

F-Xe (Fluorine-Xenon)

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The Xe-F phase diagram was unknown in [Massalski2]. [1973Leg] reported the XeF₂-XeF₆ phase diagram. However, this phase diagram was superseded by the XeF₂-XeF₄ phase diagram reported by the same investigator [1974Mar]. Figure 1 shows the latter phase diagram. XeF₃ and XeF₄ were missing in the diagram of [1973Leg].

Xe-F crystal structure data in Table 1 were taken from [2007Vil].

References

- 1973Leg:** V.A. Legasov and A.S. Marinin, The Xenon Difluoride-Xenon Hexafluoride Binary System, *Russ. J. Inorg. Chem.*, 1973, **18**(2), p 298-299
- 1974Mar:** A.S. Marinin, The Xenon Difluoride-Hydrogen Fluoride and Xenon Tetrafluoride Binary Systems, *Russ. J. Inorg. Chem.*, 1974, **19**(6), p 929-930
- 2007Vil:** P. Villars and K. Cenzual, *Pearson's Crystal Data CD-ROM*, ASM International, OH, 2007

Table 1 Xe-F crystal structure data

Phase	Composition, at.% F	Pearson symbol	Space group	Strukturbericht designation	Prototype
(Xe)(a)	0	<i>cF4</i>	<i>Fm$\bar{3}m$</i>	<i>A1</i>	Cu
XeF ₂	66.7	<i>tI6</i>	<i>I4/mmm</i>
XeF ₃	75	<i>mP16</i>	<i>P12₁/c1</i>
XeF ₄	80	<i>mP10</i>	<i>P12₁/c1</i>
XeF ₆ (a)	85.7	<i>cF1600</i>	<i>Fm$\bar{3}c$</i>
(βF)(a)	100	<i>cP16</i>	<i>Pm$\bar{3}m$</i>	...	γO
(αF)(a)	100	<i>mC8</i>	<i>C2/c</i>	...	αF

(a) Not shown in Fig. 1

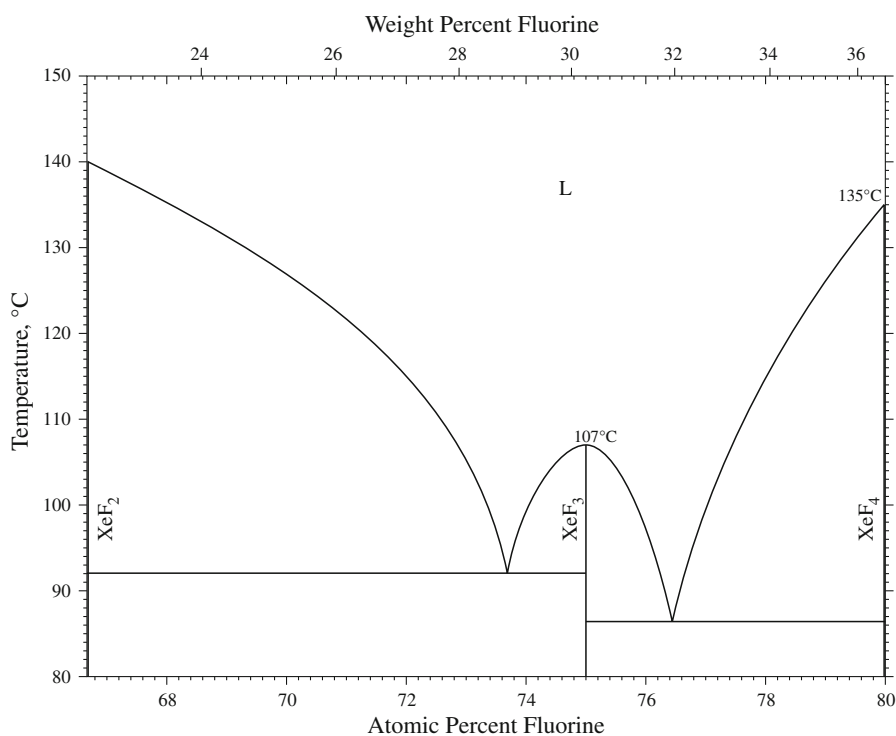


Fig. 1 Xe-F phase diagram