

WHAT IS CLAY?



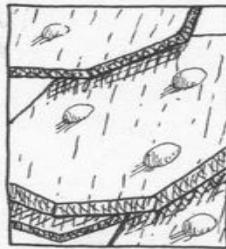
Clay is a product from the earth that when heated becomes hard.



Geologically, clay comes from decomposed rock. It is typically carried by water and settles together in a particular area where it is mined.



Chemically, clay is a combination of Alumina, Silica, and water:
$$\text{Al}_2\text{O}_3 \cdot \text{SiO}_2 \cdot 2\text{H}_2\text{O}$$
along with other minerals.



Physically, clay's crystal structure is that of tiny sheets with water between them. The sheets are held together by suction but can slide past each other like a deck of wet playing cards.



Heat causes the clay to harden. At 600°C the water is driven off and leaves a bonded alumina silicate structure. Further heat, 800°C , causes melting of the free silica and other materials into a vitrified, or glass like, substance.