

B-S (Boron-Sulfur)

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The B-S phase diagram in [Massalski2] was redrawn from [Moffatt], which was based on [1968Med] for BS_2 -S and [Shunk] for possible existence of various compounds. Because the delicate curvature of the liquidus in the original [1968Med] diagram was lost in repeated redrawing, the liquidus in Fig. 1 was directly copied from the original source.

[2001Odi] reported the liquids between B_2S_3 and BS_2 based on thermal analysis data. The result is shown in Fig. 1.

B-S crystal structure data were adopted from [Massalski2] (Table 1).

References

- 1968Med:** Z.S. Medvedeva, V.A. Boryakova, Ya.Kh. Grinsberg, and E.G. Zhukov, Equilibrium Diagram of the BS_2 -S System, *Russ. J. Inorg. Chem.*, 1968, **13**(5), p 756-758
- 2001Odi:** I.N. Odin, V.V. Grnibko, E.V. Safronov, and V.F. Kozlovskij, Study of Systems $CdX-B_2X_3$ ($X = S, Se$), $CdTe-B-Te$, *Zh. Neorg. Khim.*, 2001, **46**(7), p 1210-1214

Table 1 B-S crystal structure data

Phase	Composition, at.% S	Pearson symbol	Space group	Strukturbericht designation	Prototype
(β B)	0	<i>hR108</i>	$R\bar{3}m$	...	...
$B_{12}S$	7.7	<i>hR*</i>
B_4S	20	...	...	...	...
BS	50	...	...	...	...
B_2S_3	60	<i>mC70</i>	$C2/m$	...	...
BS_2	66.7	<i>mP48</i>	$P2_1/c$	...	...
(β S)	100	...	...	...	...
(α S)	100	<i>oF128</i>	$Fddd$	A16	αS

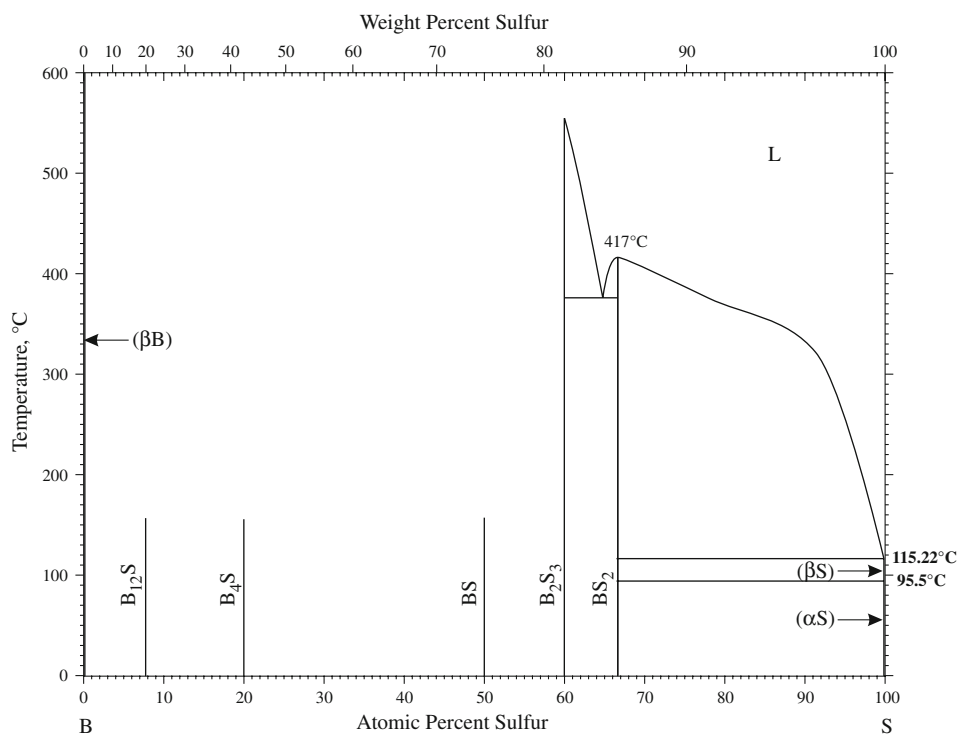


Fig. 1 B-S phase diagram