

Fact file ceramics

Science



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BUSTER**

Find out:

1. What is a ceramic material? Ceramic materials are inorganic, non-metallic materials made from compounds of a metal and a non metal.
2. The names of four types of ceramic • Structural • Refractories • White ware ceramic • Technical ceramic
3. Give examples of each of these types of ceramic Examples of structural ceramics are: bricks, pipes and roof tiles Example of Refractories ceramics: gas fire radiant's, steel and glass making crucibles. Example of white ware ceramic: tableware, cookware, wall tiles, pottery products and sanitary ware.

Example of Technical ceramic: gas burner nozzles, ballistic protection, nuclear fuel uranium oxide pellets, biomedical implants, coatings of jet engine and turbine blades. Properties List 5 properties of ceramic materials. For each property, write a sentence to explain what the word means.

- Hard: not easily broken, bent, or pierced.
- Wear-resistant: it won't wear away easily if you keep it for a long time
- Brittle: it can break easily if it drops on the floor.

Thermal insulators: it keeps heat in and the cold out. Ceramics – Porcelain and False Teeth!

1. What is porcelain? What are its properties and uses? Porcelain is a ceramic material made by heating raw materials, normally including clay in the form of kaolin, in a kiln to temperatures between 1,200 °C Properties are low permeability and elasticity, strong, hardness, toughness, whiteness and thermal shock.

2. What happened to porcelain production in the 1950s and 1960s? (aluminous porcelains) The UK Ran out of Porcelain to make all different products. . How porcelain has been used to make false teeth? It is used to make a tooth shaped model with porcelain and the dentist screws it on. Also, they used to get layer of porcelain and put it on the teeth.

Crystalline and Non-crystalline ceramics (Types of ceramic materials)

- What are crystalline ceramics? Give some examples? Crystalline ceramic materials are not amenable to a great range of processing
- What are non-crystalline ceramics? Give some examples? Non-crystalline ceramics, being glasses, tend to be formed from melts.