

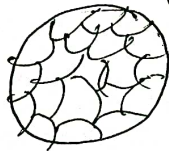
Austenite →

- * It is a solid solution of carbon and other alloying element in gamma iron. (eg. Mn, Ni etc) ←
- * It can dissolve maximum 2% Carbon.
- * Tensile strength is near about 10500 kg/cm²
- * Austenite is non magnetic and soft.



Ferrite →

- * Ferrite is BCC iron phase with very limited solubility for carbon.
- * It dissolves only 0.008% carbon at room temp.
- * It has tensile strength 2800 kg/cm²



Cementite -

- * Cementite or iron carbide (Fe₃C) contain 6.67% carbon by weight.
- * It is a typical, hard compound of low tensile strength (350 kg/cm²) but high compressive strength.



Pearlite -

- * The pearlite microstructure consist of alternate laminate of ferrite and cementite.
- * Pearlite is the product of austenite decomposition by eutectoid reaction.
- * It contain 0.8% carbon and formed at 725°C

