

substance: $\text{NiAs}_{2-x}\text{S}_x$, $\text{NiAs}_{2-x}\text{Se}_x$

property: physical properties

$\text{NiAs}_{2-x}\text{S}_x$

Homogeneity range: $x < 0.05$ at 1023 K [79K], $x \leq 0.04$ at 573 K [79K]. $\alpha \rightarrow \beta$ transformation temperature: Fig. 1.

Maximum sulfur content of β - NiAs_2 : 1.1 wt% at 973 K. Substitution of S for As lowers the $\beta \rightarrow \alpha$ inversion from 863 K to 773 K [62Y].

$\text{NiAs}_{2-x}\text{Se}_x$

homogeneity range: $x \leq 0.07$ at 1023 K [79K], $x \leq 0.05$ at 573 K [79K]. $\alpha \rightarrow \beta$ transformation temperature: Fig. 1.

References:

62Y Yund, R. A.: Amer. J. Sci. 260 (1962) 761.

79K Kjekshus, A., Rakke, T.: Acta Chem. Scand. A33 (1979) 609.

Fig. 1.

$\text{Co}_x\text{Ni}_{1-x}\text{As}_2$, $\text{NiAs}_{2-x}\text{S}_x$, $\text{NiAs}_{2-x}\text{Se}_x$. Temperature of the pararammelsbergite (α) – marcasite (β) transformation vs. concentration of substituent [79K].

