

Sb-Zn (Antimony-Zinc)

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The Sb-Zn phase diagram in [Massalski2] is based on old data published before 1966. The phase diagram of this system has been studied extensively by many authors (more than ten sources can be found in [2006Adj]). Recent experimental and theoretical studies were reported by [2000Liu], [2001Iza], [2007Adj], and [2007Li]. Their phase diagrams are very similar although the topology is slightly different. The true equilibrium phase diagram may be determined by a careful study taking into account the

differences among these reports. The Sb-Zn phase diagram obtained by the most recent thermodynamic assessment by [2007Li] is shown in Fig. 1.

Table 1 shows Sb-Zn crystal structure data summarized based on [Massalski2] and [2006Adj].

Table 1 Sb-Zn crystal structure data

Phase	Composition, at.% Zn	Pearson symbol	Space group	Strukturbericht designation	Prototype
(Sb)	0	<i>hR2</i>	$R\bar{3}m$	<i>A7</i>	α As
SbZn	50	<i>oP16</i>	<i>Pbca</i>	<i>B_c</i>	CdSb
γ Sb ₃ Zn ₄	55.8
β Sb ₃ Zn ₄	55.9
α Sb ₃ Zn ₄	57.1	<i>oP28</i>	<i>Pmmn</i>
β Sb ₂ Zn ₃	59.5	<i>oI*</i>
α Sb ₂ Zn ₃	60	<i>oP32</i>	<i>Pmmn</i>
(Zn)	100	<i>hP2</i>	<i>P6₃/mmc</i>	<i>A3</i>	Mg

References

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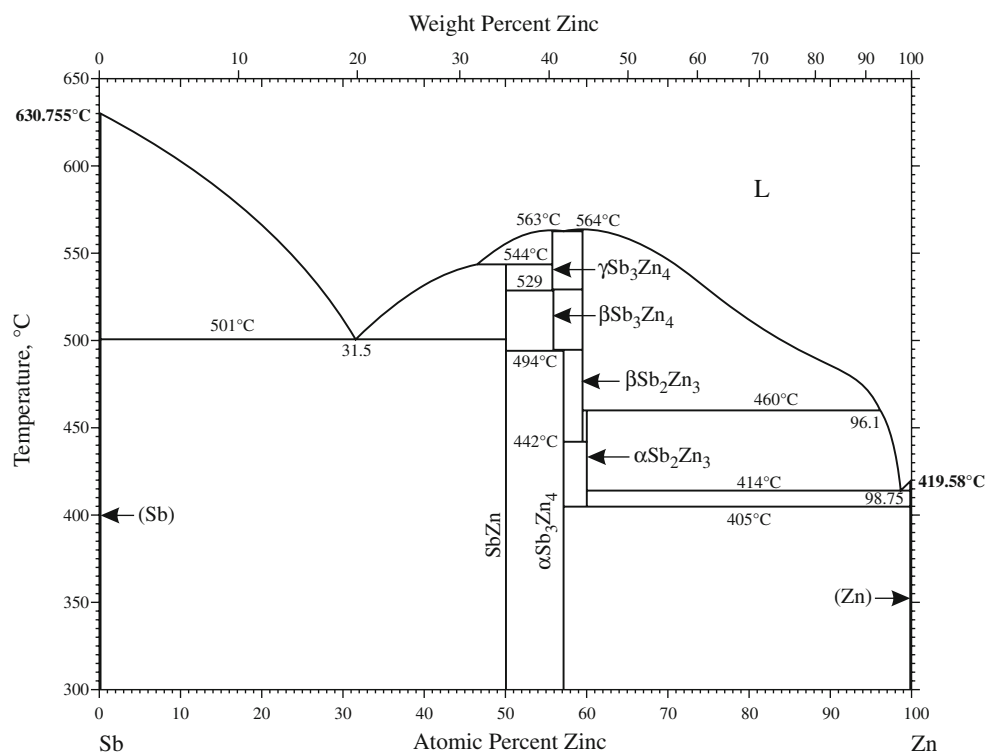


Fig. 1 Sb-Zn phase diagram