

nuclear graphite

A *polygranular graphite* material for use in nuclear reactor cores consisting of *graphitic carbon* of very high chemical purity. High purity is needed to avoid absorption of low-energy neutrons and the production of undesirable radioactive species.

Notes:

Apart from the absence of neutron-absorbing impurities, modern reactor graphites are also characterized by a high degree of *graphitization* and no preferred bulk orientation. Such properties increase the dimensional stability of the nuclear graphite at high temperatures and in a high flux of neutrons. The term nuclear graphite is often, but incorrectly, used for any *graphite material* in a nuclear reactor, even if it serves only for structural purposes.

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