Clay ceramsite, just as its name implies, is a kind of ceramic material in the production of human shape particles, the main raw material is clay, loam, etc., through grinding, mixing, rolling granulating sintering and expanding. It is widely used in concrete structures, thermal insulation, water pollution treatment, landscaping, soilless cultivation and other related fields. The main process is divided into: raw material preparation, preheating, roasting, cooling.

1. Raw material preparation: ceramic production must first solve the processing of raw materials and the granulation process, the task is to collect raw materials, by crushing, screening, ingredients, blend the chemical composition meets the requirements. The uniform water-containing materials of quality through the roller and ball method into different particle size of raw material. Raw material preparation process, according to the different varieties of materials, is divided into dry method, plasticizing method, grinding into ball method and mud ball forming method.

2. Preheating: kiln type is suitable for a double tube rotary kiln, that is to say the preheating section and the drying section of the kiln can independently control its speed, so as to control the heating time according to the situation of raw materials. Factors controlling the preheating stage preheating temperature and preheating time, these two factors are affecting the quality of the final ceramic, if the preheating temperature is too high or preheating time is too long...
will lead to raw materials in the preheating stage has produced large amounts of gas, resulting in raw material during the firing stage due to expansion of the gas shortage makes ceramic expansion poor; but the lack of preheating, it will cause the calcination process of raw explosion. All these will affect the ceramic properties.

3. Roasting: roasting stage is the most critical step in the ceramisite calcination process, it will have a direct impact on the performances of the ceramic products, if not properly controlled, it will cause the gas pressure is too large to overflow housing forms an opening pores, when the fired ceramic low intensity, higher water absorption, if the firing temperature does not reach the optimum calcination temperature, ceramic products expansion ratio will drop, density will increase. Usually produce expansion temperature above 1000 °C.

4. Cooling: cooling process have a greater impact on the quality of ceramic, it is generally believed that the reasonable ceramic cooling system is: the ceramic of roasting can be cooled to 700°C-1000°C rapidly behind the zone of swelling the highest through temperature, but from when 700 °C to 400 °C will have cooled slowly, because the rapid cooling make ceramic internal and surface temperature have a strong contraction, leading to slight cracks in the surface, so as to reduce the ceramic particle size and strength. But at 400°C can be rapidly cooled down.