

## Am – O (Americium – Oxygen)

### Phase diagram

Okamoto [91 Oka] has published an assessed partial phase diagram which was reproduced by [Moffatt]. From there information has been obtained to draw Fig. 1.

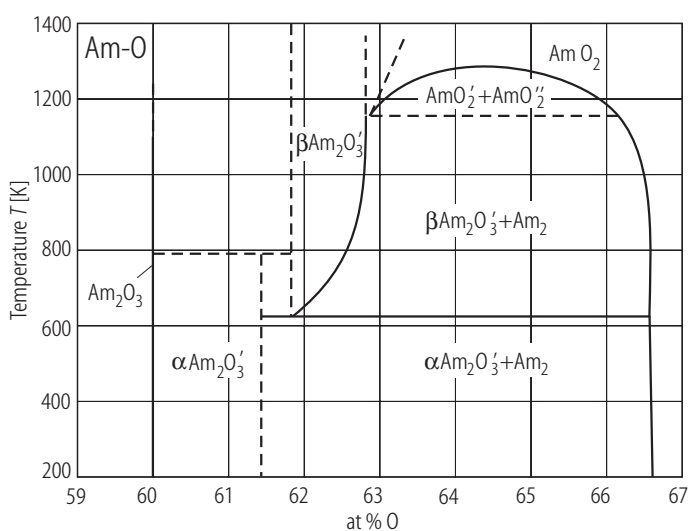
### Crystal structure

Crystallographic data of intermediate phases in the Am-O system are given in Table 1.

**Table 1. Am–O.** Crystal structure of intermediate phases in the Am-O system.

Phase	Composition [at% O]	Structure	Prototype	Lattice parameters [nm]			Reference
				<i>a</i>	<i>b</i>	<i>c</i>	
AmO	50	cub	NaCl	0.5045			[67 Aki]
Am <sub>2</sub> O <sub>3</sub>	60	hex	La <sub>2</sub> O <sub>3</sub>	0.3817		0.5971	[53 Tem]
β-Am <sub>2</sub> O <sub>3</sub>	61.7 ... 62.7	cub					[70 Sar]
α-Am <sub>2</sub> O <sub>3</sub>	61.4	cub	Mn <sub>2</sub> O <sub>3</sub>	1.103			[53 Tem]
AmO <sub>2</sub>	66.7	cub	CaF <sub>2</sub>	0.5383			[49 Zac]
Unidentified phase							
Am <sub>2</sub> O <sub>3</sub>	60	mon	Sm <sub>2</sub> O <sub>3</sub>	1.438	0.352	0.892	[68 Chi]

**Figure**



**Fig. 1. Am–O.** Partial phase diagram assessed by [91 Oka].

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**References**

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