary wares, electric insulators, storage vessels**
- 31.. Porcelain which is prepared by dry process and it is mainly used for switch block, insulating tubes, lamp sockets is : **Low voltage porcelain**
32. High voltage porcelain is prepared by : **Wet process**
33. Glazing of clay products is done to : **Improve appearance, makes it durable and impervious, gives decorative effect, protects from atmospheric actions and chemicals**
34. Transparent glazing is sub divided in to two : **Salt glazing and lead glazing**
35. Water is added to superior clay to obtain a plastic cream like substance known as : **Slip**
36. The length, breadth and thickness of a hollow block respectively are : **300mm, 200mm and 50mm-150mm**
37. Substances that is able to resist high temperatures : **Refractories**
38. Based on chemical properties, refractory materials are classified as : **Acidic, basic and neutral**
39. Acidic refractory materials are : **Fire clay, quartzite and silica**
40. Basic refractory materials are : **Dolomite, magnesite**
41. Neutral refractory materials are : **Bauxite, carbon, chromite, forsterite**
42. According to resistance to temperature, refractory materials are classified in to : **Low quality and high quality**
43. Low quality refractories are used in the manufacture of : **Fire bricks, lining material for furnace**
44. High quality refractories are used in the : **Construction of rockets, jets**