

substance: $\text{Fe}_{1-x}\text{Co}_x\text{Sb}_2$, $\text{Fe}_{1-x}\text{Ni}_x\text{Sb}_2$

property: physical properties

$\text{Fe}_{1-x}\text{Co}_x\text{Sb}_2$

complete miscibility for $x = 0 \dots 1$ [70B, 74K], loellingite-type for $x < 0.8$, arsenopyrite-type structure for $x > 0.8$ [74K]. See also Fig. 1.

$\text{Fe}_{1-x}\text{Ni}_x\text{Sb}_2$

homogeneity region: $x = 0 \dots \approx 0.50$ and $\approx 0.97 \dots 1$ [70B]. $\text{Fe}_{0.5}\text{Ni}_{0.5}\text{Sb}_2$ decomposes at 915 K [77K].

$a(T)$, $b(T)$ linear in T , $c(T)$ increases more rapidly [77K].

volume expansion coefficient

β	$3.4 \cdot 10^{-5} \text{ K}^{-1}$	$T = 300 \text{ K}$	$T = 300 \dots 500 \text{ K},$ taken from graphic representation	77K
	$5.0 \cdot 10^{-5} \text{ K}^{-1}$	$T = 600 \text{ K}$	$T = 600 \dots 900 \text{ K}$ no magnetic order at 10 K [79K]	

References:

- 70B Bjerkelund, F., Kjekshus, A.: Acta Chem. Scand. 24 (1970) 3317.
74K Kjekshus, A., Rakke, T.: Acta Chem. Scand. A28 (1974) 1001.
77K Kjekshus, A., Rakke, T.: Acta Chem. Scand. A31 (1977) 517.
79K Kjekshus, A., Peterzens, P. O., Rakke, T., Andresen, A. F.: Acta Chem. Scand. A33 (1979) 469.

Fig. 1.

$\text{Fe}_{1-x}\text{Co}_x\text{As}_2$ and $\text{Fe}_{1-x}\text{Co}_x\text{Sb}_2$. Monoclinic angle β' of the pseudo-marcasite cell vs. compositional parameter x [74K].

