

Effect of Plutonium on Fuel Properties

[Melting point]

Drops as plutonium mixing ratio increases.

- At the ratio of plutonium in MOX fuel used for thermal reactors, the melting point drops just a few tens of degrees.

[Heat conductivity]

Drops as plutonium mixing ratio increases.

- The drop in heat conduction is also slight.
- There is plenty of margin between the melting point and actual pellet temperatures.

[Gas release rate]

The proportion of gas from nuclear fission that builds up in the cladding tubes increases somewhat.

- Increases the volume of space (gas reservoir) between fuel rods and inhibits an increase in internal pressure.