

In the table of minerals used, clays are divided under the following headings:—

- (a) *Clay*.—Under this heading are included clays not specified elsewhere, common brick clay, unclassified clays, and local clays generally.
- (b) *Ball Clay*.—This is a very plastic clay of high tensile strength used in porcelain making to give plasticity to the body of the mix. It must be very low in impurities which would tend to colour the finished product, when intended for use in making white ware. It is used also as a bond in abrasive wheels.
- (c) *China Clay* or *Kaolin*.—This is a white clay, consisting, almost entirely, of hydrated silicate of alumina. It is not very plastic as a rule. As its name implies it is used largely in the making of china and porcelain. It is also used as a filler of cotton goods and paper, in the coating of book and wall paper, in the coating of cloth for window blinds, and in the manufacture of paints. It also enters into the composition of some mineral floorings.
- (d) *Fire Clay*.—Clays possessing a very high refractoriness are termed fire clays. They differ among themselves greatly in many of their physical properties and in composition, but are always low in impurities such as lime, magnesia, iron oxide, and alkalis, which are fluxing materials. When there is a high percentage of uncombined silica in a fire clay it is called ganister. This name is also applied to a silicious rock used in making firebricks. Fire clay should not fuse below 3000° Fahrenheit.

The uses of fire clay depend primarily upon its refractoriness. It is manufactured into certain classes of firebrick, furnace and stove linings, crucibles, and briquettes for gas grates. It is also extensively used for bonding the brick work of boiler settings, cupola and metallurgical furnace linings. The quantities given in the accompanying tables do not include that used for boiler setting, except in a few instances.