Corrections to Olander Book
from Nuclear System Handbook (NSH)

Melting Point, °C

Mole Fraction PuO_2	Solidus	NSH Liquidus	Liquidus Olander
0.0	2847	2847	2865
0.2	2728	2767	
0.4	2632	2685	≈2700
0.6	2553	2600	≈2600
0.8	2487	2530	
1.0	2428	2428	≈2360

Density:

$$\rho = \frac{\text{MW metal atoms}}{\text{MW nat. U}} \left[5875.5+4.97(\%PuO_2) +2540 \frac{O}{M}\right] \frac{kg}{m3}$$

Effect of Burnup on MP of Mixed UO_2-PuO_2

For 20-25% PuO_2
from NSH

Burn up MWd/MtU	**Change in Melting Point °C**
15,000	**-62**
25,000	**-64**
50,000	**-69**
75,000	**-74**
100,000	**-80**