

diamond

An allotropic form of the element *carbon* with cubic structure (space group $O_h^7-Fd\bar{3}m$) which is thermodynamically stable at pressures above 6 GPa at room temperature and metastable at atmospheric pressure. At low pressures diamond converts rapidly to *graphite* at temperatures above 1900 K in an inert atmosphere. The chemical bonding between the carbon atoms is covalent with sp^3 hybridization.

Notes:

There is also a hexagonal diamond-like structure of the element carbon (lonsdaleite).

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