

carbonization

A process by which solid residues with increasing content of the element carbon are formed from organic material usually by *pyrolysis* in an inert atmosphere.

Notes:

As with all pyrolytic reactions, carbonization is a complex process in which many reactions take place concurrently such as dehydrogenation, condensation, hydrogen transfer and isomerization. It differs from *coalification* in that its reaction rate is faster by many orders of magnitude. The final pyrolysis temperature applied controls the degree of carbonization and the residual content of foreign elements, e.g. at $T \sim 1200$ K the carbon content of the residue exceeds a mass fraction of 90 wt.%, whereas at $T \sim 1600$ K more than 99 wt.% carbon is found.

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