

### **rhombohedral graphite**

A thermodynamically unstable allotropic form of *graphite* with an AB-CABC stacking sequence of the layers. The exact crystallographic description of this allotropic form is given by the space group  $D_{3d}^5-R\bar{3}m$ , (unit cell constants:  $a = 256.6$  pm,  $c = 1006.2$  pm).

Notes:

The structure of rhombohedral graphite can be best considered as an extended stacking fault in hexagonal graphite. Rhombohedral graphite can not be isolated in pure form (*natural graphite* and laboratory preparations contain less than 40% of rhombohedral graphite in combination with *hexagonal graphite*). It is produced by shear deformation of hexagonal graphite and transforms progressively to the hexagonal (ABAB) modification on heating above 1600 K.

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