

## pyrolytic carbon

A carbon material deposited from gaseous hydrocarbon compounds on suitable underlying substrates (carbon materials, metals, ceramics) at temperatures ranging from 1000 to 2500 K (chemical vapour deposition).

Note:

A wide range of microstructures, e.g. isotropic, lamellar, substrate-nucleated and a varied content of remaining hydrogen, can occur in pyrolytic carbons, depending on the deposition conditions (temperature, type, concentration and flow rate of the source gas, surface area of the underlying substrate, etc.). 'Pyrocarbon' which is synonymous with pyrolytic carbon was introduced as a trademark and should not be used as a term. The term pyrolytic carbon does not describe the large range of carbon materials obtained by thermal degradation (thermolysis, pyrolysis) of organic compounds when they are not formed by chemical vapour deposition (CVD). Also, carbon materials, obtained by physical vapour deposition (PVD) are not covered by the term pyrolytic carbon.

**Source:**

PAC, 1995, 67, 473 (*Recommended terminology for the description of carbon as a solid (IUPAC Recommendations 1995)*) on page 502